



SIEMENS

Ingenuity for life

Building Control GAMMA instabus

Product catalog 2019

[siemens.com/gamma](https://www.siemens.com/gamma)

The worldwide
standard for
home and
building control



GAMMA

Building Control

GAMMA instabus from Siemens is based on the world-wide KNX standard for home and Building Control, which guarantees interoperability with all certified KNX devices on the market.

As a leading manufacturer Siemens offers a comprehensive product portfolio consisting of intelligent KNX devices and allows networked applications. Lighting, solar protection, heating, ventilation and air-conditioning can be controlled by display and operation units.



Content

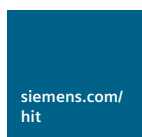
Future-proof electrical
installations based on KNX®

Building Control
GAMMA instabus
Product catalog 2019

GAMMA-TD:
Technical Product Database



HIT-Portal:
Online Catalog



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SIEMENS
Ingenuity for life

Improving people's lives
by improving their buildings.

Dear customers

Ingenuity for Life creates perfect places. People spend about 90 percent of their lives indoors – starting with our birth in hospitals, learning at schools, developing at universities, succeeding in office buildings. Buildings are not just a place for working and living. They are the places where we spend our lives. That is the reason why building technology is so important. Using the right technology, we improve the lives of people by improving their buildings.

When building technology creates perfect places – that is Ingenuity for life.

The Siemens Building Technologies Division has a broad and comprehensive portfolio, covering a wide range of requirements, applications and protocols. This catalog presents the KNX portfolio and gives for example a detailed and comprehensive overview on the GAMMA instabus products, KNX thermostats as well as Synco products. With its extensive product portfolio range, GAMMA instabus ensures efficient and economical operation across the entire lifecycle of a building. The GAMMA instabus and Synco products provide optimal comfort solutions and energy-efficient applications. The interaction between lighting, solar protection, heating, ventilation and air-conditioning helps to achieve the greatest possible energy savings. Additionally, Building Control GAMMA instabus offers compliance with the KNX standard and the highest levels of flexibility.

A consistent strategy

Market-leading technologies and winning business models have been the foundation of our success for more than 170 years.

Electrification: shaping the new energy age

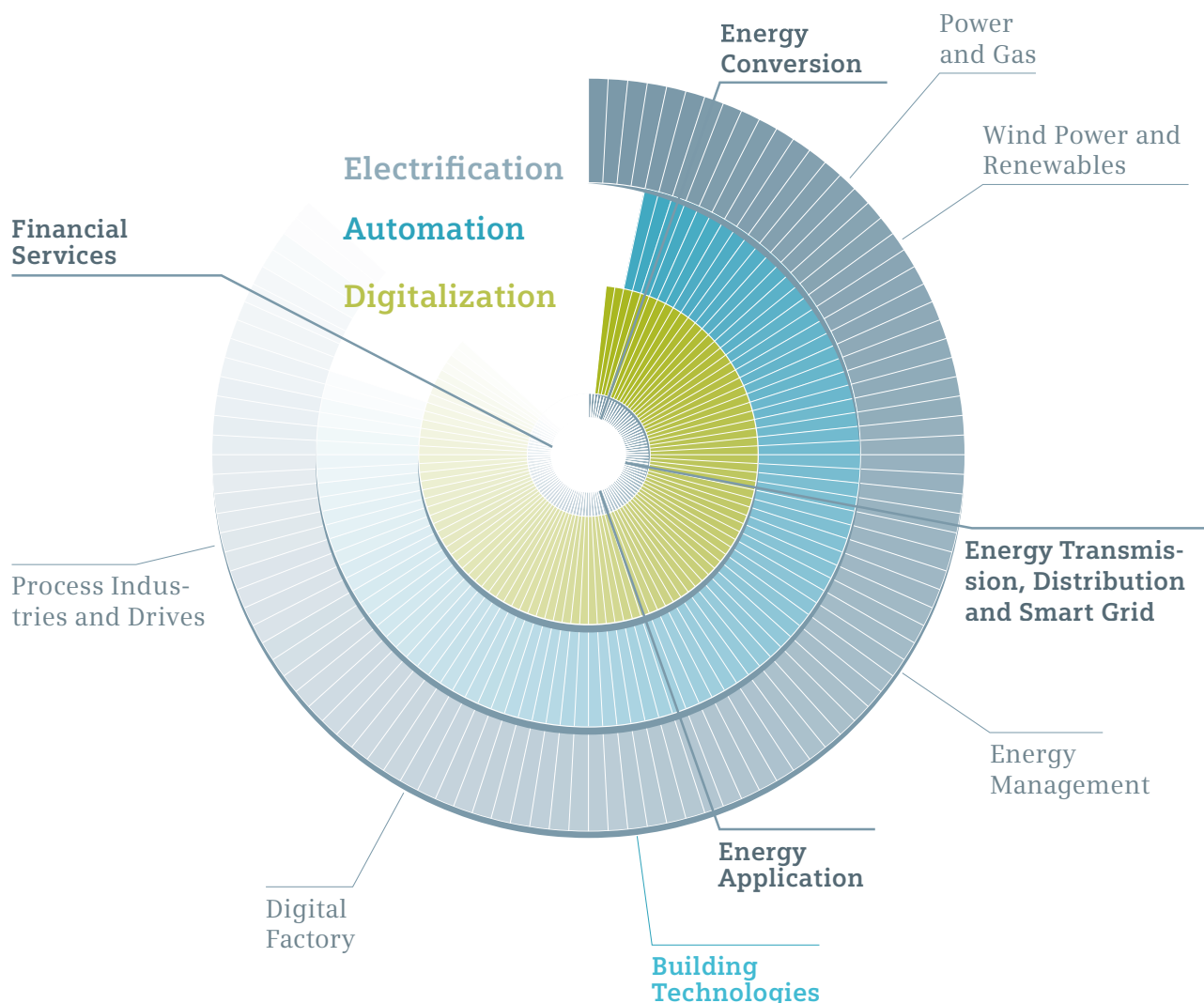
Siemens is positioned along the electrification value chain. Our products are highly efficient at generating, transmitting, distributing and using electrical energy. Electrification is where our roots are. We are still the leader in this space, and it is where our future lies.

Automation: shaping the fourth industrial revolution

We have been successfully automating our customers' processes for many years. We are a global leader in automation – a position we intend to maintain and expand.

Digitalization: shaping the digital enterprise

We want to exploit the opportunities offered by digitalization even more because added value for customers can increasingly be found in software solutions and intelligent data analytics.





Digitalization

„We now generate as much data every 48 hours as from the start of humanity to 2003“.¹

The world has never been more connected than today. Billions of smart devices and intelligent machines generate large amounts of data that unite the real and virtual world. By using digital technologies production, energy systems and infrastructures become more efficient, reliable and future-proof, and this applies to transportation networks as well as commercial and industrial buildings.

However: the future is digital. Therefore, the Federal Ministry of Economic Affairs in Germany calculates for Germany solely an additional growth of around 153 billion Euros by industry 4.0 until the year 2020.² Siemens wants to use and realize digitalization – efficient, sustainable and secure.

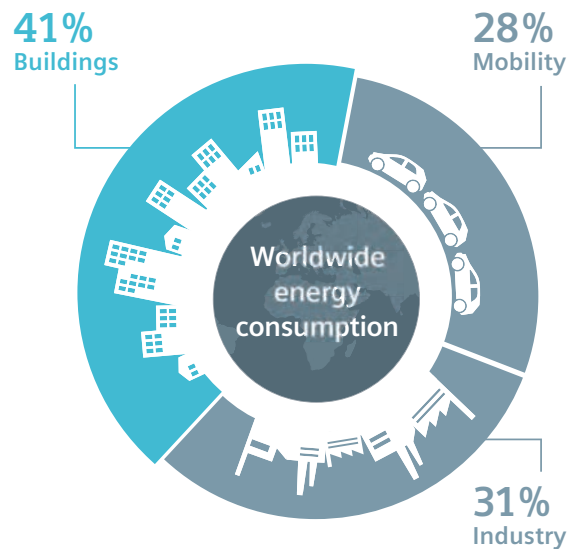
¹ Edward Bryan IBM
² [siemens.com/customer-magazine/de/home/industrie/fertigungsindustrie/digitalisierung-ist-nicht-aufzuhalten.html](https://www.siemens.com/customer-magazine/de/home/industrie/fertigungsindustrie/digitalisierung-ist-nicht-aufzuhalten.html)

[siemens.com/
digitalization](https://www.siemens.com/digitalization)



Building technology makes the difference

We know that 40% of the total energy consumption worldwide is consumed by buildings, so it is obvious that buildings can make a significant contribution to a green future. Heating, cooling or lighting, to mention just a few, are significant driver to influence energy consumption.



Perfect places in the digital world

Ingenuity for life creates perfect places - with digitalization. Buildings are changing their behavior: they communicate. Digitalization enables buildings to inform us how they feel, if they have a stressful time and what they lack of. We understand the messages they send and create perfect places. Building control GAMMA instabus offers intelligent solutions and products, which help to achieve very good energy balances, excellent comfort and a healthy feel-good atmosphere in the building.

With the help of digitalization we create special places which increase the value of real estates in order to feel good in all circumstances and to have the best technology for maximum efficiency, sustainability and safety.



Building information modeling (BIM)

Understanding the language of buildings

BIM is the equivalent of digitalization in the construction industry: A digitally supported process for planning, constructing and operating buildings that enables a significant productivity increase in the construction industry.

BIM helps to plan, build and operate buildings with greater insight. BIM data combined with real-time building data will enhance predictive data analytics over the building lifecycle. This enables significant gains around productivity, efficiency, reliability and overall quality.

Siemens owes its success in delivering digital services to its strengths and competencies in building management and predictive data

analytics, supported by reliable and secure infrastructure. With our trusted domain and IT expertise, we have built long-standing credibility around all disciplines of building technologies. In our pursuit of excellence to deliver the perfect place, you essentially benefit from our years of experience in building technologies.

Siemens BIM-compliant product data: The basis of all digital buildings

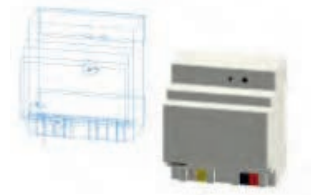
Siemens BIM-compliant product data allows easy integration of the data into CAD systems. With more than 1,800 products already available and more to come, Siemens is setting the benchmark for BIM-compliant product data.

siemens.com/bim



Benefits at a glance:

- Fast download of all data
- Uncomplicated plug-in installation
- Filter function for easy product selection
- Integrated IFC export function
- Regular plug-in update to keep data current
- Continuous expansion of BIM data



Graphic: IP Control Center – digital in BIM



Tools and Apps

GAMMA-TD

The GAMMA-TD website contains technical information about all KNX products from Siemens. You can download operating and installation instructions, descriptions of individual applications, VD files, technical product information, specification texts for invitations to tender as well as CE certificates.



siemens.com/gamma-td



ETS – Engineering Tool Software

ETS stands for Engineering Tool Software and is based on the world's only open standard for home and Building Control. ETS is a manufacturer-independent configuration tool that can be used to design and configure intelligent home and Building Control installations based on KNX. ETS is a software, which runs on Windows®-based computers and is maintained by the KNX Association. ETS can be used to commission any KNX product, making it possible to generate complete project documentation at any time.



knx.org



ETS Inside

The ETS Inside is a software tool of the KNX Association, which enables to adapt functions in a house individually. All GAMMA instabus-products, which don't have an ETS Plugin, can be commissioned with the ETS Inside. A list of all GAMMA and HVAC-products you can find on the GAMMA-TD: „ETS Inside Information“. (siemens.com/gamma-td)

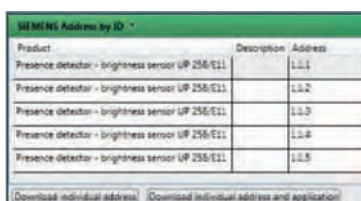


etsinside.knx.org



Siemens Address by ID

Users can program the individual address of a KNX device by using the KNX serial number. Siemens offers selected products with removable labels printed with the unique KNX serial number on. In practical work the installer of a KNX device can fix the label to the device in the installation plan. So later on the ETS expert can program the KNX device without pressing the programming button.

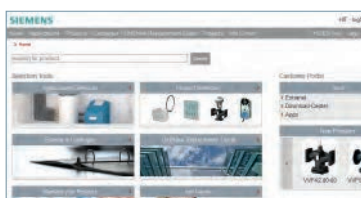


go.siemens.net/78812952



HIT Portal

Supports the European energy efficiency standard EN 15232. This tool provides more than 300 preconfigured standard HVAC configurations classified according to their energy saving potential. This allows users to select the application that best matches their requirements. Documents linked to the applications describe the conditions that have to be met to ensure compliance with one of the energy efficiency classes defined in EN 15232.



siemens.com/hit



Industry Mall

All automation, drive and installation products, including products from the HVAC and GAMMA portfolios, are listed in the Industry Mall, a consolidated information and order platform.



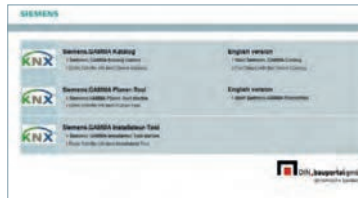
siemens.com/industrymall



Siemens actively supports every phase of your project with tools and apps.

GAMMA Planer and Installateur Tool

On the DIN Bau Portal you can access the GAMMA catalog from Siemens for Building Control products, compile product descriptions and specifications, and download them in multiple formats – online and as STLB Bau-compliant documents. The Siemens GAMMA Planner Tool offers the same functionality for creating master building specifications that will stand up to inspections by building authorities. In addition, the Siemens GAMMA Installer Tool allows you to quickly create complete tenders.



go.siemens.net/79722454



Available only in German

EPC – Energy Performance Classification Tool

The EPC Tool helps users determine the actual state of an existing building automation system and rates it according to one of four efficiency classes (A to D). When the building automation system is upgraded, the EPC Tool can be used to determine the system's new efficiency class. In addition, the EPC Tool helps users identify the profitability of modernization measures and to quickly prepare customized documentation.



siemens.com/epc



SIOS – Siemens Industry Online System

The Siemens Industry Online System (SIOS) is an Internet portal containing technical information about all KNX products from Siemens. You can download operating and installation instructions, descriptions of individual applications, VD files, technical product information, specification texts for invitations to tender as well as CE certificates. This makes the SIOS the go-to destination for all your questions about KNX products.

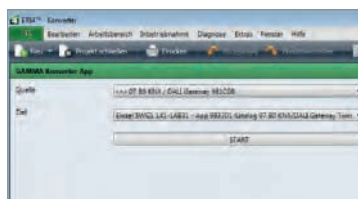


support.automation.siemens.com



GAMMA Converter app

GAMMA Converter app is used to exchange applications of products from Siemens automatically. It expands the basic functionality of the GAMMA converter tools with the feature, to exchange the application within the ETS automatically. Therefore, the app uses for converting the data the KNX converter library of Siemens, which can be downloaded for free.



go.siemens.net/78812952



Siemens Download Center

The Download Center app allows you to download all brochures, instructions, specifications and datasheets published by the Siemens Building Technologies to your smartphone or tablet.

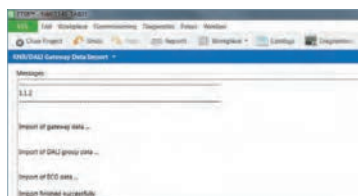


is.gd/YDScZ5



ETSApp DALI data import

This ETSApp enables the user to import data of an Excel or CSV file to ETS to add configured KNX/DALI Gateways into a project. The ETSApp DALI allows parameter settings import for the KNX/DALI Gateways N141/03, N141/21 and N141/31.



go.siemens.net/78812952





How we support you

In order to transform buildings into efficient systems that operate economically and reliably as well as to achieve higher returns, we offer a wide-ranging support. GAMMA instabus from Siemens is based on the world-wide KNX standard for home and building systems, so interoperability with all certified KNX devices on the market is guaranteed. With the KNX technology you can flexibly realize and optimize simple and also cross-discipline solutions according to individual needs. KNX products are produced by more than 400 manufacturers worldwide. By interacting with other systems, there is a unique flexibility not only in the planning phase but also in usage changes.

Comprehensive solutions enable networked applications. Lighting, solar protection, heating, ventilation and air conditioning can be controlled via display and operation units. All information about products and systems can be found on our online databases. In addition, our regional sales support you as well as our general support. There are also extensive KNX training courses offered for the GAMMA products.

go.siemens.
net/26761870



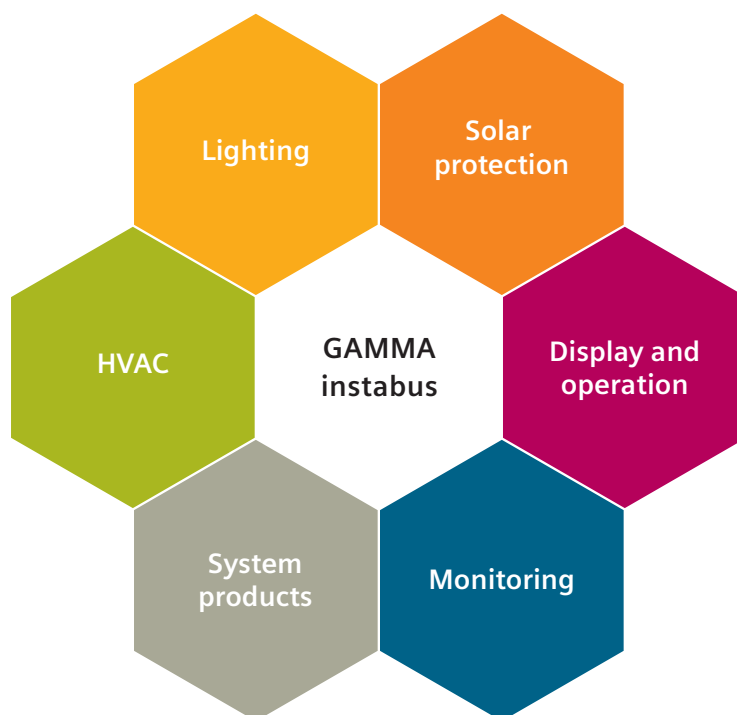
Building Control GAMMA instabus

Energy efficient room and Building Control



Building Control

GAMMA instabus from Siemens is based on the worldwide KNX standard for home and Building Control, which guarantees interoperability with all certified KNX devices on the market. The comprehensive product portfolio consists of smart field devices and enables networked applications. GAMMA instabus offers products for lighting, solar protection, display and operation, energy monitoring, system products as well as heating, ventilation and air-conditioning. With GAMMA instabus and Synco primary control, it is possible to reach efficiency class A in buildings according to the BACS Energy Performance Classes EN 15232 or other energy labels. Through the standardized commissioning software (ETS) and products for different installation standards (IEC and UL/NEMA) ensure applications for the worldwide markets. So, if GAMMA instabus operates a building, the lifecycle costs are low.



Lighting

The GAMMA instabus product portfolio offers regarding lighting compact KNX/DALI Gateway as well as LED dimmer. For this, there are many sensors for detecting presence, motion, and controlling lighting levels.



Solar protection

For controlling solar protection, door and window contact actuators, the GAMMA instabus product portfolio offers blind actuators and weather stations to measure light, temperature, wind and rain.



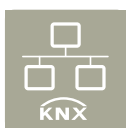
Display and operation

The GAMMA instabus product portfolio offers various alternatives for display and operation for lighting, solar protection and HVAC: Starting from easy pushbuttons and room thermostat, multi functional room operation units to web based systems.



Heating, ventilation and air-conditioning (HVAC)

For heating, ventilation and air-conditioning (HVAC) in a room and building, the GAMMA instabus product portfolio offers room temperature controller, thermal actuators and actuating drives.



System products

The system products of GAMMA instabus such as power supply, IP Router, line coupler, Gateways, Automation Controller and modular actuators are available for several installation standards (IEC and UL/NEMA).



Monitoring

Monitoring enables to measure, compare and evaluate electrical power and performance, heat flow volume, consumption of gas, water and oil in various line and bar charts.

GAMMA instabus – New products



Universal dimmer N 554D31

The new universal dimmer allows with four independent channels seamless dimming adjustment of dimmable LED retrofit lamps and those in all other dimmable categories, with no minimum load.

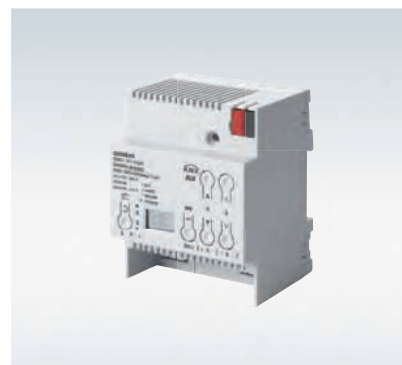
→ Page 5–17



Room thermostat RDF600KN/S

The room thermostat with LCD for fan coil units and compressors in DX-type equipment has four buttons for the functions: switching, dimming, blinds control and 8-bit scene control.

→ Page 7–15



New application program for the KNX/DALI Gateway N141/31

The KNX/DALI Gateway N141/31 has two application programs now. One of them includes the functions Stand-by and Burn-in, besides the emergency lights support and the individual control of ECGs.

→ Page 5–24



Room operation units QMX3 ...

All multi-function room units with control functions for the individual requirements of all disciplines in the room are available in the colors white and new also in the color black.

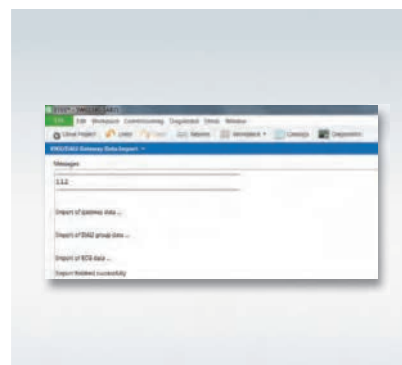
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Electromotoric rotary actuator GLB111.9E/KN

The electromotoric rotary actuator is for control ball valves up to DN50, without spring-return. The delivered product is pre-wired with a connection cable and KNX cable.

→ Page 7–50



ETSApp DALI data import

This ETS App enables the user to import data of an Excel or CSV file to ETS to add configured KNX/DALI Gateways into a project. The ETSAPP DALI allows parameter settings import for the KNX/DALI Gateways N141/03, N141/21 and N141/31.

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GAMMA instabus

Suitable for all DELTA frames

DELTA miro Aluminium



DELTA style



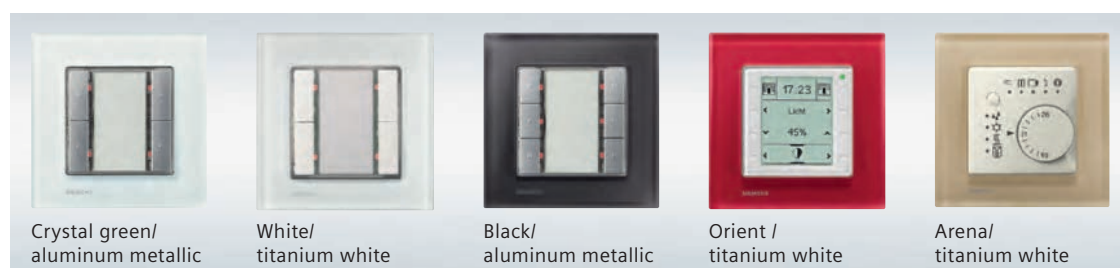
DELTA line



DELTA miro wood



DELTA miro Glas



DELTA miro Color



Training GAMMA instabus

Certified training options in all areas of GAMMA Building Control



KNX – a strong partner for your success

KNX – the worldwide standard for home and building control – enables on demand and cross-discipline control of room temperature and energy management as well as lighting and shading. Installed by qualified Building Control technicians, the intelligent networking of building automation products offers completely new ways to increase energy efficiency, security and comfort.

The certified training program from Siemens provides you with comprehensive and in-depth knowledge on every aspect of KNX. The GAMMA training kit offers you an extremely simple self-instruction option for training in a wide range of functions and applications, as well as for consolidating your knowledge and abilities in the KNX field – leading you step by step to success.

Practical learning made easy

With our wide range of courses and practical trainings on all aspects of KNX, IP and DALI you can gain the extra edge you need to take the lead in the market. For your certified training and future-proof specialization, we offer you a wide choice of courses – from KNX certificate courses like the KNX basic course and the KNX trainer seminar to application-related courses including lighting, control and monitoring with KNX.

Putting theory into practice from the start

Our training courses offer a balanced mix of theory and practice and so contribute to your success in the market. Our high quality training courses are distinguished by their high level of practical content.



GAMMA Training Kit

KNX Training with the GAMMA Training Kit (GTK)

If the training case Classic School is fully equipped, it is suitable for the organization of mobile KNX classes for system integrators, electrical installers and planners alike. The training cases offer the option to mount three additional modules individually and add also the DALI module when required. On the standard Modules are a push-button mounted with a programmable interface and a room control unit.

All GAMMA Training Kits are robust and built as a Trolley for a safe and easy transportation of the technique. To order the GAMMA Training Kit and the Operation and Function Modules, please contact your local sales for receiving an offer.



Contact and support

Further information can be found here:



Building Control GAMMA instabus:
siemens.com/gamma



HIT Portal:
siemens.com/hit



Technical documentation:
siemens.com/gamma-td



SIOS:
siemens.com/sios

Support: Mail: support.automation@siemens.com; Website: siemens.com/automation/support-request

Notes

Display and operation units



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Display and operation units

Overview and selection guides

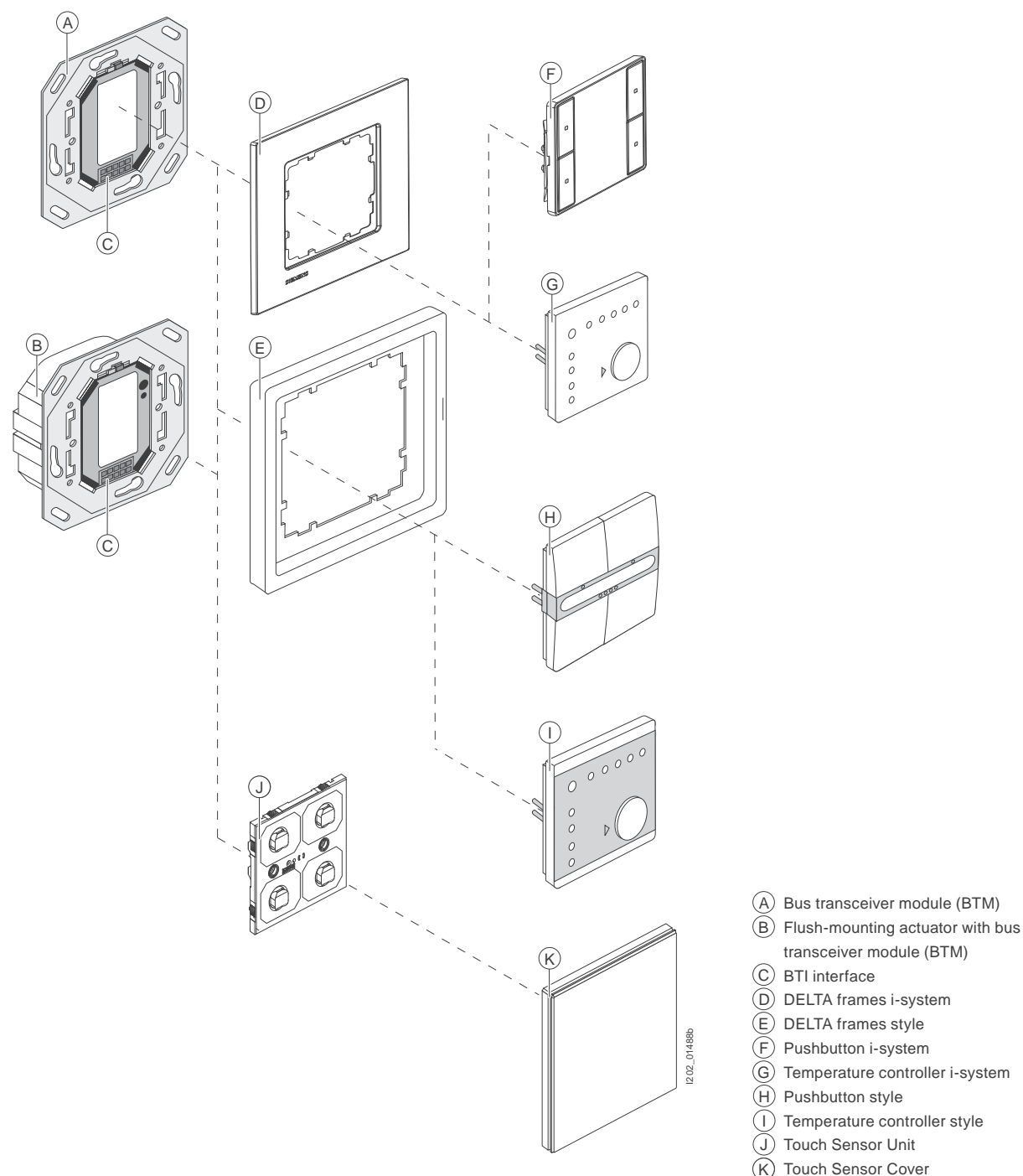
Pushbuttons bus transceiver module (BTM)

Modular bus transceiver module and flush-mounting actuator

A key feature of the GAMMA instabus is its uniform bus transceiver module. The bus transceiver module (BTM) can be used as a stand-alone unit, as well as a combined version in various devices of the flush-mounting actuator range.

Implementation of the BTI interface (Bus Transceiver Interface) with the bus transceiver module (BTM) ensures maximum flexibility and an impressive range of functions. Bus coupling units (BTM) and flush-mounting actuators with integrated bus transceiver modules (BTM) enable the use of GAMMA display/operator interfaces, such as pushbuttons, room temperature controllers and operation units in a wide range of designs. Thus, all GAMMA instabus operator interfaces with BTI interface in the design lines i-system, DELTA style and touch sensors glass can be combined with either a bus transceiver module (BTM) or a flush-mounting actuator with bus transceiver module (BTM).

This reduces planning work and facilitates installation and commissioning. The application programs of the flush-mounting actuators are identical to those of the functionally equivalent devices from the modular room control range. This means that all devices have the same standard application program - regardless of mounting type - whether flush-mounting, with or without mounting frame - or whether designed for installation in the room control box and automation module box.



GAMMA arina-Taster

Touch sensors GAMMA arina – in a matching design program

The attractive design of the touch sensors GAMMA arina is harmonized with the switch and socket program DELTA arina. GAMMA arina was designed in China for the Asian market. This design line consists of several switches and a communicative KNX thermostat. The arina program is a complete comprehensive solution for room automation. Switches, sockets and data outlets in the arina program together with intelligent display and operation units generate a coordinated, harmonious appearance in the room.

Harmony in variety and function

The parameters of the touch sensors GAMMA arina are conform to the parameters and functions of the existing program DELTA i-system and style. The installers and system integrators can parameterize with a continuous, harmonious application program in the usual structure. With the touch sensors GAMMA arina all standard functions in a room can be controlled.

There are 1-fold, 2-fold and 4-fold sensors, with orientation lights, with or without status LED to choose. The 4-fold touch sensors can be featured with a temperature sensor. Therefore the integration into a room temperature control is possible. Another version of the 4-fold touch sensors is equipped with an IR receiver decoder. All room functions for lighting, solar protection and room climate can be controlled via mobile remote control. With the integrated scene control a complete scene can be controlled with a single touch.

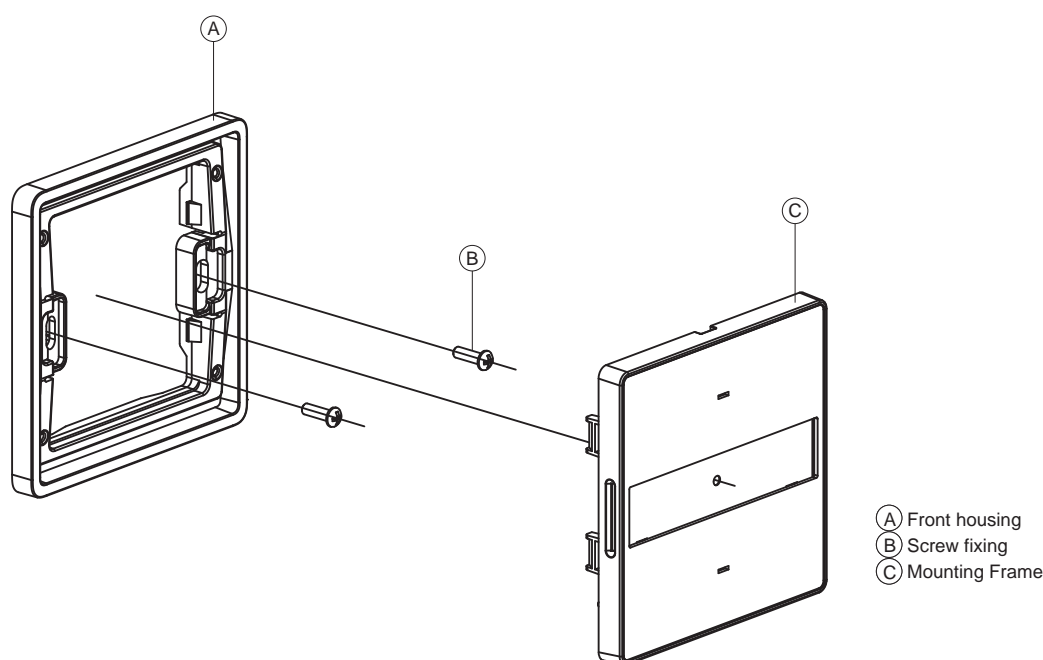
Technical structure

The touch sensors GAMMA arina are designed as a compact mono block version. A separate bus connection is not necessary. The structure and installation of the touch sensors GAMMA arina are similar to the product line arina. The device block is square shaped and can only be picked up from a square shaped installation box (86 x 86 millimeters). The program is issued to the UK installation standard or for the area Asia Pacific/ China.

The touch sensors GAMMA arina are installed in a mounting frame. They can be mounted in simple or multiple frames. The mounting frames must be ordered separately via Siemens LMV WA Cina. (www.siemens.com.cn/WA)

Note:

The touch sensors GAMMA arina are not designed for round installation boxes in accordance with DIN / VDE.

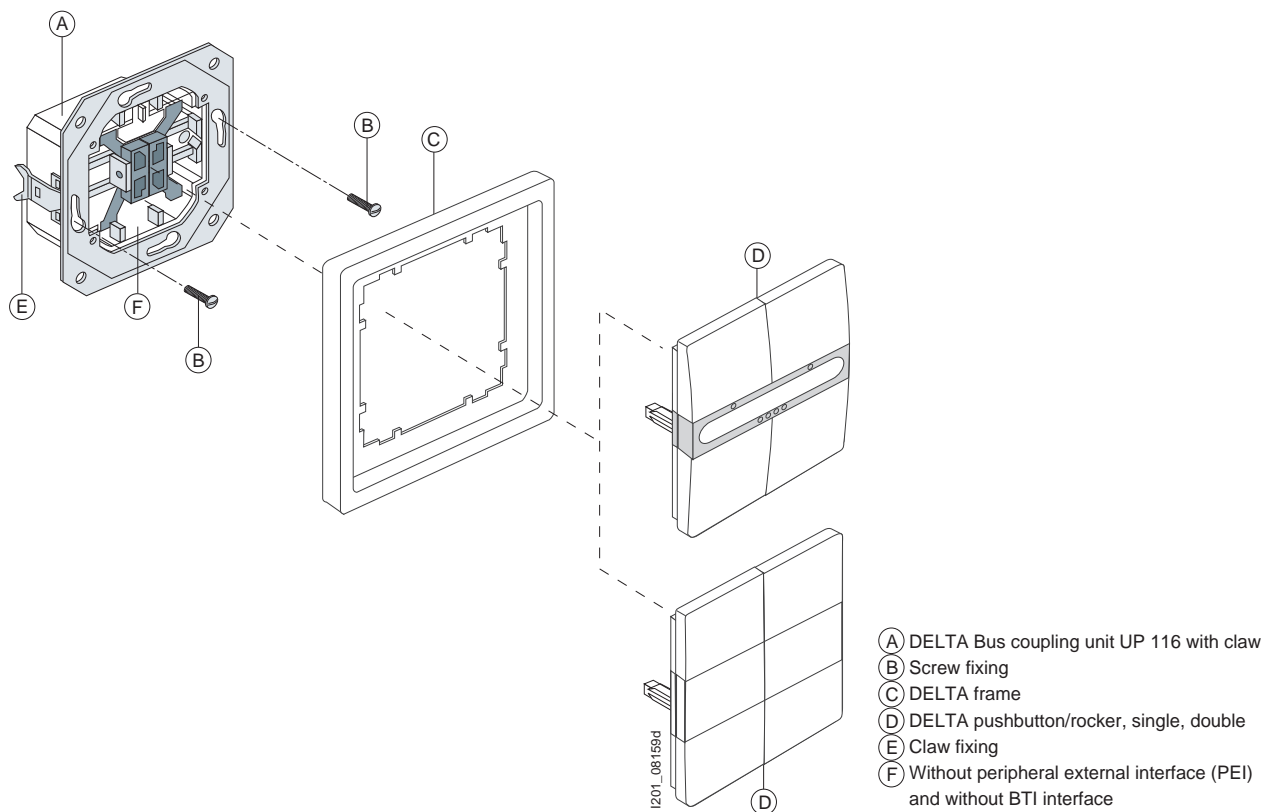


Display and operation units

Overview and selection guides

Pushbuttons for DELTA bus coupling units

Operator interface with DELTA bus coupling unit



Display and operation units

Overview and selection guides

Pushbuttons with IR receiver decoder

Overview IR products

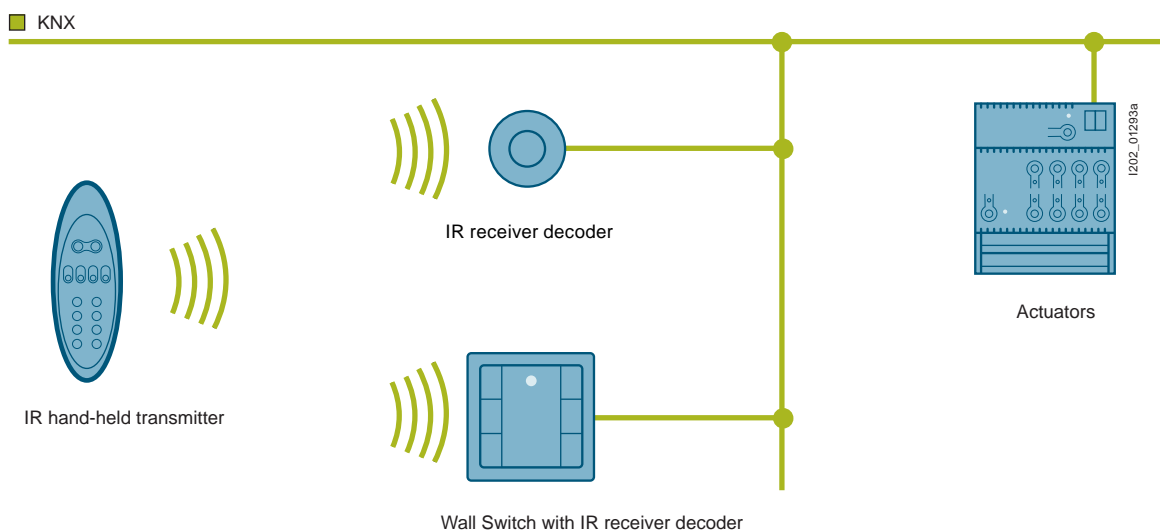
IR products are available for the remote control of room functions. Compared to radio solutions, IR is particularly interesting because

- there are applications in which radio-based remote control is not permitted (e. g. hospitals)
- the frequencies used are not allowed in all countries

Application

- Remote control of room functions: Lighting, sun protection, room climate, scenes, etc.
- Mounting on "movable" walls
- Use in hospitals where radio solutions are often prohibited
- Additional room functions which can be operated only by remote control (e. g. by service personnel, doctors, teachers, etc.)

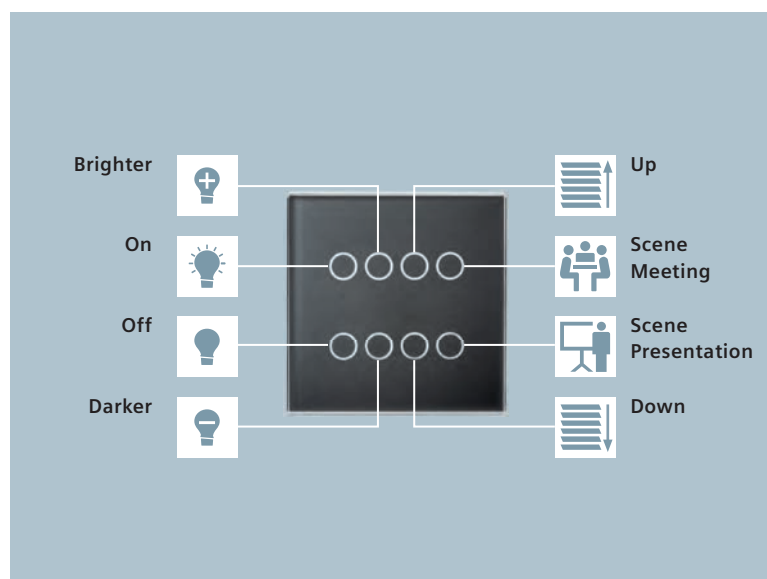
System overview about IR products in a KNX installation system



Display and operation units

Overview and selection guides

Touch sensors glass



Touch sensors glass – stylish and high-quality design covers

High-quality design – combined with sensitive touch operation

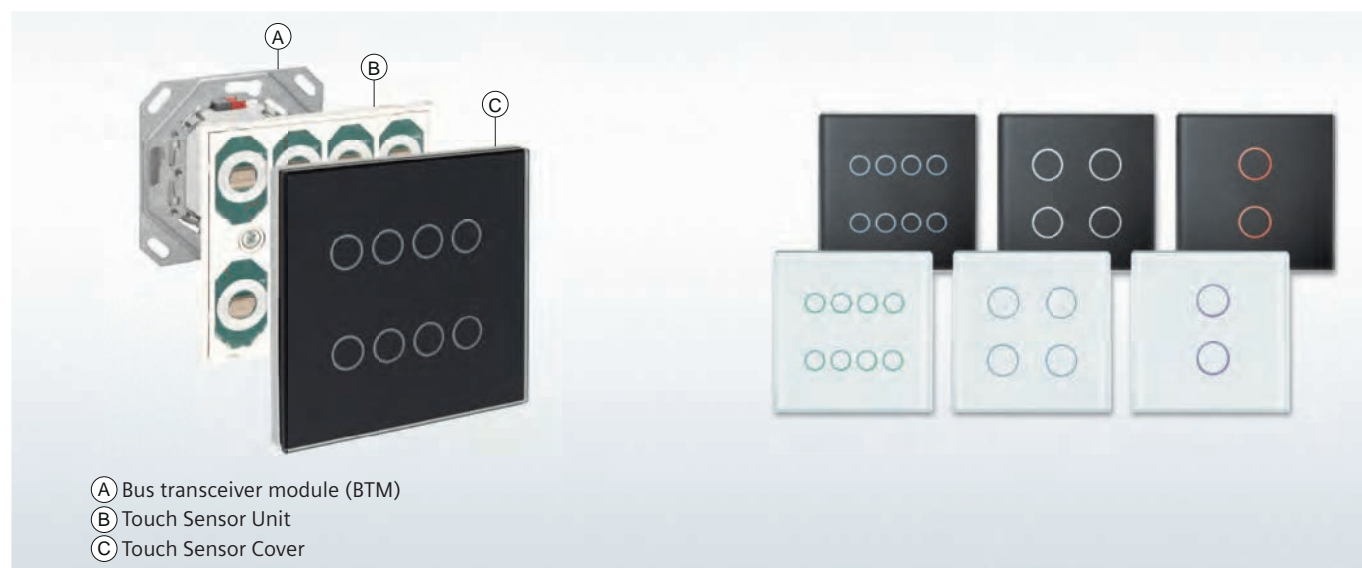
The representative design of these touch sensors is qualified for an upscale room setup, e.g. for conference rooms, hotels, representative office buildings or enhanced residential areas. The touch sensors glass in the colors white and black match to the frame program DELTA miro glass from Siemens, so the switches, sockets and operation units give the room a harmonious appearance.

Ambience via press of a touch area

A touch sensor glass controls the basic functions in a room. At the touch of a button of each touch sensor variant, a complete scene is activated. For example, a conference room can be set to presentation mode within seconds: The blinds close, the room lighting is dimmed, the screen is let down and the beamer switches on.

Technical structure of touch sensors glass

The design cover with touch sensor unit is placed on the bus coupling unit. This means that the touch sensors glass base on the uniform concept of bus coupling concept.



Display and operation units Overview and selection guides IP Control Center, Web-Visualization

Visualization with a PC



Visualization with a tablet



Web visualization for a KNX system

The IP Control Center N 152 allows web visualization of KNX systems on various web-based operating devices. The visualization controller can be used to design intuitive operating and display interfaces for PCs, laptops, tablets or smartphones on an individual basis.

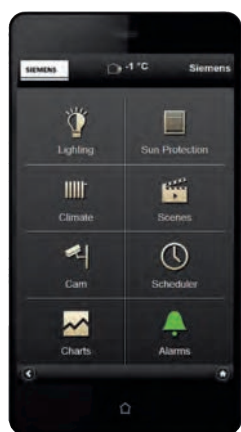
Up to 1250 values and states can be set for the various building and room functions, as well as a high-performance application module and the scope also includes an annual time switch program with an astronomic calendar, while the scene control allows you to call up and record up to 5000 scenes and events. A range of data points, e.g. consumption values and weather records can also be shown in the form of curve or bar charts, while data can be monitored and stored to facilitate fault diagnosis and via an interface, IP devices can be controlled using TCP/UDP commands. Alarm notifications are signaled both visually and audibly as well as being managed in an alarm history. Alarm notifications can also be sent as recorded trend data or monitor data by email.

Your choice of web content can be shown, such as news or weather forecasts, as well as scope to display images or films from IP cameras. The commissioning process is performed with the ETS, while a graphic editor and smart editor are permanently installed in the device to help when developing projects. This also eliminates the need for any additional software.

The web editor allows wide-ranging display and operating elements to be arranged using the drag-and-drop approach, while the user interface can be individually configured with personal or pre-existing elements from a comprehensive library. The scope also extends to six different selectable styles and building views and floor plans can be depicted as background images.

The Smart Editor allows you to develop visualizations specially tailored for mobile browsers on smartphones or tablets, swiftly and intuitively.

Visualization with a smartphone



A clear model project is available via download for the IP Control Center.

For applications in industrial environment, e.g. installation in a control board, are powerful operation terminals SIMATIC ITC from 12" to 22" available. For further information see:

<http://w3.siemens.com/mcmsg/pc-based-automation/en/industrial-pcl/industrial-monitors/simatic-industrial-thin-client/Pages/SIMATIC-Industrial-Thin-Client.aspx>

Display and operation units

Overview and selection guides

Visualization, software

Overview ComBridge Studio Evolution



IPAS is one of the leading providers of web-based visualization. With ComBridge Studio Suite, the HTML-based visualization software, IPAS was already able to offer solutions for individual large-scale projects, such as airports, shopping centers, administration buildings and distributed locations.

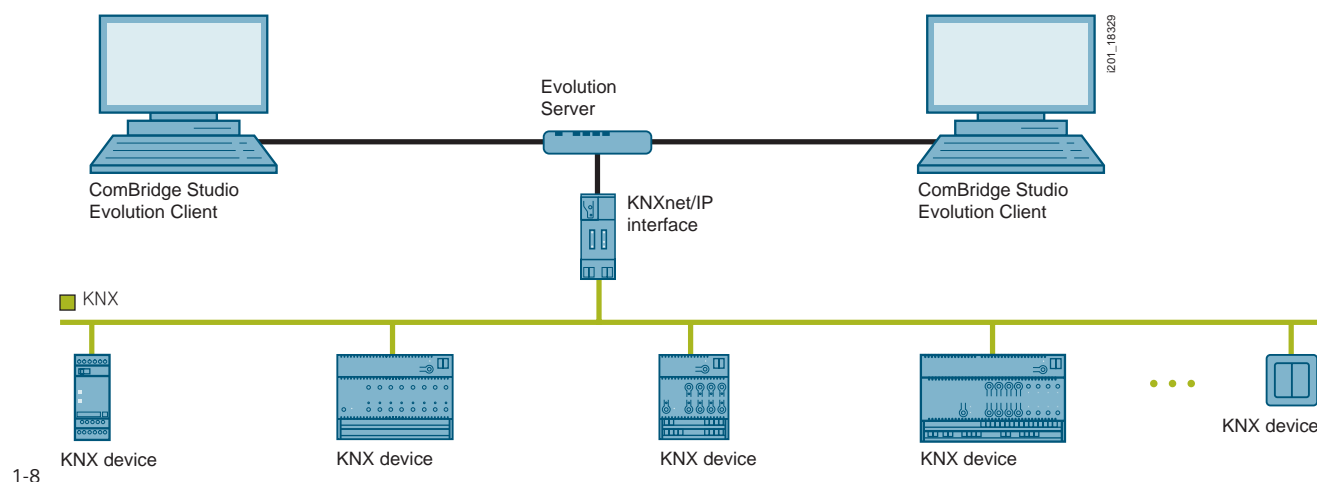
All this experience flowed into the latest development of ComBridge Studio Evolution, which now permits extremely high quantities of data, or hundreds of KNXnet/IP interfaces in a project with several hundred users to be realized. As well as the representation of statuses and the operation of functions, ComBridge Studio Evolution offers optimum support for the configuration of complex functions, such as scenes, yearly programs, graphical logics and much, much more. Based on Adobe Flash, it now couldn't be easier to insert design-oriented elements and functions in visualizations, so that mapping the actual situation is child's play.

ComBridge Studio Evolution also now enables the representation of even complex database analyses in an individual and attractive design. A particular highlight of ComBridge Studio Evolution is the Smart Metering module. This module analyses consumption data that are stored in the database. Based on current consumption data, the Smart Metering module calculates the probable weekly, monthly and yearly consumption, so that users are always informed as to what costs are generated by their energy consumption in a given period. It is also possible to graphically compare different periods and evaluate them. The consumption data can be evaluated directly from KNX counters, such as Siemens energy counters (see Chapter Counters).

Another huge advantage is that it is operating system-independent ComBridge Studio Evolution is configured directly on the ComBridge Studio Evolution server. The application tool is a standard browser in connection with Adobe Flash Player. Adobe Flash Player can be downloaded free from the Internet.

For further information:
www.ipas-products.com
 Order address:
 IPAS GmbH
 Hölscherstrasse 27
 47167 Duisburg, Germany
 Telephone: +49 203 37867-0
 Fax: +49 203 37867-10

The Evolution Server for large-scale projects






Display and operation units

Technical specifications

Pushbuttons bus transceiver module (BTM)

Pushbuttons bus transceiver module (BTM)


	<div>Glass</div> 			<div>i-system</div> 								<div>DELTA style</div> 							
Design																			
Type	UP 211	UP 212	UP 213	UP 221/.2	UP 221/.3	UP 222/.2	UP 222/.3	UP 223/.2	UP 223/.3	UP 223/.4	UP 223/.5	UP 285/.2	UP 285/.3	UP 286/.2	UP 286/.3	UP 287/.2	UP 287/.3	UP 287/.4	UP 287/.5
Application program ¹⁾	910901			909301															
Enclosure data																			
Dimensions																			
• Width [mm]	95			55								68							
• Height [mm]	95			55								68							
• Depth [mm]	10.2			11								14							
Display/control elements																			
Individual pushbuttons	2	4	8	2	2	4	4	6	6	6	6	2	2	4	4	8	8	8	8
Pushbutton pairs	1	2	4	1	1	2	2	3	3	3	3	1	1	2	2	4	4	4	4
Operation (v: vertical, h: horizontal)	v	v	v	h	h	h	h	h	h	h	h	v	v	v	v	v	v	v	v
LED per pushbutton pair for status indication	2	2	2		2		2		2	2	2		2		2		2	2	2
LED for orientation light (ON/OFF configurable/dimmable)	RGB	RGB	RGB	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
IR activity display configurable via LED												■							■
LED brightness configurable and controllable via object	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Bus connection																			
For plugging onto a bus transceiver module (BTM) or a flush-mounting actuator with bus transceiver module (BTM)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Inputs																			
IR receiver decoder												■							■
IR channels in blocks of 64												16							16
Integrated room temperature sensor											■							■	
Proximity sensor	■	■	■																
Input functions																			
Switching																			
Switching ON/OFF/OVER	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Pushbutton function (bell function)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Dimming																			
Dimming with stop telegram (4-bit)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
• Short button press, ON/OFF	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
• Long button press, BRIGHTER/DARKER	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
One-pushbutton dimming	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Value transmission																			
8 bit/percent/16 bit	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Brightness value	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Temperature value	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Positively driven operation	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Time-delayed transmission of a second telegram, depending on main function	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Button deactivation	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Shutter/blind																			
Shutter/blind control	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
• Short button press, slat OPEN/CLOSED or STOP	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
• Long button press, UP/DOWN	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
One-pushbutton sun protection	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Scene																			
Integrated 8-bit scene control (channels)	8	8	8								8	8						8	8
Assignments per channel	8	8	8								8	8						8	8
Store and call up scene, 8-bit	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Store and call up scene, 1-bit	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Short or long button press (store/call up scene), configurable	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Status																			
LED on/off/flashing depending on the value (1 bit/8 bit/16 bit)	■	■	■		■		■		■	■	■		■		■		■	■	■
Pushbutton operation display configurable via LED	■	■	■		■		■		■	■	■		■		■		■	■	■

¹⁾ For current application programs, see www.siemens.com/gamma-td

Display and operation units

Technical specifications

Pushbuttons flush-mounted




Pushbuttons flush-mounted								
Design	GAMMA arina 							
Type	UP 201/..2	UP 201/..3	UP 202/..2	UP 202/..3	UP 203/..2	UP 203/..3	UP 203/..4	UP 203/..5
Application program ¹⁾	910301							
Enclosure data								
Dimensions								
• Width [mm]	86							
• Height [mm]	86							
• Depth [mm]	14,6							
Display/control elements								
Individual pushbuttons	2	2	4	4	8	8	8	8
Pushbutton pairs	1	1	2	2	4	4	4	4
Operation (v: vertical, h: horizontal)	v	v	v	v	v	v	v	v
LED per pushbutton pair for status indication		2		2		2	2	2
LED for orientation light (ON/OFF configurable/dimmable)	■	■	■	■	■	■	■	■
IR activity display configurable via orientation LED								■
LED brightness configurable and controllable via object	■	■	■	■	■	■	■	■
Bus connection								
Monoblock	■	■	■	■	■	■	■	■
Inputs								
IR receiver decoder								■
IR channels in blocks of 64								16
integrated room temperature sensor							■	
Input functions								
Switching								
Switching ON/OFF/OVER	■	■	■	■	■	■	■	■
Pushbutton function (bell function)	■	■	■	■	■	■	■	■
Dimming								
Dimming with stop telegram (4-bit)	■	■	■	■	■	■	■	■
• Short button press, ON/OFF	■	■	■	■	■	■	■	■
• Long button press, BRIGHTER/DARKER	■	■	■	■	■	■	■	■
One-pushbutton dimming	■	■	■	■	■	■	■	■
Value transmission								
8 bit/percent/16 bit	■	■	■	■	■	■	■	■
Brightness value	■	■	■	■	■	■	■	■
Temperature value	■	■	■	■	■	■	■	■
Positively driven operation	■	■	■	■	■	■	■	■
Time-delayed transmission of a second telegram, depending on main function	■	■	■	■	■	■	■	■
Button deactivation	■	■	■	■	■	■	■	■
Shutter/blind control								
• Short button press, slat OPEN/CLOSED or STOP	■	■	■	■	■	■	■	■
• Long button press, UP/DOWN	■	■	■	■	■	■	■	■
One-pushbutton sun protection	■	■	■	■	■	■	■	■
Scene								
Integrated 8-bit scene control (channels)							8	8
Assignments per channel							8	8
Store and call up scene, 8-bit	■	■	■	■	■	■	■	■
Store and call up scene, 1-bit	■	■	■	■	■	■	■	■
Short or long button press (store/call up scene), configurable	■	■	■	■	■	■	■	■
Status								
LED on/off/flashing depending on the value (1 bit/8 bit/16 bit)	■	■	■	■	■	■	■	■
Tasterbetätigungsanzeige über LED parametrierbar	■	■	■	■	■	■	■	■

¹⁾ For current application programs, see www.siemens.com/gamma-td

Display and operation units

Technical specifications

Pushbuttons with IR receiver decoder





Pushbuttons with IR receiver decoder			
	i-system	DELTA style	GAMMA arina
			
Design			
Type	UP 223/..5	UP 287/..5	UP 203/..5
Application program ¹⁾	909301		910301
Enclosure data			
Dimensions			
• Width [mm]	55	68	86
• Height [mm]	55	68	86
• Depth [mm]	11	14	14,6
Display/control elements			
Individual pushbuttons	6	8	8
Pushbutton pairs	3	4	4
Operation (v: vertical, h: horizontal)	h	v	v
LED per pushbutton pair for status indication	2	2	2
LED for orientation light (ON/OFF configurable/dimmable)	■		■
IR activity display configurable via orientation LED	■	■	■
LED brightness configurable and controllable via object	■	■	■
Bus connection			
For plugging onto a bus transceiver module (BTM) or a flush-mounting actuator with bus transceiver module (BTM)	■	■	
Inputs			
IR receiver decoder	■	■	■
IR channels in blocks of 64	16	16	16
Input functions			
Switching			
Switching ON/OFF/OVER	■	■	■
Pushbutton function (bell function)	■	■	■
Dimming			
Dimming with stop telegram (4-bit)	■	■	■
• Short button press, ON/OFF	■	■	■
• Long button press, BRIGHTER/DARKER	■	■	■
One-pushbutton dimming	■	■	
Value transmission			
8 bit/percent/16 bit	■	■	■
Brightness value	■	■	■
Temperature value	■	■	■
Positively driven operation	■	■	■
Time-delayed transmission of a second telegram, depending on main function	■	■	■
Button deactivation	■	■	■
Shutter/blind control			
• Short button press, slat OPEN/CLOSED or STOP	■	■	■
• Long button press, UP/DOWN	■	■	■
One-pushbutton sun protection	■	■	■
Scene			
Integrated 8-bit scene control (channels)	8	8	8
Assignments per channel	8	8	8
Store and call up scene, 8-bit	■	■	■
Store and call up scene, 1-bit	■	■	■
Short or long button press (store/call up scene), configurable	■	■	■
Status			
LED on/off/flashing depending on the value (1 bit/8 bit/16 bit)	■	■	■
Pushbutton operation display configurable via LED	■	■	■

¹⁾ For current application programs, see www.siemens.com/gamma-td

Display and operation units

Technical specifications

Pushbuttons for DELTA bus coupling units

Pushbuttons for DELTA bus coupling units				
				
Type	UP 116/01	UP 116/11	UP 116/21	UP 116/31
Application program ¹⁾	211201	221201	211101	221101
Enclosure data				
For installation in flush-mounting switch and socket boxes with Ø = 60 mm	■	■	■	■
Dimensions				
• Width [mm]	71	71	71	71
• Height [mm]	71	71	71	71
• Depth [mm]	32	32	32	32
Mounting type				
Claw fixing	■	■	■	■
Screw fixing	■	■	■	■
Display/control elements				
LED per pushbutton pair for status indication or configurable as orientation light	1	1	1	1
Mounting of rockers from the DELTA product ranges	■	■	■	■
Rocker button, intermediate position (pushbutton with 2 operating points)	1	2		
Rocker button, pushbutton position (pushbutton with 1 operating point)			1	2
Bus connection				
Integrated bus coupling units	■	■	■	■
General functions				
Max. number of group addresses	11	11	11	11
Max. number of assignments	15	15	15	15
Input functions				
Switching				
Switching ON/OFF	■	■	■	■
Switching OVER	■	■	■	■
Dimming				
Dimming with stop telegram (4-bit)	■	■		■
• Short button press, ON/OFF	■	■		■
• Long button press, BRIGHTER/DARKER	■	■		■
Dimming with cyclic transmission (4-bit)	■	■		■
• Short button press, ON/OFF	■	■		■
• Long button press, BRIGHTER/DARKER	■	■		■
Shutter/blind control				
• Short button press, slat OPEN/CLOSED or STOP	■	■		■
• Long button press, UP/DOWN	■	■		■
Scene				
Store and call up scene, 1-bit in conjunction with scene module	1	2		
Short or long button press (store/call up scene), configurable	■	■		
Status				
Display of any status objects (1-bit)	■			
Display of pushbutton objects	■		■	■





¹⁾ For current application programs, see www.siemens.com/gamma-td

Display and operation units

Technical specifications

Wall-mounting pushbuttons

Wall-mounting pushbuttons

				
Type	AP 115/01	AP 115/11	AP 115/21	AP 115/31
Application program ¹⁾	211201	221201	211101	221101
Enclosure data				
Surface-mounting enclosures	■	■	■	■
Degree of protection	IP44	IP44	IP44	IP44
Dimensions				
• Width [mm]	66	66	66	66
• Height [mm]	75	75	75	75
• Depth [mm]	52	52	52	52
Display/control elements				
LED per pushbutton pair for status indication or configurable as orientation light	1		1	
Rocker button, intermediate position (pushbutton with 2 operating points)	1	2		
Rocker button, pushbutton position (pushbutton with 1 operating point)			1	2
Bus connection				
Integrated bus coupling units	■	■	■	■
General functions				
Max. number of group addresses	11	11	11	11
Max. number of assignments	15	15	15	15
Input functions				
Switching				
Switching ON/OFF	■	■	■	■
Switching OVER	■	■	■	■
Dimming				
Dimming with stop telegram (4-bit)	■	■		■
• Short button press, ON/OFF	■	■		■
• Long button press, BRIGHTER/DARKER	■	■		■
Dimming with cyclic transmission (4-bit)	■	■		■
• Short button press, ON/OFF	■	■		■
• Long button press, BRIGHTER/DARKER	■	■		■
Shutter/blind control				
• Short button press, slat OPEN/CLOSED or STOP	■	■		■
• Long button press, UP/DOWN	■	■		■
Scene				
Store and call up scene, 1-bit in conjunction with scene module	1	2		
Short or long button press (store/call up scene), configurable	■	■		
Status				
Display of any status objects (1-bit)	■			
Display of pushbutton objects	■		■	■







¹⁾ For current application programs, see www.siemens.com/gamma-td

Display and operation units

Technical specifications

Room temperature controller

Room temperature controller

									
Type	RDG100KN	RDG160KN	RDG165KN	RDG405KN	RDF800KN	RDF600KN	RDF600KN/S	UP 237K i-system	UP 254K DELTA style
Design									
Wall mounted	■	■	■	■					
Semi-Flush Mounted					★	★	★	■	■
For VDE/CEE box					■	■	■	■	■
For British Standard box									
Housing									
Digital display	■	■	■	■	■	■	■		
Touch Screen Display					★				
LED indicators								■	■
Setpoint rotary knob	■	■	■	■				■	■
Operating mode button	■	■	■	■		■	■	■	■
Fan speed button	■	■	■	■		■	■		
Buttons for light and blind control							■		
Bus connection									
Integrated bus coupling units	■	■	■	■	■	■	■		
For plugging onto a bus coupling units (BTM)								■	■
Power supply									
Bus-powered electronic								■	■
Terminal voltage AC 230 V	■				■	■	■		
Terminal voltage AC 24 V		■	■	■					
Integrated sensor									
Room temperature sensor	■	■	■	■	■	■	■	■	■
Humidity sensor			■						
Inputs									
Multifunctional inputs digital/analog	3	3	3	2	2	2	2		
Input DC 0...10 V				1					
Outputs									
ON/OFF (PWM) Triac (H/C)	■			■					
ON/OFF Relay (H/C)		■	■		■	★	★		
Analog outputs DC 0...10 V (H/C)		★	★	■					
3-stage Relay (fan)	■	■	■		■	■	■		
Analog DC 0...10 V (fan)		★	★						
Applications									
Fancoil 2-/4-pipe	■	■	■		■	■	■		
Fancoil with electrical heater	■	■	■		■	■	■		
Fancoil with Radiator	■	■	■						
Heating / Cooling 2-/4-pipe	■	■	■		■			■	■
Heating / Cooling with 6-port valve		★							
Humidity control			■						
Indoor Air Quality				■					
Heat Pump System		■	■		■	■	■	■	■
Variable Air Volume (VAV)				■					
VAV with electrical heater				■					
VAV with radiator / Heat-Cool coil				■					
Functionalities									
2-position control	■	■	■	■	■	■	■	■	■
Modulating control	■	■	■	■	■ ²⁾	■ ²⁾	■ ²⁾	■	■
2-stage control sequence for heating or cooling	■	■	■		■ ¹⁾	■ ¹⁾	■ ¹⁾	■	■
Operating mode									
Comfort, Economy, Protection	■	■	■	■	■	■	■	■	■
Pre-Comfort								■	■
Manual / Auto operating mode	■	■	■	■	■	■	■	■	■

¹⁾ only for 2-stage heating
■ valid for all variants

²⁾ modulating output only for 2-pipe applications
★ main feature

Multifunction devices

						
Type	UP227	UP204	QMX3.P34	QMX3.P74	QMX3.P02	QMX3.P37
Mounting						
Wall mounted			■	■	■	■
Flush mounted	■ ¹⁾	■				
Display-/operating elements						
Display	■	■ ²⁾	■	■		■
Capacitive buttons	■				■	■
Rotary/push-button, Setpoint rotary wheel		■				
LED indicators per button					■	■
LED indicators central	■	■				
Sensors						
Temperature	■	■	■	■	■	■
Humidity				■		
Air quality CO2				■		
Bus interface						
- integrated bus coupling unit	■		■	■	■	■
- Separate bus coupling unit		■				
Power supply						
- KNX bus voltage	■	■	■	■	■	■
- Additional power supply DC 24 V		■				
Functionalities						
Switching ON/OFF/OVER	■	■			■	■
Pushbutton function (bell function)	■	■				
Dimming	■	■			■	■
Send Values						
- 8 bit/percent	■	■			■	■
- 16 bit	■	■				
- Brightness value	■	■				
- Temperature value	■	■				
- Wind speed value	■	■				
- 4 Byte display value		■				
- 1 bit	■	■				
- 8 bit/percent/16 bit	■					
- Brightness value	■					
- Temperature value	■		■	■		■
- Wind speed value	■					
- Text messages	■	■				
Alarmhandling	■	■				
Forced control	■	■				
Shutter-/blind control	■	■			■	■
Call and save scene, 1 bit	■	■				
Call and save scene, 8 bit	■	■			■	■
Button deactivation	■		■	■		■
Time switch schedules	■	■				
Room temperature controller functionality						
Setpoint value setting, absolute	■	■	■	■		■
Setpoint value shifting	■	■	■	■		■
Setting operating modes	■	■	■	■		■
Setting comfort prolongation	■	■	■	■		■
Heating/Cooling	■	■	■	■		■
Two-point control	■	■	■	■		■
Continuous control	■	■	■	■		■
Two-level heating and cooling (sequenz)	■	■	■	■		■
Applications						
Radiator	■	■	■	■	■	■
Underfloor heating	■	■	■	■	■	■
Fancoil	■	■				
Threshold control for humidity			■	■	■	■
Threshold control for air quality			■	■	■	■

¹⁾ Design line i-system

²⁾ Design line DELTA style

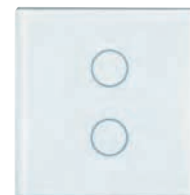
Pushbuttons

Pushbuttons bus transceiver module (BTM)

Touch sensors glass

UP 211, UP 212, UP 213

- Sensitive pair of touch areas for vertical operation
- Per touch area selectable function, scene controller
- Round, transparent circle per touch area to the RGB LED background lighting
- Glass cover with chrome border
- Proximity sensor
- For plugging onto a bus transceiver module (BTM) or a flush-mounting actuator with bus transceiver module (BTM)



Dimensions (W x H x D)

95 x 95 x 10,2 mm

Range overview UP 211, UP 212, UP 213

Product Title	Stock No.	Product No.	DT
Touch sensor unit, single	5WG1211-2DB01	UP 211/01	A
Touch sensor cover, single, white	5WG1211-8DB11	UP 211/11	A
Touch sensor cover, single, black	5WG1211-8DB21	UP 211/21	A
Touch sensor unit, double	5WG1212-2DB01	UP 212/01	A
Touch sensor cover, double, white	5WG1212-8DB11	UP 212/11	A
Touch sensor cover, double, black	5WG1212-8DB21	UP 212/21	A
Touch sensor unit, quadruple	5WG1213-2DB01	UP 213/01	A
Touch sensor cover, quadruple, white	5WG1213-8DB11	UP 213/11	A
Touch sensor cover, quadruple, black	5WG1213-8DB21	UP 213/21	A

The touch sensor units are to be completed with the respective touch sensor covers. The bus transceiver module (BTM) (see Chapter System Products and Accessories) or flush-mounting actuator with bus transceiver module (BTM) must be ordered separately.

Display and operation units

Pushbuttons

Pushbuttons bus transceiver module (BTM)

UP 22..



Pushbutton, i-system

- Pushbutton in pair
- Horizontal operation
- Per pushbutton selectable function
- LED for orientation light
- Labeling field
- Connectable bus coupling unit (BTM) or flush-mounted actuators via BTI

Dimensions (W x H x D)

55 x 55 x 11 mm

Range overview UP 22..

Product Title	Stock No.	Product No.	DT
Pushbutton, single, without status LED, titanium white, i-system	5WG1221-2DB12	UP 221/12	A
Pushbutton, single, with status LED, titanium white, i-system	5WG1221-2DB13	UP 221/13	A
Pushbutton, single, without status LED, aluminum metallic	5WG1221-2DB32	UP 221/32	A
Pushbutton, single, with status LED, aluminum metallic	5WG1221-2DB33	UP 221/33	A
Pushbutton, double, without status LED, titanium white, i-system	5WG1222-2DB12	UP 222/12	A
Pushbutton, double, with status LED, titanium white, i-system	5WG1222-2DB13	UP 222/13	A
Pushbutton, double, without status LED, aluminum metallic	5WG1222-2DB32	UP 222/32	A
Pushbutton, double, with status LED, aluminum metallic	5WG1222-2DB33	UP 222/33	A
Pushbutton, triple, without status LED, titanium white	5WG1223-2DB12	UP 223/12	A
Pushbutton, triple, with status LED, titanium white	5WG1223-2DB13	UP 223/13	A
Pushbutton, triple, without status LED, aluminum metallic	5WG1223-2DB32	UP 223/32	A
Pushbutton, triple, with status LED, aluminum metallic	5WG1223-2DB33	UP 223/33	A

The bus transceiver module (BTM) (see Chapter System Products and Accessories) or flush-mounting actuator with bus transceiver module (BTM) must be ordered separately. The matching design frame must be ordered separately. See Chapter Display and Operation Units – Pushbutton accessories.

Pushbuttons Pushbuttons bus transceiver module (BTM)

Pushbutton with scene controller and room temperature sensor, i-system

UP 223/..4

- Pushbutton in 3 pairs
- Horizontal operation
- Per pushbutton selectable function, scene controller
- LED for orientation light
- Labeling field
- Temperature sensor
- Connectable bus coupling unit (BTM) or flush-mounted actuators via BTI



Dimensions (W x H x D)

55 x 55 x 11 mm

Range overview UP 223/..4

Product Title	Stock No.	Product No.	DT
Wall switch, triple, with status LED, neutral, with scene controller, with room temperature sensor, DELTA i-system, titanium white	5WG1223-2AB14	UP 223/14	A
Wall switch, triple, with status LED, neutral, with scene controller, with room temperature sensor, DELTA i-system, aluminum metallic	5WG1223-2AB34	UP 223/34	A

The bus transceiver module (BTM) (see Chapter System Products and Accessories) or flush-mounting actuator with bus transceiver module (BTM) must be ordered separately. The matching design frame must be ordered separately. See Chapter Display and Operation Units - Pushbutton accessories.

Pushbutton with scene controller and IR receiver decoder, i-system

UP 223/..5

- Pushbutton in 3 pairs
- Horizontal operation
- Per pushbutton selectable function, scene controller
- LED for orientation light
- Labeling field
- IR receiver for IR handheld transmitter S 425/72
- Connectable bus coupling unit (BTM) or flush-mounted actuators via BTI



Dimensions (W x H x D)

55 x 55 x 11 mm

Range overview UP 223/..5

Product Title	Stock No.	Product No.	DT
Pushbutton, triple, with status LED, with scene controller, with IR receiver decoder, titanium white	5WG1223-2DB15	UP 223/15	A
Pushbutton, triple, with status LED, with scene controller, with IR receiver decoder, aluminum metallic	5WG1223-2DB35	UP 223/35	A

The bus transceiver module (BTM) (see Chapter System Products and Accessories) or flush-mounting actuator with bus transceiver module (BTM) must be ordered separately. The matching design frame must be ordered separately. See Chapter Display and Operation Units - Pushbutton accessories.

Display and operation units

Pushbuttons

Pushbuttons bus transceiver module (BTM)

UP 28..



Pushbutton, DELTA style

- Pushbutton in pair
- Vertical operation
- Per pushbutton selectable function
- LED for orientation light
- Labeling field
- Connectable bus coupling unit (BTM) or flush-mounted actuators via BTI

Bus coupling unit (BTM) / flush mounted actuator and a design frame must be ordered as a separate items.

Dimensions (W x H x D)

68 x 68 x 14 mm

Range overview UP 28..

Product Title	Stock No.	Product No.	DT
Pushbutton, single, without status LED, titanium white, DELTA style	5WG1285-2DB12	UP 285/12	A
Pushbutton, single, with status LED, titanium white, DELTA style	5WG1285-2DB13	UP 285/13	A
Pushbutton, single, without status LED, platinum metallic	5WG1285-2DB42	UP 285/42	A
Pushbutton, single, with status LED, platinum metallic	5WG1285-2DB43	UP 285/43	A
Pushbutton, double, without status LED, titanium white, DELTA style	5WG1286-2DB12	UP 286/12	A
Pushbutton, double, with status LED, titanium white, DELTA style	5WG1286-2DB13	UP 286/13	A
Pushbutton, double, without status LED, platinum metallic	5WG1286-2DB42	UP 286/42	A
Pushbutton, double, with status LED, platinum metallic	5WG1286-2DB43	UP 286/43	A
Pushbutton, quadruple, without status LED, titanium white	5WG1287-2DB12	UP 287/12	A
Pushbutton, quadruple, with status LED, titanium white	5WG1287-2DB13	UP 287/13	A
Pushbutton, quadruple, without status LED, platinum metallic	5WG1287-2DB42	UP 287/42	A
Pushbutton, quadruple, with status LED, platinum metallic	5WG1287-2DB43	UP 287/43	A

The bus transceiver module (BTM) (see Chapter System Products and Accessories) or flush-mounting actuator with bus transceiver module (BTM) must be ordered separately. The matching design frame must be ordered separately. See Chapter Display and Operation Units - Pushbutton accessories.

Pushbuttons Pushbuttons bus transceiver module (BTM)

Pushbutton with scene controller and room temperature sensor, DELTA style

UP 287/..4

- Pushbutton in 4 pairs
- Vertical operation
- Per pushbutton selectable function, scene controller
- LED for orientation light
- Labeling field
- Temperature sensor
- Connectable bus coupling unit (BTM) or flush-mounted actuators via BTI



Dimensions (W x H x D)

68 x 68 x 14 mm

Range overview UP 287/..4

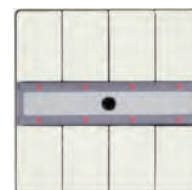
Product Title	Stock No.	Product No.	DT
Wall switch, quadruple, with status LED, neutral, DELTA style, titanium white	5WG1287-2AB14	UP 287/14	A
Wall switch, quadruple, with status LED, neutral, DELTA style, platinum metallic	5WG1287-2AB44	UP 287/44	A

The bus transceiver module (BTM) (see Chapter System Products and Accessories) or flush-mounting actuator with bus transceiver module (BTM) must be ordered separately. The matching design frame must be ordered separately. See Chapter Display and Operation Units - Pushbutton accessories.

Pushbutton with scene controller and IR receiver decoder, DELTA style

UP 287/..5

- Pushbutton in 4 pairs
- Vertical operation
- Per pushbutton selectable function, scene controller
- LED for orientation light
- Labeling field
- IR receiver for IR handheld transmitter S 425/72
- Connectable bus coupling unit (BTM) or flush-mounted actuators via BTI



Dimensions (W x H x D)

68 x 68 x 14 mm

Range overview UP 287/..5

Product Title	Stock No.	Product No.	DT
Pushbutton, quadruple, with status LED, with scene controller, with IR receiver decoder, titanium white	5WG1287-2DB15	UP 287/15	A
Pushbutton, quadruple, with status LED, with scene controller, with IR receiver decoder, platinum metallic	5WG1287-2DB45	UP 287/45	A

The bus transceiver module (BTM) (see Chapter System Products and Accessories) or flush-mounting actuator with bus transceiver module (BTM) must be ordered separately. The matching design frame must be ordered separately. See Chapter Display and Operation Units - Pushbutton accessories.

Display and operation units

Pushbuttons

Pushbuttons flush-mounted

UP 20..



Touch sensors GAMMA arina

- Pair of touch areas for vertical operation
- Per touch area selectable function
- LED for orientation light
- Labeling field
- Integrated bus coupling unit

The mounting frame must be ordered separately. See **Accessories for Touch sensors**.

Dimensions (W x H x D)

86 x 86 x 14.6 mm

Range overview UP 201.., UP 202.., UP 203..

Product Title	Stock No.	Product No.	DT
Touch sensor, single, without status LED, GAMMA arina, white	5WG1201-2DB12	UP 201/12	A
Touch sensor, single, with status LED, GAMMA arina, white	5WG1201-2DB13	UP 201/13	A
Touch sensor, double, without status LED, GAMMA arina, white	5WG1202-2DB12	UP 202/12	A
Touch sensor, double, with status LED, GAMMA arina, white	5WG1202-2DB13	UP 202/13	A
Touch sensor, quadruple, without status LED, GAMMA arina, white	5WG1203-2DB12	UP 203/12	A
Touch sensor, quadruple, with status LED, GAMMA arina, white	5WG1203-2DB13	UP 203/13	A

The mounting frame must be ordered separately. See **Accessories for Touch sensors**.

UP 203/14



Touch sensor with status LED, scene controller and room temperature sensor, GAMMA arina

- Pair of touch areas for vertical operation
- Per touch area selectable function
- LED for orientation light
- Labeling field
- Room temperature sensor
- Integrated bus coupling unit

The mounting frame must be ordered separately. See **Accessories for Touch sensors**.

Dimensions (W x H x D)

86 x 86 x 14.6 mm

Stock No.	Product No.	DT
5WG1203-2DB14	UP 203/14	A

**Touch sensor with status LED, scene controller and
IR receiver decoder, GAMMA arina**

UP 203/15

- Pair of touch areas for vertical operation
- Per touch area selectable function
- LED for orientation light
- Labeling field
- IR receiver decoder
- IR activity display configurable via orientation LED
- Integrated bus coupling unit

The mounting frame must be ordered separately. See **Accessories for Touch sensors.GAMMA arina**

Dimensions (W x H x D) 86 x 86 x 14.6 mm



Stock No.	Product No.	DT
5WG1203-2DB15	UP 203/15	A

Accessories for Touch sensors GAMMA arina RDF8../**NF, RDD8../NF Mounting Frames (DELTA arina)**

ARG800.1

Single Mounting Frame, ivory white

Packaging unit 20 pcs
Dimensions (W x H x D) 86 x 86 x 9.40 mm

Stock No.	Product No.	DT
S55770-T370	ARG800.1	A

Display and operation units

Pushbuttons

Pushbutton DELTA bus coupling unit

UP 116..

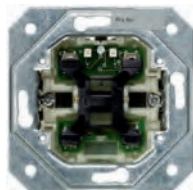
DELTA Bus coupling unit

- For installation in flush-mounting switch and socket boxes with diameter = 60 mm, for Screw fixing and prepared for Claw fixing
- LED per pushbutton pair for status indication or configurable as orientation light
- Mounting of rockers from the DELTA product ranges
- Integrated bus coupling units, bus connection via bus terminal

Dimensions (W x H x D)

71 x 71 x 32 mm

UP 116/01



DELTA bus coupling unit, single, intermediate position, with 2 LEDs

- One Rocker button, intermediate position (pushbutton with 2 operating points)
- The following functions can be assigned per operating point as required:
 - Switching on/off/over
 - Dimming with stop telegram (4-bit) Short button press, on/off Long button press, brighter/darker
 - Dimming with cyclic transmission (4-bit) Short button press, on/off Long button press, brighter/darker
 - Shutter/blind control Short button press, slat open/closed or stop Long button press, up/down
 - Store and call up scene, 1-bit in conjunction with scene module
 - Short or long button press (store/call up scene), configurable
 - Display of any status objects (1-bit)
 - Display of pushbutton objects

The required single or multiple rocker (with or without window) must be ordered separately.

Stock No.

Product No.

DT

5WG1116-2AB01

UP 116/01

A

UP 116/11



DELTA bus coupling unit, double, intermediate position, with 2 LEDs

- Two Rocker button, intermediate position (pushbutton with 2 operating points)
- The following functions can be assigned per operating point as required:
 - Switching on/off/over
 - Dimming with stop telegram (4-bit) Short button press, on/off Long button press, brighter/darker
 - Dimming with cyclic transmission (4-bit) Short button press, on/off Long button press, brighter/darker
 - Shutter/blind control Short button press, slat open/closed or stop Long button press, up/down
 - Store and call up scene, 1-bit in conjunction with scene module
 - Short or long button press (store/call up scene), configurable

The required single or multiple rocker (with or without window) must be ordered separately.

Stock No.

Product No.

DT

5WG1116-2AB11

UP 116/11

A

Display and operation units

Pushbuttons

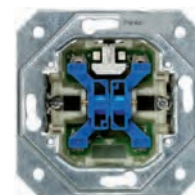
Pushbutton DELTA bus coupling unit

DELTA bus coupling unit, single, pushbutton position, with 2 LEDs

UP 116/21

- One Rocker button, pushbutton position (pushbutton with 1 operating point)
- Optional assigned functions Switching on/off/over
- Display of pushbutton objects

The required single or multiple rocker (with or without window) must be ordered separately.



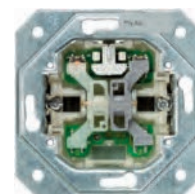
Stock No.	Product No.	DT
5WG1116-2AB21	UP 116/21	A

DELTA bus coupling unit, double, pushbutton position, with 2 LEDs

UP 116/31

- Two Rocker button, pushbutton position (pushbutton with 1 operating point)
- The following functions can be assigned per operating point as required:
 - Switching on/off/over
 - Dimming with stop telegram (4-bit) Short button press, on/off Long button press, brighter/darker
 - Dimming with cyclic transmission (4-bit) Short button press, on/off Long button press, brighter/darker
 - Shutter/blind control Short button press, slat open/closed or stop Long button press, up/down
 - Display of pushbutton objects

The required single or multiple rocker (with or without window) must be ordered separately.



Stock No.	Product No.	DT
5WG1116-2AB31	UP 116/31	A

Accessories for UP 116..

Sealing sets for rockers, IP44, for single or double rockers

5TG4324

One set contains four insert seals



Stock No.	Product No.	DT
5TG4324	5TG4324	B

One set contains four insert seals

Display and operation units

Pushbuttons

Wall-mounted pushbuttons

AP 115..

Surface-mounting pushbuttons IP44

- Surface-mounting enclosures, Degree of protection IP44
- Switching on/off/over
- Integrated bus coupling units

Dimensions (W x H x D)

66 x 75 x 52 mm

AP 115/01



Surface-mounting pushbuttons IP44, single, push button position, gray

- LED for status indication or configurable as orientation light
- Single, pushbutton position
- Dimming with stop telegram (4-bit) short button press, on/off long button press, brighter/darker
- Dimming with cyclic transmission (4-bit) short button press, on/off long button press, brighter/darker
- Shutter/blind control short button press, slat open/closed or stop long button press, up/down
- Store and call up scene, 1-bit in conjunction with scene module

Stock No.	Product No.	DT
5WG1115-3AB01	AP 115/01	A

AP 115/11



Surface-mounting pushbuttons IP44, double, middle position, gray

- Double, middle position
- Dimming with stop telegram (4-bit) short button press, on/off long button press, brighter/darker
- Dimming with cyclic transmission (4-bit) short button press, on/off long button press, brighter/darker
- Shutter/blind control short button press, slat open/closed or STOP long button press, up/down
- Store and call up 2 scene, 1-bit in conjunction with scene module

Stock No.	Product No.	DT
5WG1115-3AB11	AP 115/11	A

Pushbutton, single, pushbutton position, 1 LED, IP 44, gray

AP 115/21

- LED for status indication or configurable as orientation light
- Single, pushbutton position



Stock No.	Product No.	DT
5WG1115-3AB21	AP 115/21	A

Pushbutton, double, pushbutton position, IP 44, gray

AP 115/31

- Double, middle position
- Dimming with stop telegram (4-bit) short button press, on/off long button press, brighter/darker
- Dimming with cyclic transmission (4-bit) short button press, on/off long button press, brighter/darker
- Shutter/blind control short button press, slat open/closed or STOP long button press, up/down



Stock No.	Product No.	DT
5WG1115-3AB31	AP 115/31	A

Display and operation units

IR-System

Pushbuttons IR receiver decoder

UP 223/..5



Pushbutton with scene controller and IR receiver decoder, i-system

- Pushbutton in 3 pairs
- Horizontal operation
- Per pushbutton selectable function, scene controller
- LED for orientation light
- Labeling field
- IR receiver for IR handheld transmitter S 425/72
- Connectable bus coupling unit (BTM) or flush-mounted actuators via BTI

Dimensions (W x H x D)

55 x 55 x 11 mm

Range overview UP 223/..5

Product Title	Stock No.	Product No.	DT
Pushbutton, triple, with status LED, with scene controller, with IR receiver decoder, titanium white	5WG1223-2DB15	UP 223/15	A
Pushbutton, triple, with status LED, with scene controller, with IR receiver decoder, aluminum metallic	5WG1223-2DB35	UP 223/35	A

The bus transceiver module (BTM) (see Chapter System Products and Accessories) or flush-mounting actuator with bus transceiver module (BTM) must be ordered separately. The matching design frame must be ordered separately. See Chapter Display and Operation Units - Pushbutton accessories.

UP 287/..5



Pushbutton with scene controller and IR receiver decoder, DELTA style

- Pushbutton in 4 pairs
- Vertical operation
- Per pushbutton selectable function, scene controller
- LED for orientation light
- Labeling field
- IR receiver for IR handheld transmitter S 425/72
- Connectable bus coupling unit (BTM) or flush-mounted actuators via BTI

Dimensions (W x H x D)

68 x 68 x 14 mm

Range overview UP 287/..5

Product Title	Stock No.	Product No.	DT
Pushbutton, quadruple, with status LED, with scene controller, with IR receiver decoder, titanium white	5WG1287-2DB15	UP 287/15	A
Pushbutton, quadruple, with status LED, with scene controller, with IR receiver decoder, platinum metallic	5WG1287-2DB45	UP 287/45	A

The bus transceiver module (BTM) (see Chapter System Products and Accessories) or flush-mounting actuator with bus transceiver module (BTM) must be ordered separately. The matching design frame must be ordered separately. See Chapter Display and Operation Units - Pushbutton accessories.

Display and operation units

IR-System

Pushbuttons IR receiver decoder

Touch sensor with status LED, with scene controller and IR receiver decoder, GAMMA arina

UP 203/15

- Pair of touch areas for vertical operation
- Per touch area selectable function
- LED for orientation light
- Labeling field
- IR receiver decoder
- IR activity display configurable via orientation LED
- Integrated bus coupling unit

The mounting frame must be ordered separately. See **Accessories for Touch sensor GAMMA arina**.

Dimensions (W x H x D) 86 x 86 x 14.6 mm



	Stock No.	Product No.	DT
	5WG1203-2DB15	UP 203/15	A

Display and operation units

IR-System

IR hand-held transmitter

S 425/72



IR remote, silver

IR hand-held transmitters:

- For wireless control of actuators via infrared signals, e.g. for switching on/off/toggle, dimming, send value, control solar protection or recall/save scenes
- 1 LED per group for control of transmission and battery
- Infrared wave length: 890 nm
- Infrared frequency: 455 kHz
- Transmission range: 20 m, non-directional
- Power supply by two commercially available 1.5 V batteries type Alkaline LR03/AAA

The 2 batteries of type LR03/AAA (1.5 V) required for operation are not included in delivery.

Color

Silver

Dimensions (W x H x D)

55 x 154 x 24 mm

Stock No.	Product No.	DT
5WG1425-7AB72	S 425/72	A

IR receiver decoder

S 450/03



- For receiving IR signals transmitted from IR hand-held transmitters
- Conversion of IR signals received from up to 32 IR channels into bus telegrams
- Configurable evaluation of the IR signals per IR channel as single button or as button pair
- Per IR button selectable functions
 - Switching on/off/over
 - Switching on or off at either rising or falling edge
 - Single button dimming
 - Single button sun protection control
 - 1-/8-bit scene control
 - 8-/16-bit value
 - Percentage value
 - Temperature value
 - Brightness value
 - Positively driven operation
- Depending on the selected main function
 - Per IR button selectable additional function executed either after a time delay (time delay configurable from 100 ms to 6550 s) or alternatively on a long button press
- Per IR button pair selectable functions
 - 2-button dimming with stop telegram
 - 2-button sun protection control
 - Transmission variable percentage value
 - Transmission variable 8-bit value
 - 1-/8-bit scene control
 - Positively driven operation
- Depending on the selected main function: per IR button selectable additional functions
 - Switching on/off
 - 8-16-bit value
 - Percentage value
 - Temperature value
 - Brightness value
 - Recall/save 1-bit scene 1
 - Recall/save 1-bit scene 2
 - Recall 8-bit scene
 - Positively driven on/off/deactivate
- Blocking can selected for each IR button and configured individually
- Integrated bus coupling units, Bus connection via bus terminal
- Bus-powered electronics
- Including clamping spring and rosette for installation in ceilings, walls or lights
- For commissioning when mounted, a magnet is required

Dimensions (W x H x D)

25 x 26 x 75 mm

Stock No.	Product No.	DT
5WG1450-7AB03	S 450/03	A

Display and operation units

Pushbutton accessories

Frames DELTA line

5TG255..-0

Frames, DELTA line, Titanium white (similar to RAL 9010)



Frames, DELTA line, Titanium white (similar to RAL 9010), for combinations, for horizontal and vertical mounting

Range overview 5TG255..-0

Product Title	Dimensions (W x H)	Stock No.	Product No.	DT
Frames, DELTA line, Titanium white (similar to RAL 9010), single	80x80 mm	5TG2551-0	5TG25510	B
Frames, DELTA line, Titanium white (similar to RAL 9010), double	151 x 80 mm	5TG2552-0	5TG25520	B
Frames, DELTA line, Titanium white (similar to RAL 9010), triple	222 x 80 mm	5TG2553-0	5TG25530	B
Frames, DELTA line, Titanium white (similar to RAL 9010), quadruple	293 x 80 mm	5TG2554-0	5TG25540	B
Frames, DELTA line, Titanium white (similar to RAL 9010), quintuple	364 x 80 mm	5TG2555-0	5TG25550	B

5TG258..-0

Frames, DELTA line, Electrical white (similar to RAL 1013)



Frames, DELTA line, Electrical white (similar to RAL 1013), for combinations, for horizontal and vertical mounting

Range overview 5TG258..-0

Product Title	Dimensions (W x H)	Stock No.	Product No.	DT
Frames, DELTA line, electrical white (similar to RAL 1013), single	80x80 mm	5TG2581-0	5TG25810	B
Frames, DELTA line, electrical white (similar to RAL 1013), double	151 x 80 mm	5TG2582-0	5TG25820	B
Frames, DELTA line, electrical white (similar to RAL 1013), triple	222 x 80 mm	5TG2583-0	5TG25830	B
Frames, DELTA line, electrical white (similar to RAL 1013), quadruple	293 x 80 mm	5TG2584-0	5TG25840	B
Frames, DELTA line, electrical white (similar to RAL 1013), quintuple	364 x 80 mm	5TG2585-0	5TG25850	B

Display and operation units

Pushbutton accessories

Frames DELTA line

Frames, DELTA line, aluminum metallic (similar to RAL 9006)

5TG255..-3

Frames, DELTA line, Aluminum metallic (similar to RAL 9006), for combinations, for horizontal and vertical mounting



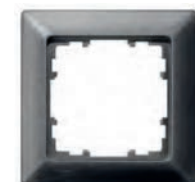
Range overview 5TG255..-3

Product Title	Dimensions (W x H)	Stock No.	Product No.	DT
Frames, DELTA line, aluminum metallic (similar to RAL 9006), single	80x80 mm	5TG2551-3	5TG25513	B
Frames, DELTA line, aluminum metallic (similar to RAL 9006), double	151x80 mm	5TG2552-3	5TG25523	B
Frames, DELTA line, aluminum metallic (similar to RAL 9006), triple	222x80 mm	5TG2553-3	5TG25533	B
Frames, DELTA line, aluminum metallic (similar to RAL 9006), quadruple	293x80 mm	5TG2554-3	5TG25543	B
Frames, DELTA line, aluminum metallic (similar to RAL 9006), quintuple	364x80 mm	5TG2555-3	5TG25553	B

Frames, DELTA line, carbon metallic (similar to RAL 7016)

5TG255..-6

Frames, DELTA line, Carbon metallic (similar to RAL 7016), for combinations, for horizontal and vertical mounting



Range overview 5TG255..-6

Product Title	Dimensions (W x H)	Stock No.	Product No.	DT
Frames, DELTA line, carbon metallic (similar to RAL 7016), single	80x80 mm	5TG2551-6	5TG25516	B
Frames, DELTA line, carbon metallic (similar to RAL 7016), double	151x80 mm	5TG2552-6	5TG25526	B
Frames, DELTA line, carbon metallic (similar to RAL 7016), triple	222x80 mm	5TG2553-6	5TG25536	B
Frames, DELTA line, carbon metallic (similar to RAL 7016), quadruple	293x80 mm	5TG2554-6	5TG25546	B
Frames, DELTA line, carbon metallic (similar to RAL 7016), quintuple	364x80mm	5TG2555-6	5TG25556	B

Display and operation units

Pushbutton accessories

Frames DELTA line

5TG255..a

Frames, DELTA line, with labeling field, Titanium white (similar to RAL 9010)



Frames, DELTA line, with labeling field, Titanium white (similar to RAL 9010), for combinations, for horizontal and vertical mounting

Range overview 5TG255..a

Product Title	Dimensions (W x H)	Stock No.	Product No.	DT
Frames, DELTA line, with labeling field, titanium white (similar to RAL 9010), single	80x80 mm	5TG2551-1	5TG25511	B
Frames, DELTA line, with labeling field, titanium white (similar to RAL 9010), double, horizontal	151x80 mm	5TG2552-1	5TG25521	B
Frames, DELTA line, with labeling field, titanium white (similar to RAL 9010), double, vertical	80x151 mm	5TG2552-2	5TG25522	B
Frames, DELTA line, with labeling field, titanium white (similar to RAL 9010), triple, horizontal	222x80 mm	5TG2553-1	5TG25531	B
Frames, DELTA line, with labeling field, titanium white (similar to RAL 9010), triple, vertical	80x222 mm	5TG2553-2	5TG25532	B
Frames, DELTA line, with labeling field, titanium white (similar to RAL 9010), quadruple, horizontal	293x80 mm	5TG2554-1	5TG25541	B
Frames, DELTA line, with labeling field, titanium white (similar to RAL 9010), quadruple, vertical	80x293 mm	5TG2554-2	5TG25542	B

For individual labeling we recommend our labeling tool which is for free.

Download: www.siemens.com/gamma-labels

Display and operation units

Pushbutton accessories

Frames DELTA line

Frames, DELTA line, with labeling field, Electrical white (similar to RAL 1013)

5TG258..

Frames, DELTA line, with labeling field, Electrical white (similar to RAL 1013), for combinations, for horizontal and vertical mounting



Range overview 5TG258..

Product Title	Dimensions (W x H)	Stock No.	Product No.	DT
Frames, DELTA line, with labeling field, electrical white (similar to RAL 1013), single	80x80 mm	5TG2581-1	5TG25811	B
Frames, DELTA line, with labeling field, electrical white (similar to RAL 1013), double, horizontal	151x80 mm	5TG2582-1	5TG25821	B
Frames, DELTA line, with labeling field, electrical white (similar to RAL 1013), double, vertical	80x151 mm	5TG2582-2	5TG25822	B
Frames, DELTA line, with labeling field, electrical white (similar to RAL 1013), triple, horizontal	222x80 mm	5TG2583-1	5TG25831	B
Frames, DELTA line, with labeling field, electrical white (similar to RAL 1013), triple, vertical	80x222 mm	5TG2583-2	5TG25832	B
Frames, DELTA line, with labeling field, electrical white (similar to RAL 1013), quadruple, horizontal	293x80 mm	5TG2584-1	5TG25841	B
Frames, DELTA line, with labeling field, electrical white (similar to RAL 1013), quadruple, vertical	80x293 mm	5TG2584-2	5TG25842	B

For individual labeling we recommend our labeling tool which is for free.

Download: www.siemens.com/gamma-labels

Display and operation units

Pushbutton accessories

Frames DELTA line

5TG255..b



Frames, DELTA line, with labeling field, aluminum metallic (similar to RAL 9006)

Frames, DELTA line, with labeling field, Aluminum metallic (similar to RAL 9006), for combinations, for horizontal and vertical mounting

Range overview 5TG255..b

Product Title	Dimensions (W x H)	Stock No.	Product No.	DT
Frames, DELTA line, with labeling field, aluminum metallic (similar to RAL 9006), single	80x80 mm	5TG2551-4	5TG25514	B
Frames, DELTA line, with labeling field, aluminum metallic (similar to RAL 9006), double, horizontal	151x80 mm	5TG2552-4	5TG25524	B
Frames, DELTA line, with labeling field, aluminum metallic (similar to RAL 9006), double, vertical	80x151 mm	5TG2552-5	5TG25525	B

For individual labeling we recommend our labeling tool which is for free.

Download: www.siemens.com/gamma-labels

Display and operation units

Pushbutton accessories

Frames DELTA line

Frames, DELTA line, with labeling field, Carbon metallic (similar to RAL 7016)

5TG255..c

Frames, DELTA line, with labeling field, Carbon metallic (similar to RAL 7016), for combinations, for horizontal and vertical mounting



Range overview 5TG255..c

Product Title	Dimensions (W x H)	Stock No.	Product No.	DT
Frames, DELTA line, with labeling field, carbon metallic (similar to RAL 7016), single	80x80 mm	5TG2551-7	5TG25517	B
Frames, DELTA line, with labeling field, carbon metallic (similar to RAL 7016), double, horizontal	151x80 mm	5TG2552-7	5TG25527	B
Frames, DELTA line, with labeling field, carbon metallic (similar to RAL 7016), double, vertical	80x151 mm	5TG2552-8	5TG25528	B

For individual labeling we recommend our labeling tool which is for free.

Download: www.siemens.com/gamma-labels

Display and operation units

Pushbutton accessories

Frames DELTA miro color

5TG111...-0

Frame, DELTA miro color, plastic, titanium white (similar to RAL 9010)



Frames, DELTA miro color, plastic, Titanium white (similar to RAL 9010), for combinations, for horizontal and vertical mounting

Range overview 5TG111...-0

Product Title	Dimensions (W x H)	Stock No.	Product No.	DT
Frame, DELTA miro color, plastic, titanium white (similar to RAL 9010), single	90x90 mm	5TG1111-0	5TG11110	B
Frame, DELTA miro color, plastic, titanium white (similar to RAL 9010), Double	90x161 mm	5TG1112-0	5TG11120	B
Frame, DELTA miro color, plastic, titanium white (similar to RAL 9010), triple	90x232 mm	5TG1113-0	5TG11130	B
Frame, DELTA miro color, plastic, titanium white (similar to RAL 9010), quadruple	90x303 mm	5TG1114-0	5TG11140	B
Frame, DELTA miro color, plastic, titanium white (similar to RAL 9010), quintuple	90x374 mm	5TG1115-0	5TG11150	B

5TG111...-1

Frame, DELTA miro color, plastic, aluminum metallic (similar to RAL 9006)



Frames, DELTA miro color, plastic, Aluminum metallic (similar to RAL 9006), for combinations, for horizontal and vertical mounting

Range overview 5TG111...-1

Product Title	Dimensions (W x H)	Stock No.	Product No.	DT
Frame, DELTA miro color, plastic, aluminum metallic (similar to RAL 9006), single	90x90 mm	5TG1111-1	5TG11111	B
Frame, DELTA miro color, plastic, aluminum metallic (similar to RAL 9006), double	90x161 mm	5TG1112-1	5TG11121	B
Frame, DELTA miro color, plastic, aluminum metallic (similar to RAL 9006), triple	90x232 mm	5TG1113-1	5TG11131	B
Frame, DELTA miro color, plastic, aluminum metallic (similar to RAL 9006), quadruple	90x303 mm	5TG1114-1	5TG11141	B
Frame, DELTA miro color, plastic, aluminum metallic (similar to RAL 9006), quintuple	90x374 mm	5TG1115-1	5TG11151	B

Display and operation units

Pushbutton accessories

Frames DELTA miro color

Frame, DELTA miro color, plastic, carbon metallic (similar to RAL7016)

5TG111..-2

Frames, DELTA miro color, plastic, Carbon metallic (similar to RAL 7016), for combinations, for horizontal and vertical mounting



Range overview 5TG111..-2

Product Title	Dimensions (W x H)	Stock No.	Product No.	DT
Frame, DELTA miro color, plastic, carbon metallic (similar to RAL7016), single	90x90 mm	5TG1111-2	5TG11112	B
Frame, DELTA miro color, plastic, carbon metallic (similar to RAL7016), double	90x161 mm	5TG1112-2	5TG11122	B
Frame, DELTA miro color, plastic, carbon metallic (similar to RAL7016), triple	90x232 mm	5TG1113-2	5TG11132	B
Frame, DELTA miro color, plastic, carbon metallic (similar to RAL7016), quintuple	90x303 mm	5TG1114-2	5TG11142	B
Frame, DELTA miro color, plastic, carbon metallic (similar to RAL7016), quintuple,	90x374 mm	5TG1115-2	5TG11152	B

Display and operation units

Pushbutton accessories

Frames DELTA miro glass

5TG120..

Frames, DELTA miro glass, real glass, crystal green



Frames, DELTA miro glass, real glass, crystal green, for combinations, for horizontal and vertical mounting

Range overview 5TG120..

Product Title	Dimensions (W x H)	Stock No.	Product No.	DT
Frame, DELTA miro glass, real glass, crystal green, single	90x90 mm	5TG1201	5TG1201	B
Frame, DELTA miro glass, real glass, crystal green, double	90x161 mm	5TG1202	5TG1202	B
Frame, DELTA miro glass, real glass, crystal green, triple	90x232 mm	5TG1203	5TG1203	B
Frame, DELTA miro glass, real glass, crystal green, quadruple	90x303 mm	5TG1204	5TG1204	B
Frame, DELTA miro glass, real glass, crystal green, quintuple	90x374 mm	5TG1205	5TG1205	B

5TG120..-1

Frames, DELTA miro glass, real glass, white



Frames, DELTA miro glass, real glass, white, for combinations, for horizontal and vertical mounting

Range overview 5TG120..-1

Product Title	Dimensions (W x H)	Stock No.	Product No.	DT
Frame, DELTA miro glass, real glass, white, single	90x90 mm	5TG1201-1	5TG12011	B
Frame, DELTA miro glass, real glass, white, double	90x161 mm	5TG1202-1	5TG12021	B
Frame, DELTA miro glass, real glass, white, triple	90x232 mm	5TG1203-1	5TG12031	B
Frame, DELTA miro glass, real glass, white, quadruple	90x303 mm	5TG1204-1	5TG12041	B
Frame, DELTA miro glass, real glass, white, quintuple	90x374 mm	5TG1205-1	5TG12051	B

Display and operation units

Pushbutton accessories

Frames DELTA miro glass

Frames, DELTA miro glass, real glass, black

5TG120..-2

Frames, DELTA miro glass, real glass, black, for combinations, for horizontal and vertical mounting



Range overview 5TG120..-2

Product Title	Dimensions (W x H)	Stock No.	Product No.	DT
Frame, DELTA miro glass, real glass, black, single	90x90 mm	5TG1201-2	5TG12012	B
Frame, DELTA miro glass, real glass, black, double	90x161 mm	5TG1202-2	5TG12022	B
Frame, DELTA miro glass, real glass, black, triple	90x232 mm	5TG1203-2	5TG12032	B
Frame, DELTA miro glass, real glass, black, quadruple	90x303 mm	5TG1204-2	5TG12042	B
Frame, DELTA miro glass, real glass, black, quintuple	90x374 mm	5TG1205-2	5TG12052	B

Frames, DELTA miro glass, real glass, orient

5TG120..-3

Frames, DELTA miro glass, real glass, orient, for combinations, for horizontal and vertical mounting



Range overview 5TG120..-3

Product Title	Dimensions (W x H)	Stock No.	Product No.	DT
Frame, DELTA miro glass, real glass, orient, single	90x90 mm	5TG1201-3	5TG12013	B
Frame, DELTA miro glass, real glass, orient, double	90x161 mm	5TG1202-3	5TG12023	B
Frame, DELTA miro glass, real glass, orient, triple	90x232 mm	5TG1203-3	5TG12033	B
Frame, DELTA miro glass, real glass, orient, quadruple	90x303 mm	5TG1204-3	5TG12043	B
Frame, DELTA miro glass, real glass, orient, quintuple	90x374 mm	5TG1205-3	5TG12053	B

Display and operation units

Pushbutton accessories

Frames DELTA miro glass

5TG120..-4

Frames, DELTA miro glass, real glass, arena



Frames, DELTA miro glass, real glass, arena, for combinations, for horizontal and vertical mounting



Range overview 5TG120..-4

Product Title	Dimensions (W x H)	Stock No.	Product No.	DT
Frame, DELTA miro glass, real glass, arena, single	90x90 mm	5TG1201-4	5TG12014	B
Frame, DELTA miro glass, real glass, arena, double	90x161 mm	5TG1202-4	5TG12024	B
Frame, DELTA miro glass, real glass, arena, triple	90x232 mm	5TG1203-4	5TG12034	B
Frame, DELTA miro glass, real glass, arena, quadruple	90x303 mm	5TG1204-4	5TG12044	B
Frame, DELTA miro glass, real glass, arena, quintuple	90x374 mm	5TG1205-4	5TG12054	B

Display and operation units

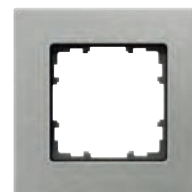
Pushbutton accessories

Frames DELTA miro aluminium

Frame, DELTA miro aluminum, real aluminum, natural

5TG112..-0

Frames, DELTA miro aluminum, real aluminum, natural, for combinations, for horizontal and vertical mounting



Range overview 5TG112..-0

Product Title	Dimensions (W x H)	Stock No.	Product No.	DT
Frame, DELTA miro aluminum, real aluminum, natural, single	90x90 mm	5TG1121-0	5TG11210	B
Frame, DELTA miro aluminum, real aluminum, natural, double	90x161 mm	5TG1122-0	5TG11220	B
Frame, DELTA miro aluminum, real aluminum, natural, triple	90x232 mm	5TG1123-0	5TG11230	B
Frame, DELTA miro aluminum, real aluminum, natural, quadruple	90x303 mm	5TG1124-0	5TG11240	B
Frame, DELTA miro aluminum, real aluminum, natural, quintuple	90x374 mm	5TG1125-0	5TG11250	B

Frame, DELTA miro aluminum, real aluminum, yellow oxide

5TG112..-3

Frames, DELTA miro aluminum, real aluminum, yellow oxide, for combinations, for horizontal and vertical mounting



Range overview 5TG112..-3

Product Title	Dimensions (W x H)	Stock No.	Product No.	DT
Frame, DELTA miro aluminum, real aluminum, yellow oxide, single	90x90 mm	5TG1121-3	5TG11213	B
Frame, DELTA miro aluminum, real aluminum, yellow oxide, double	90x161 mm	5TG1122-3	5TG11223	B
Frame, DELTA miro aluminum, real aluminum, yellow oxide, triple	90x232 mm	5TG1123-3	5TG11233	B
Frame, DELTA miro aluminum, real aluminum, yellow oxide, quadruple	90x303 mm	5TG1124-3	5TG11243	B
Frame, DELTA miro aluminum, real aluminum, yellow oxide, quintuple	90x374 mm	5TG1125-3	5TG11253	B

Display and operation units

Pushbutton accessories

Frames DELTA style

5TG132..

Frame, DELTA style, titanium white (similar to RAL 9010)



Frames, DELTA style, Titanium white (similar to RAL 9010), for combinations, for horizontal and vertical mounting

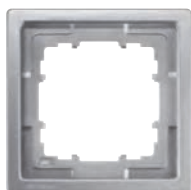


Range overview 5TG132..

Product Title	Dimensions (W x H)	Stock No.	Product No.	DT
Frame, DELTA style, titanium white (similar to RAL 9010), single	82 x 82 mm	5TG1321	5TG1321	B
Frame, DELTA style, titanium white (similar to RAL 9010), double	82 x 153 mm	5TG1322	5TG1322	B
Frame, DELTA style, titanium white (similar to RAL 9010), triple	82 x 224 mm	5TG1323	5TG1323	B
Frame, DELTA style, titanium white (similar to RAL 9010), quadruple	82 x 295 mm	5TG1324	5TG1324	B
Frame, DELTA style, titanium white (similar to RAL 9010), quintuple	82 x 366 mm	5TG1325	5TG1325	B

5TG132..-1

Frame, DELTA style, platinum metallic



Frames, DELTA style, Platinum metallic (similar to RAL 9007), for combinations, for horizontal and vertical mounting



Range overview 5TG132..-1

Product Title	Dimensions (W x H)	Stock No.	Product No.	DT
Frame, DELTA style, platinum metallic, single	82 x 82 mm	5TG1321-1	5TG13211	B
Frame, DELTA style, platinum metallic, double	82 x 153 mm	5TG1322-1	5TG13221	B
Frame, DELTA style, platinum metallic, triple	82 x 224 mm	5TG1323-1	5TG13231	B
Frame, DELTA style, platinum metallic, quadruple	82 x 295 mm	5TG1324-1	5TG13241	B
Frame, DELTA style, platinum metallic, quintuple	82 x 366 mm	5TG1325-1	5TG13251	B

Display and operation units

Pushbutton accessories

Frames DELTA style

DELTA style int. frame 55

5TG1327..

DELTA style intermediate frame 68x68 mm for installing devices with cover plate 55x55 mm



Product Title	Stock No.	Product No.	DT
DELTA style titanium white int. frame 55	5TG1327	5TG1327	B
DELTA style platinum met. int. frame 55	5TG1327-1	5TG13271	B

Display and operation units

Pushbutton accessories

Frames GAMMA UL/NEMA

S 221N12



Frame 55 - 4 x 4, titanium white (similar to RAL 9010), for 4" x 4" Box (double gang box)

- For user operation interfaces in the design i-system
- For mounting on a bus coupling unit (BTM) UP 117C12 for NEMA wall boxes

Dimensions (W x H x D)

120 x 120 x 9,5 mm



Stock No.

Product No.

DT

5WG1221-8NB12

S 221N12

A

S 281U12



Frame 68 - 4 x 4, titanium white (similar to RAL 9010), for 4" x 4" Box (double gang box)

- For user operation interfaces in the design DELTA style
- For mounting on a bus coupling unit (BTM) UP 117C12 for NEMA wall boxes

Color

Titanium white

Dimensions (W x H x D)

120 x 120 x 9,5 mm



Stock No.

Product No.

DT

5WG1281-8UB12

S 281U12

A

Display and operation units

Pushbutton accessories

Wall-mounted enclosures

Surface-mounting enclosures for flush-mounting devices, DELTA line, DELTA style, titanium white

5TG290..

Flame-retardant base plate, for combinations, for horizontal and vertical mounting



Range overview 5TG290..

Product Title	Dimensions (W x H x D) [mm]	Stock No.	Product No.	DT
Surface-mounting enclosure, for flush-mounting devices, DELTA line, DELTA style, titanium white, single	84 x 84 x 42.5	5TG2901	5TG2901	B
Surface-mounting enclosure, for flush-mounting devices, DELTA line, DELTA style, titanium white, double	84 x 155 x 42.5	5TG2902	5TG2902	B
Surface-mounting enclosure, for flush-mounting devices, DELTA line, DELTA style, titanium white, triple	84 x 226 x 42.5	5TG2903	5TG2903	B

Surface-mounting enclosures for flush-mounting devices, DELTA line, Electrical white

5TG286..

Flame-retardant base plate, for combinations, for horizontal and vertical mounting



Range overview 5TG286..

Product Title	Dimensions (W x H x D) [mm]	Stock No.	Product No.	DT
Surface-mounting enclosure, for flush-mounting devices, DELTA line, electrical white, single	84 x 84 x 42.5	5TG2861	5TG2861	B
Surface-mounting enclosure, for flush-mounting devices, DELTA line, electrical white, double	84 x 155 x 42.5	5TG2862	5TG2862	B
Surface-mounting enclosure, for flush-mounting devices, DELTA line, electrical white, triple	84 x 226 x 42.5	5TG2863	5TG2863	B

Display and operation units

Pushbutton accessories

Rocker for i-system

5TG62_1

Rocker, neutral, i-system



Dimensions (W x H)

55 x 55 mm

Range overview 5TG62_1

Product Title	Stock No.	Product No.	DT
Rocker, 1-fold, neutral, titanium white, i-system	5TG6201	5TG6201	B
Rocker, 2-fold, neutral, titanium, i-system	5TG6205	5TG6205	B
Rocker, 1-fold, neutral, aluminum metallic, i-system	5TG6241	5TG6241	B
Rocker, 2-fold, neutral, aluminum metallic, i-system	5TG6245	5TG6245	B

5TG62_2

Rocker, with Label plate, i-system



Dimensions (W x H)

55 x 55 mm

Range overview 5TG62_2

Product Title	Stock No.	Product No.	DT
Rocker, 1-fold, with Label plate, titanium white, i-system	5TG6210	5TG6210	B
Rocker, 2-fold, with Label plate, titanium white, i-system	5TG6212	5TG6212	B
Rocker, 1-fold, with Label plate, aluminum metallic, i-system	5TG6250	5TG6250	B
Rocker, 2-fold, with Label plate, aluminum metallic, i-system	5TG6252	5TG6252	B

5TG62_3

Rocker, with Window, i-system



Dimensions (W x H)

55 x 55 mm

Range overview 5TG62_3

Product Title	Stock No.	Product No.	DT
Rocker, 1-fold, with Window, titanium white, i-system	5TG6200	5TG6200	B
Rocker, 2-fold, with Window, titanium white, i-system	5TG6204	5TG6204	B
Rocker, 1-fold, with Window, aluminum metallic, i-system	5TG6240	5TG6240	B
Rocker, 2-fold, with Window, aluminum metallic, i-system	5TG6244	5TG6244	B

Display and operation units

Pushbutton accessories

Rocker for i-system

Rocker, with I/O Symbols, i-system

5TG62_4

Dimensions (W x H)

55 x 55 mm



Range overview 5TG62_4

Product Title	Stock No.	Product No.	DT
Rocker, 1-fold, with I/O Symbols, titanium white, i-system	5TG6202	5TG6202	B
Rocker, 1-fold, with I/O Symbols, aluminum metallic, i-system	5TG6242	5TG6242	B

Rocker, with Up/Down Symbols, i-system

5TG62_5

Dimensions (W x H)

55 x 55 mm



Range overview 5TG62_5

Product Title	Stock No.	Product No.	DT
Rocker, 2-fold, with Up/Down Symbols, titanium white, i-system	5TG6214	5TG6214	B
Rocker, 2-fold, with Up/Down Symbols, aluminum metallic, i-system	5TG6254	5TG6254	B

Display and operation units

Pushbutton accessories

Rocker for DELTA style

5TG71_1

Rocker, neutral, DELTA style



Dimensions (W x H)

55 x 55 mm

Range overview 5TG71_1

Product Title	Stock No.	Product No.	DT
Rocker, 1-fold, neutral, titanium white, DELTA style	5TG7141	5TG7141	B
Rocker, 1-fold, neutral, platinum metallic, DELTA style	5TG7141-1	5TG7141-1	B
Rocker, 2-fold, neutral, titanium white, DELTA style	5TG7145	5TG7145	B
Rocker, 2-fold, neutral, platinum metallic, DELTA style	5TG7145-1	5TG7145-1	B

5TG71_2

Rocker, with Label plate, DELTA style



Dimensions (W x H)

55 x 55 mm

Range overview 5TG71_2

Product Title	Stock No.	Product No.	DT
Rocker, 1-fold, with Label plate, titanium white, DELTA style	5TG7156	5TG7156	B
Rocker, 1-fold, with Label plate, platinum metallic, DELTA style	5TG7156-1	5TG7156-1	B

5TG71_3

Rocker, with Window, DELTA style



Dimensions (W x H)

55 x 55 mm

Range overview 5TG71_3

Product Title	Stock No.	Product No.	DT
Rocker, 1-fold, with Window, titanium white, DELTA style	5TG7140	5TG7140	B
Rocker, 1-fold, with Window, platinum metallic, DELTA style	5TG7140-1	5TG7140-1	B
Rocker, 2-fold, with Window, titanium white, DELTA style	5TG7158	5TG7158	B
Rocker, 2-fold, with Window, platinum metallic, DELTA style	5TG7158-1	5TG7158-1	B

Display and operation units

Pushbutton accessories

Rocker for DELTA style

Rocker, with I/O Symbols, DELTA style

5TG71_42

Dimensions (W x H)

55 x 55 mm



Range overview 5TG71_42

Product Title	Stock No.	Product No.	DT
Rocker, 1-fold, with I/O Symbols, titanium white, DELTA style	5TG7142	5TG7142	B
Rocker, 1-fold, with I/O Symbols, platinum metallic, DELTA style	5TG7142-1	5TG7142-1	B

Rocker, with Up/Down Symbols, DELTA style

5TG71_43

Dimensions (W x H)

55 x 55 mm



Range overview 5TG71_43

Product Title	Stock No.	Product No.	DT
Rocker, 2-fold, with Up/Down Symbols, titanium white, DELTA style	5TG7143	5TG7143	B
Rocker, 2-fold, with Up/Down Symbols, platinum metallic, DELTA style	5TG7143-1	5TG7143-1	B

Rocker, with Label plate and Window, DELTA style

5TG71_5

Dimensions (W x H)

55 x 55 mm



Range overview 5TG71_5

Product Title	Stock No.	Product No.	DT
Rocker, 2-fold, with Label plate and Window, titanium white, DELTA style	5TG7157	5TG7157	B
Rocker, 2-fold, with Label plate and Window, platinum metallic, DELTA style	5TG7157-1	5TG7157-1	B

Display and operation units

Room temperature controllers with integrated sensor and operation i-system

UP 237K..



Temperature controller, i-system

- Integrated room temperature sensors
- Control can be set as a two-point control and/or continuous-action control (P or PI algorithm), for heating only, for cooling only, or for heating and cooling mode
- Operating modes that can be switched via KNX: comfort mode, pre-comfort mode, energy-saving mode and frost or heat protection mode
- Presence pushbutton to locally switch between comfort and pre-comfort mode or comfort and energy-saving mode and to extend comfort mode after operating energy-saving or protection mode
- Pushbutton for switching over between manual and automatic mode
- The room temperature setpoint value for comfort mode can be set via an interchangeable rotary button (+/-) on the controller and via the KNX
- Basic setpoint of the room temperature for comfort mode which can be set via the KNX
- Setpoint value for comfort mode in °C which can be set via an interchangeable rotary button on the controller
- Adjustable dead zone between the heating setpoint and the cooling setpoint for comfort mode
- Two-level heating or cooling
- Output of the control variable(s) either as an on/off switch command or as a positioning command in the range of 0...100 %
- 5 LEDs to display manual mode and the current operating modes
- 4 LEDs to display heating/cooling valve open, dew point alarm and open window
- For plugging onto a bus transceiver module (BTM) or a flush-mounting actuator with bus transceiver module (BTM)

Dimensions (W x H x D)

55 x 55 x 16 mm

Range overview UP 237K..

Product Title	Stock No.	Product No.	DT
Temperature controller, titanium white	5WG1237-2KB11	UP 237K11	A
Temperature controller, aluminum metallic	5WG1237-2KB31	UP 237K31	B

The bus transceiver module (BTM) (see Chapter System Products and Accessories) or flush-mounting actuator with bus transceiver module (BTM) must be ordered separately. The matching design frame must be ordered separately. See Chapter Display and Operation Units - Push-button accessories.

Room temperature controllers with integrated sensor and operation DELTA style

Temperature controller, DELTA style

UP 254K..

- Integrated room temperature sensors
- Control can be set as a two-point control and/or continuous-action control (P or PI algorithm), for heating only, for cooling only, or for heating and cooling mode
- Operating modes that can be switched via KNX: comfort mode, pre-comfort mode, energy-saving mode and frost or heat protection mode
- Presence pushbutton to locally switch between comfort and pre-comfort mode or comfort and energy-saving mode and to extend comfort mode after operating energy-saving or protection mode
- Pushbutton for switching over between manual and automatic mode
- The room temperature setpoint value for comfort mode can be set via an interchangeable rotary button (+/-) on the controller and via the KNX
- Basic setpoint of the room temperature for comfort mode which can be set via the KNX
- Setpoint value for comfort mode in °C which can be set via an interchangeable rotary button on the controller
- Adjustable dead zone between the heating setpoint and the cooling setpoint for comfort mode
- Two-level heating or cooling
- Output of the control variable(s) either as an on/off switch command or as a positioning command in the range of 0...100 %
- 5 LEDs to display manual mode and the current operating modes
- 4 LEDs to display heating/cooling valve open, dew point alarm and open window
- For plugging onto a bus transceiver module (BTM) or a flush-mounting actuator with bus transceiver module (BTM)



Dimensions (W x H x D)

68 x 68 x 16 mm

Range overview UP 254K..

Product Title	Stock No.	Product No.	DT
Temperature controller, titanium white/metallic silver	5WG1254-2KB13	UP 254K13	A
Temperature controller, platinmetallic	5WG1254-2KB43	UP 254K43	A

The bus transceiver module (BTM) (see Chapter System Products and Accessories) or flush-mounting actuator with bus transceiver module (BTM) must be ordered separately. The matching design frame must be ordered separately. See Chapter Display and Operation Units - Push-button accessories.

Display and operation units

Multifunction device

i-system

UP 227



Room Control Unit

- Multifunctional display-/control panel for KNX with Dot-Matrix LCD display 96 x 128 pixels
- 8 capacitive touch buttons for horizontal operation
- For the display and control of at least 10 adjustable room control functions: Switching toggle/On/Off, Dimming, Door bell function On/Off, Solar protection control; send 1 Byte/2 Byte value; display 1 Bit/1 Byte/2 Byte value; Forced control; display text messages; warning and alarm messaging; recall and save scenes; warning and alarm messaging
- Room control functions lockable via KNX-bus
- Green/red LED as orientation light, as status indication, as a response to pressing a button respectively to the signalling of alarm reports
- A signaler for acoustical alarm reports respectively as a status of the touch operation
- Integrated room temperature sensor
- Evaluation and weighting of an external inside temperature sensor
- Room temperature control configurable as two-step control and/or continuous control, for exclusive heating operation, exclusive cooling operation or heating and cooling operation
- Selectable operating modes over the KNX: Comfort, Pre-comfort, Energy-savings and protection
- Local indication
 - Of the active operating modes or automatic- respectively manual mode
 - Inside temperature or outside temperature
 - Heating or cooling mode
 - Dew point alarm
 - Open window
- Local switching between
 - Manual- and automatic mode
 - Comfort, pre-comfort, energy-saving- and protection mode
- Adjustable time-limited extension of the comfort mode
- Adjustable room temperature setpoint shifting for comfort mode
- Via KNX set basic setpoint value of the room temperature for comfort mode
- An outside temperature based temperature setpoint value tracing in the cooling operation
- Adjustable dead zone between the heating setpoint value and the cooling setpoint value for comfort mode
- Transmission of controller output(s) either as On/Off switching commands or as control commands in the range 0...100 %
- Local display of the manually selected fan rotational speed respectively of the automatic adjustment of the fan rotational speed
- Adjustable fan rotational speed respectively automatic adjustment of the fan rotational speed on the controller
- Weekly schedule programme for controller- operating modes, automatic mode and at the least 8 room control functions
- At the least 40 schedule tasks and Display and set of the date and time
- User control of LCD background lighting and Background color
- Display system settings and room temperature controller in the languages: German, English, French, Italian or Spanish
- User setting of at least 3 operating languages also Integrated bus coupling unit, bus connection via bus terminal possible
- Flush mounted device for the mounting in an flush wall box Ø 60 mm, for fixing on the mounting plate AQR2500NF via lateral springs (separately specified)

The matching design frame must be ordered separately. See chapter Display and Operation Units - Push-buttons accessories.

The mounting plate AQR2500.. must be ordered separately.

Number of button pairs	10
Design line	DELTA i-system
Color	Titanium white
Dimensions (W x H x D)	55 x 55 x 37,2 mm

Stock No.	Product No.	DT
5WG1227-2AB11	UP 227	A

Display and operation units

Multifunction device

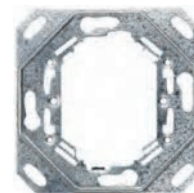
i-system Accessories

Mounting plate EU (CEE/VDE)

AQR2500NF

- Mounting plates to plug onto the front module

Data sheet N1408
 Mechanical design EU (CEE/VDE)
 Dimensions (W x H) 70.8 x 70.8 mm



Stock No.	Product No.	DT
S55720-S161	AQR2500NF	A

Mounting plate IT (3 modular)

AQR2500NG

- Mounting plates to plug onto the front module

Data sheet N1408
 Mechanical design IT (3 modular)
 Dimensions (W x H) 110 x 64 mm



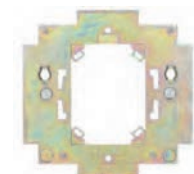
Stock No.	Product No.	DT
S55720-S163	AQR2500NG	A

Mounting plate UK (British Standard)

AQR2500NH

- Mounting plates to plug onto the front module

Data sheet N1408
 Mechanical design UK (British Standard)
 Dimensions (W x H) 83 x 83 mm



Stock No.	Product No.	DT
S55720-S162	AQR2500NH	A

Mounting plate US (UL)

AQR2500NJ

- Mounting plates to plug onto the front module

Data sheet N1408
 Mechanical design US (UL)
 Dimensions (W x H) 64 x 110 mm



Stock No.	Product No.	DT
S55720-S164	AQR2500NJ	A

Display and operation units

Multifunction device

Flush-mounted

UP 204/..1



Room Controller Contouch, incl. bus coupling unit

- Multifunctional display/operating device for KNX, with 320 x 240 pixel, 2.8" LCD color display
- For the display and operation of at least 18 configurable room operator functions:
 - Switching On/Off/Over and Pushbutton function (bell function)
 - Shutter/blind/roller control
 - Value transmission: 1 byte in %, 1 byte integer without prefix, 1 byte integer with prefix, 2 byte integer without prefix, 2 byte integer with prefix
 - Positively driven operation
 - Scene control: Store and call up scene 8 bit, store and call up scene 1 bit
 - Text display and warning and alarm indications
- Operation using touch screen and/or by turning/pushing rotary/push button
- RGB LED as orientation light or for signaling alarm indications
- Buzzer for acoustic alarm indication or as feedback when operating touch screen
- Integrated room temperature sensors
- Analysis and weighting of an external inside temperature sensor
- Room temperature control can be set as a two-point control and/or continuous-action control for heating only, for cooling only, or for heating and cooling mode
- Operating modes that can be switched via KNX: comfort mode, pre-comfort mode, energy-saving mode and frost or heat protection mode
- Local displaying of active operating modes or automatic or manual modes
- Local displaying of heating/cooling valve open, dew point alarm and open window
- Local switchover between automatic or manual mode, and between comfort, pre-comfort, energy-saving and protection modes
- Local, time-adjustable extension of comfort mode
- The room temperature setpoint value for comfort mode can be set via a rotary button on the room controller
- Basic room temperature setpoint value for comfort mode which can be set via the KNX
- Outdoor temperature-based tracking of temperature setpoint value in cooling mode
- Adjustable dead zone between the heating setpoint and the cooling setpoint for comfort mode
- Two-level heating or cooling
- Output of the control variable(s) either as an on/off switch command or as a positioning command in the range of 0...100%
- Local displaying of manually set fan speed step or automatic speed input
- Fan speed step can be set via the rotary button or entered automatically by the controller
- Weekly scheduling program for controller operating modes and for 18 room operator functions
- At least 16 time switching points per function per weekday
- Display of date and time
- Selection of at least 4 different design templates as operator and display interface
- Local activation of a cleaning function to lock the touch screen and the rotary/push button
- Slot for a micro SD card for transferring firmware and configuration data
- incl. bus coupling unit (included in delivery)
- Bus connection via bus terminal
- Connection of the separate 24 V DC boost voltage, power consumption approx. 50 mA
- Flush-mounting device for mounting in a Ø 60 mm installation box, with screw fixing

Dimensions (W x H x D)

86 x 116 x 30 mm

Range overview UP 204/..1

Product Title	Stock No.	Product No.	DT
Room Controller Contouch, incl. bus coupling unit, titanium white	5WG1204-2AB11	UP 204/11	A

Accessories for UP 204/..1

Product Title	Stock No.	Product No.	DT
Electronic power supply unit, 350 mA	4AC2402	4AC2402	B
LOGO! Power 24 V/1.3 A	6EP3331-6SB00-0AY0	LOGO!POWER 24 V/1,3 A	A

Display and operation units

Multifunction device

Wall-mounted

Room operator unit KNX with temperature sensor, configurable touchkeys, LED display, white

QMX3.P02

Functions:

- Temperature sensor
- Configurable touchkeys with LED display
- Switching and control of lighting, blinds, scenes
- Window for labels
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX



Data sheet N1602
Dimensions (W x H x D) 88.4 x 133.4 x 18 mm

Stock No.	Product No.	DT
S55624-H107	QMX3.P02	A

Room operator unit KNX with temperature sensor, configurable touchkeys, LED display, black

QMX3.P02-1BSC

Functions:

- Temperature sensor
- Configurable touchkeys with LED display
- Switching and control of lighting, blinds, scenes
- Window for labels
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX



Data sheet N1602
Dimensions (W x H x D) 88.4 x 133.4 x 18 mm

Stock No.	Product No.	DT
S55624-H128	QMX3.P02-1BSC	A

Display and operation units

Multifunction device

Wall-mounted

QMX3.P34

**Room operator unit KNX with temperature sensor, segmented backlit display, touchkeys, white**

Functions:

- Temperature sensor
- Segmented backlit display and touchkeys
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm

Stock No.

Product No.

DT

S55624-H105

QMX3.P34

A

QMX3.P34-1BSC

**Room operator unit KNX with temperature sensor, segmented backlit display, touchkeys, black**

Functions:

- Temperature sensor
- Segmented backlit display and touchkeys
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm

Stock No.

Product No.

DT

S55624-H126

QMX3.P34-1BSC

A

Display and operation units

Multifunction device

Wall-mounted

Room operator unit KNX with temperature sensor, segmented backlit display, configurable touchkeys, LED display, white

QMX3.P37

Functions:

- Temperature sensor
- Segmented backlit display and touchkeys
- Configurable touchkeys with LED display
- Switching and control of lighting, blinds, scenes
- Window for labels
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX



Data sheet N1602
Dimensions (W x H x D) 88.4 x 133.4 x 18 mm

Stock No.	Product No.	DT
S55624-H108	QMX3.P37	A

Room operator unit KNX with temperature sensor, segmented backlit display, configurable touchkeys, LED display, black

QMX3.P37-1BSC

Functions:

- Temperature sensor
- Segmented backlit display and touchkeys
- Configurable touchkeys with LED display
- Switching and control of lighting, blinds, scenes
- Window for labels
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX



Data sheet N1602
Dimensions (W x H x D) 88.4 x 133.4 x 18 mm

Stock No.	Product No.	DT
S55624-H129	QMX3.P37-1BSC	A

Display and operation units

Multifunction device

Wall-mounted

QMX3.P74

**Room operator unit KNX with sensors for temperature, humidity, CO2, segmented backlit display, touchkeys, white**

Functions:

- multisensor for temperature, humidity and CO2
- Segmented backlit display and touchkeys
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm

Stock No.

Product No.

DT

S55624-H106

QMX3.P74

A

QMX3.P74-1BSC

**Room operator unit KNX with sensors for temperature, humidity, CO2, segmented backlit display, touchkeys, black**

Functions:

- Multisensor for temperature, humidity and CO2
- Segmented backlit display and touchkeys
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm

Stock No.

Product No.

DT

S55624-H127

QMX3.P74-1BSC

A

Accessories for QMX3..

Basic plate for conduit and cavity wall box

QMX3.MP1

Basic plate for conduit box / cavity wall box with 68 mm diameter hole

20 pcs. per package

Data sheet	N1602
Dimensions (W x H)	80.5 x 115 mm

Stock No.	Product No.	DT
S55624-H110	QMX3.MP1	B

Display and operation units

Room thermostats

Flush-mounted

RDF800KN



Touch screen room thermostat with KNX communications, for 2-/4- pipe fan coil, universal applications or compressors in DX-type equipment

- KNX communications
- Operating modes: Comfort, Economy and Protection
- For heating and/or cooling applications
- 2 or 3-position control outputs
- Output for 1-speed or 3-speed fan
- 2 multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), heat / cool changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact, presence detector
- Automatic or manual heating/cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Color of housing: Ivory white
- Backlit display

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 4-pipe system

Data sheet	N3174
Operating voltage	AC 230 V
Power consumption	6 VA
Setpoint setting range	5...40 °C
Switching differential	0.5...6 K
Communication	Bus: KNX (S-mode and LTE mode with Synco 700)
Analog inputs, number	2
Relay outputs	Fan: N.O. contacts, non-floating Valve: N.O. contacts, non-floating
Relay outputs, number	5
Relay output, switching voltage	AC 230 V
Relay output, switching current	5 (2) A
Type of fixing	With screws on recessed round conduit box diameter min. 60 mm
Degree of protection	IP30
Dimensions (W x H x D)	86 x 86 x 47 mm

Stock No.	Product No.	DT
S55770-T350	RDF800KN	B

Flush-mount room thermostats with KNX communications, 2-/4-pipe fan coils or DX type equipment**RDF..KNX Flush Mount**

- KNX communications
- Operating modes: Comfort, Economy and Protection
- For heating and/or cooling applications
- 2 or 3-position control outputs
- Output for 1-speed or 3-speed fan
- 2 multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), heat / cool changeover, operation mode changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact, presence detector
- Automatic or manual heating/cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Color of housing: signal white (RAL 9003)
- Backlit display

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 4-pipe system

Data sheet	N3171
Operating voltage	AC 230 V
Setpoint setting range	5...40 °C
Switching differential	0.5...6 K
Communication	Bus: KNX (S-mode and LTE mode with Synco 700)
Analog inputs, number	2
Relay outputs	Fan: N.O. contacts, non-floating Valve: N.O. contacts, non-floating
Relay outputs, number	5
Relay output, switching voltage	AC 230 V
Relay output, switching current	5 (2) A
Degree of protection	IP30

Range overview RDF..KNX Flush Mount

Product Title	Type of fixing	Dimensions (W x H x D) [mm]	Stock No.	Product No.	DT
Flush-mount room thermostat with KNX communications, 2-/4-pipe fan coils or DX type equipment	With screws on recessed round conduit box diameter min. 60 mm	86x86x46	S55770-T293	RDF600KN	A
Flush-mount room thermostat with KNX communications, 2-/4-pipe fan coils or DX type equipment, with KNX switching group, four buttons for switching lights and blinds	With screws on recessed round conduit box diameter min. 60 mm	86x86x46	S55770-T400	RDF600KN/S	A

Display and operation units

Room thermostats

Wall-mounted

RDG100KN



Room thermostat with KNX communications, AC 230 V, for fan coil units and universal applications

- KNX communications
- 3 multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), heat / cool changeover, operation mode changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact
- Operating modes: Comfort, Economy and Protection
- 2-position, 3-position or PWM control outputs
- Automatic or manual fan speed for 1-speed, 3-speed fan
- Automatic or manual heating / cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Backlit display

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 2-pipe system and radiator / floor heating
- 4-pipe system
- 4-pipe system with electrical heater
- 2-stage heating or cooling system

Data sheet

Operating voltage

Setpoint setting range

Switching differential

Communication

Analog inputs, number

Digital inputs, number

Relay outputs

Relay outputs, number

Relay output, switching voltage

Relay output, switching current

Triac outputs

Triac outputs, number

Triac output, switching voltage

Triac output, switching current

Type of fixing

Degree of protection

Dimensions (W x H x D)

N3191

AC 230 V

5...40 °C

Heating: 0.5...6 K

Cooling: 0.5...6 K

Bus: KNX (S-Mode und LTE-Mode mit Synco 700)

2

1

Fan: 1- or 3-speed

3

AC 230 V

5 (4) A

Valve, el. heater

2-position, PWM, 3-position

3

AC 230 V

Max. 1 A

Wall mounting with screws

IP30

93 x 128 x 30.8 mm

Stock No.

Product No.

DT

S55770-T163

RDG100KN

A

Room thermostat with KNX communications, AC 24 V, for fan coil units and universal applications, heat pump, fan (1-/ 3-speed, DC), valves (2-point, DC)

RDG160KN



- KNX communications
- For applications with DC control outputs and DC or 3-speed fan output
- For applications with 2-position control output with DC fan output
- 3 multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), heat / cool changeover, operation mode changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact, presence detector
- Operating modes: Comfort, Economy and Protection
- Automatic or manual EC fan or 1-/3-speed
- Automatic or manual heating / cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Backlit display
- Master / Slave function in KNX S-mode

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 2-pipe system and radiator / floor heating
- 4-pipe system
- 2-stage heating or cooling system
- Heating / cooling with 6-port ball valves

Data sheet	N3191
Operating voltage	AC 24 V
Setpoint setting range	5...40 °C
Switching differential	Heating: 0.5...6 K Cooling: 0.5...6 K
Communication	Bus: KNX (S-Mode und LTE-Mode mit Synco 700)
Analog inputs, number	2
Analog outputs	Valve, el. heater: 2 Fan: 1 (ECM)
Analog outputs, number	3
Analog output, signal	DC 0...10 V
Digital inputs, number	1
Relay outputs	Valve, compressor or el. heater: 2 outputs, 2-position Fan: 1- or 3-speed
Relay outputs, number	3
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	5 (4) A
Type of fixing	Wall mounting with screws
Degree of protection	IP30
Dimensions (W x H x D)	93 x 128 x 30.8 mm

Stock No.	Product No.	DT
S55770-T297	RDG160KN	A

Display and operation units

Room thermostats

Wall-mounted

RDG165KN



Room thermostat with KNX communications and built-in humidity sensor and humidity control, AC 24 V, for fan coil units and universal applications, heat pump, fan (1-/ 3-speed, DC), valves (2-point, DC)

- KNX communications
- For applications with DC control outputs and DC or 3-speed fan output
- For applications with 2-position control output with DC fan output
- 3 multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), heat / cool changeover, Presence detector, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact
- Operating modes: Comfort, Economy and Protection
- Automatic or manual EC fan or 1-/3-speed
- Automatic or manual heating / cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Backlit display
- Built-in humidity sensor and humidity control

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 2-pipe system and radiator / floor heating
- 4-pipe system
- 2-stage heating or cooling system

Data sheet

Operating voltage

Setpoint setting range

Switching differential

Communication

Analog inputs, number

Analog outputs

Analog outputs, number

Analog output, signal

Digital inputs, number

Relay outputs

Relay outputs, number

Relay output, switching voltage

Relay output, switching current

Type of fixing

Degree of protection

Dimensions (W x H x D)

N3191

AC 24 V

5...40 °C

Heating: 0.5...6 K

Cooling: 0.5...6 K

Bus: KNX (S-Mode und LTE-Mode mit Synco 700)

2

Valve, el. heater: 2

Fan: 1 (ECM)

3

DC 0...10 V

1

Valve, compressor or el. heater: 2 outputs, 2-position

Fan: 1- or 3-speed

3

AC 24...230 V

5 (4) A

Wall mounting with screws

IP30

93 x 128 x 30.8 mm

Stock No.

Product No.

DT

S55770-T347

RDG165KN

A

Room thermostat for temperature and air quality control with KNX communications, AC 24 V, VAV heating and cooling systems

RDG405KN



- KNX communications
- Output DC 0...10 V for VAV actuator and auxiliary output ON/OFF, PWM or 3-position or 3-position for VAV actuator and auxiliary output DC 0...10 V
- 2 multifunctional inputs for keycard contact, external room / return air temperature (1x, QAH11.1, QAA32), heat / cool changeover, operation mode changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact, presence detector
- 1 input DC 0...10 V for damper position feedback, for CO2 sensor
- Operating modes: Comfort, Economy and Protection
- Modulating PI control
- Control depending on the room or the return air temperature and air quality
- Automatic or manual heating / cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Minimum and maximum limitation of air flow signal
- Output signal inversion (DC 0...10 V) as an option
- Backlit display

Application selectable:

- Single-duct system
- Single-duct system with electrical heater
- Single-duct system and radiator / floor heating
- Single-duct system with heating / cooling coil

Data sheet	N3192
Operating voltage	AC 24 V
Power consumption	2 VA
Setpoint setting range	5...40 °C
Switching differential	Heating: 0.5...6 K Cooling: 0.5...6 K
Communication	Bus: KNX (S-mode and LTE mode with Synco 700)
Analog inputs, number	2
Analog outputs	VAV actuator, electric heater, valve
Analog outputs, number	1
Analog output, signal	DC 0...10 V
Analog output, current	Max. ±1 mA
Digital inputs, number	1
Triac outputs	VAV actuator, valve, el. heater 2-position, PWM, 3-position
Triac outputs, number	1
Triac output, switching voltage	AC 24 V
Triac output, switching current	Max. 1 A
Type of fixing	Wall mounting with screws
Degree of protection	IP30
Dimensions (W x H x D)	93 x 128 x 30.8 mm

Stock No.	Product No.	DT
S55770-T348	RDG405KN	A

UP 588/..3



Touch Panel

- Multifunctional display/operating device for the KNX, with 320 x 240 pixels, 5.7" TFT color display and touch screen
- Dimming of LED background lighting over the operator interface
- For the display and operation of at least 210 communication objects on at least 20 display pages
- An additional page for the display and acknowledgement of at least 16 alarms
- Time program as weekly program for at least 110 communication objects and at least 10 switching tasks per weekday
- Presence simulation for at least 50 communication objects
- A trend module for storing and displaying graphics of the status values
- 1-bit or 8-bit scene control for at least 64 scenes
- At least 32 AND/OR operations, each comprising up to at least 4 communication objects
- At least 16 reference conditions for tripping one switching task respectively
- Individual password protection for each display page
- Buffered real-time clock and display of time and date
- Selection of at least 4 different design templates as operator and display interface
- Display of a loadable image as a start screen page or with display of a slide show containing at least 100 loadable images instead of a start screen page
- USB interface for loading images and symbols
- USB cable, 1 m long and a transfer rate of 480 MBit/sec.
- Pushbutton for device reset
- Integrated bus coupling units, Bus connection via bus terminal
- Flush-mounting device in flush-mounting/hollow-wall box

The matching design frame and the flush-mounting/hollow-wall box must be ordered separately.

Dimensions (W x H x D)

161,5 x 135 x 64 mm

Range overview 588/..3

Product Title	Stock No.	Product No.	DT
Touch Panel, 230 V AC, 50 Hz	5WG1588-2AB13	UP 588/13	A
Touch Panel, 24 V AC/DC	5WG1588-2AB23	UP 588/23	A

S 588/12



Design frame for touch panel UP 588/..3, aluminium

Design frames aluminium for UP 588/3

Design line

Touch Panel

Color

Aluminum metallic

Dimensions (W x H x D)

194 x 156 x 5 mm

Stock No.

Product No.

DT

5WG1588-8AB12

S 588/12

A

S 588/13



Design frame for touch panel UP 588/..3, stainless steel design

Design frames stainless steel for UP 588/3

Design line

Touch Panel

Color

Stainless steel

Dimensions (W x H x D)

194 x 156 x 5 mm

Stock No.

Product No.

DT

5WG1588-8AB13

S 588/13

A

Design frame for touch panel UP 588/..3, glass black

S 588/14

Design frames black glass for UP 588/3 touch panels

Design line	Touch Panel
Color	Glass black
Dimensions (W x H x D)	194 x 156 x 5 mm



Stock No.	Product No.	DT
5WG1588-8AB14	S 588/14	A

Design frame for touch panel UP 588/..3, glass white

S 588/15

Design frames white glass for UP 588/3 touch panels

Design line	Touch Panel
Color	Glass white
Dimensions (W x H x D)	194 x 156 x 5 mm



Stock No.	Product No.	DT
5WG1588-8AB15	S 588/15	A

Flush-type box for all touch panel UP 588

UP 588E01

Flush-mounting/hollow-wall boxes for UP 588 touch panels

Design line	Touch Panel
Dimensions (W x H x D)	161,5 x 135 x 64 mm



Stock No.	Product No.	DT
5WG1588-8EB01	UP 588E01	A

Display and operation units

Visualization, server

N 152/01



IP Control Center

Visualisation controller for full-graphic visualizations on web-compatible end devices such as PCs, tablets and smart phones with a standard web browser.

For communication between KNX devices and PCs and, in connection with a LAN-/WLAN modem or DSL router, for remote access to a KNX installation, for usage as an interface for the ETS 3/4/5 and as an interface for a visualization, with usage of the KNXnet/IP protocol, with the following simultaneously usable functions:

- Web server for operating and monitoring up to 1250 statuses and values transmitted by the KNX network, which can be displayed using a standard browser on PCs, tablets, or smartphones connected to the IP network
- Special web page for firmware upgrade
- Graphical web editor for a creation of fully graphical visualization with control and display elements, configurable in various styles
- Smart editor for the creation of a visualisation, tuned for mobile browsers, smartphones, tablets with control and display elements, configurable in various styles and layouts
- Annual timer, with astronomical calendar, for 300 time switch schedules with up to 30 time switch commands per time switch schedule
- Scene module with up to 5000 scenes or events
- Chart module for recording and reporting of up to 10 data points
- Monitoring module for monitoring and storage of up to 1000 events into a ring buffer
- IP interface for control of up to 20 IP-devices via up to 20 TCP/UDP commands per IP-device
- Fully graphical logic module with up to 1000 logic functions
- Alarm function for up to 250 different alarms
- E-mail function, with up to 20 contacts, for transmission of chart data from chart module, logged data from monitoring module or alarm data
- Ethernet interface 10/100 Mbits/s with RJ45 socket for connection to the IP network using the Internet Protocol
- 2 LED displays for IP connection/communication and for error messages
- Integrated bus connector and bus terminal for connection to a KNX network
- Power supply of the electronics by an external voltage source for DC 24 V, 50 mA
- Series installation device for mounting on support rails TH35 DIN EN 60715

Dimension width (1 MW = 18 mm)

4 MW

	Stock No.	Product No.	DT
	5WG1152-1AB01	N 152/01	A

Accessories for N 152/01

Product Title	Stock No.	Product No.	DT
Electronic power supply unit, 350 mA	4AC2402	4AC2402	B
LOGO! Power 24 V/1.3 A	6EP3331-6SB00-0AY0	LOGO!POWER 24 V/1,3 A	A

Web server for Synco devices

OZW772..

Web server OZW772 allows for remote plant control and monitoring via the web.

- Operate web browser via PC/laptop and Smartphone
- Operate ACS (PC/laptop with ACS plant operating software)
- Connections: USB and Ethernet
- Display fault messages in the web browser
- Send fault messages to a maximum of 4 e-mail recipients
- Periodically send system reports to e-mail recipients
- Visualize the plants in the web browser based on standard plant diagrams and customized plant web pages
- Acquire and display consumption data
- Send consumption data file to 2 email recipients
- Function „Energy indicator“ to monitor data points for energy-related limit values, or „Green limits“
- Web services for external applications via Web API (Web Application Programming Interface)
- Encrypted with https and TLS for e-mails
- Record of trends, display and dispatch to 2 e-mail recipients
- Integration up to 237 S-Mode data points of KNX devices (not OZW772.01)
- Direct commissioning with web browser or ACS service tool
- Easy and secure remote access and plant overview with Synco IC Remote Access - a web-based service for secure remote access (www.siemens-syncoic.com)



Internet portal Synco IC offers simple and secure access to your plants

- Simple and fast set up of access via the Internet (fixed net- or mobile router)
- The portal provides additional functions:
 - Manage one or multiple plants
 - Central user management
 - Display of plant overview, state of Energy indicators and alarms
 - Send alarm notifications per e-mail
 - Secured communications through encryption (https)

Package insert:

Mounting Instructions M5701
 Power pack AC 230 V / DC 24 V
 Ethernet-cable
 USB-cable
 2 cable ties

Web servers OZW772.01, OZW772.04, OZW772.16, OZW772.250 can connect 1, 4, 16, or 250 KNX devices from the product ranges Synco 700, Synco RXB, and RDG/RDF/RDU room thermostats, and the QAX Synco living central apartment units.

Data sheet	N5701
Operating voltage	Power pack: AC 230 V Web server: DC 24 V
Communication	KNX TP (twisted pair) Ethernet, RJ45 plug socket (shielded) USB V2.0
Mounting	On DIN rails With Screws
Degree of protection	IP30
Dimensions (W x H x D)	87.5 x 90 x 40 mm

Range overview OZW772..

Product Title	Stock No.	Product No.	DT
Web server for 1 Synco device	BPZ:OZW772.01	OZW772.01	A
Web server for 4 Synco devices	BPZ:OZW772.04	OZW772.04	A
Web server for 16 Synco devices	BPZ:OZW772.16	OZW772.16	A
Web server for 250 Synco devices	BPZ:OZW772.250	OZW772.250	A



Overview and selection guides	Binary output devices	2-2
Technical specifications	Binary output devices	2-6
	Load data for switching actuators per channel	2-10
Binary output devices	Switching actuators / DIN rail mounted devices	2-13
	Modular switching actuators / DIN rail mounted device	2-20
	Switching actuators / Modular installation system	2-22
	Combination switching actuators	2-29

The binary output devices from Siemens can be flexibly used in many applications. The extensive product range for all standard loads (AC1, AC3, AX, C-Load) includes modular extensible switching actuators with integrated load current detection.

Usage of load types AC1, AC3, AX and C load

The industrial and building control sector have seen the establishment of a range of different switching capacities and outputs. These tend to be specific to the respective applications and are specified in the corresponding national and international standards. The tests are defined such that they reproduce typical applications, such as motor loads (industry) or fluorescent lamps (buildings).

The AC1 and AC3 details are switching capacity specifications which have become established in the industrial sector:

- AC1: refers to the switching of predominantly resistive loads (p.f. = 0.8)

- AC3: refers to an (inductive) motor load (p.f. = 0.45)

These switching capacities are defined in the standard EN 60947-4-1. „Contactors and motor starters – Electromechanical contactors and motor starters“. The standard describes starters and/or contactors, which are originally used in industrial applications.

The designation AX has become established in building controls:

- AX: refers to a (capacitive) fluorescent lamp load

Switchable capacitive loads (200 µF, 140 µF, 70 µF or 35 µF), at a load of 200 µF “C load”, and are mentioned in conjunction with fluorescent lamp loads. This switching capacity refers to the standard EN 60669 „Switches for household and similar fixed electrical installations – Particular requirements“, which is primarily implemented for applications in building control. For 6A devices a test with 70 µF and for 10A devices a test with 140 µF is required. The switching capacity declarations AC and AX are directly comparable with each other.

Modular switching actuators

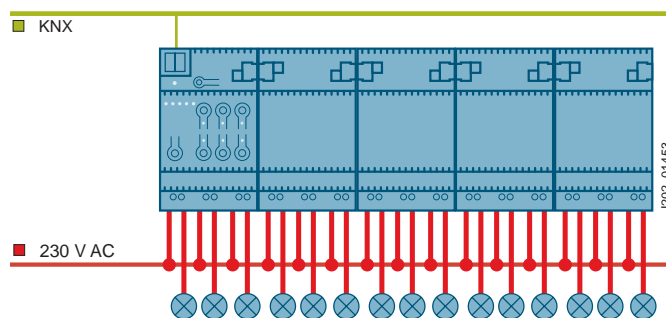


The modular design of the GAMMA instabus switching actuators guarantees the flexible design for each case of application. Up to four switching actuator extensions can be connected to the 6-pin interface on the main module using a jumper. In this manner, a 3-fold switching actuator can be extended to 6/9/12 or 15-fold switching actuators and flexibly adapted to the number and size of loads to be switched. The variety of the functionality of the application software covers a broad spectrum: Ranging from multistage fan control, operating hours and switching cycle counters to scene control, thermal actuator control up to load recognition and monitoring of load current per channel.

The extensive application program controls both the outputs of the main units and the outputs of all connected expansions. This includes:

- Recording and monitoring of load current per output for load failure or overload
- Detection of a significant equipment failure
- Preventive detection of failures due to continuous monitoring of the current
- Detection of load circuit interruption
- Simultaneous switching of all three outputs
- Implementation of a rotational speed stated as a percentage, in 1 to 3-stage switching commands (fan speed control)
- Implementation of a valve position stated as a percentage in a pulse width modulated switching command (thermal drive control)
- Switching operation and operating hours counter with limit monitoring per output
- Integrated 8-bit scene control, with each output assignable to up to 8 scenes

Diagram of 15-fold switching actuator



The depicted diagram is an example of schematic interconnection and connection of individual switching actuator modules. All modules labeled 10 AX, 16 AX and 20 AX are compatible and therefore can be used together. Detailed information is available on our Internet page with technical documentation: www.siemens.de/gamma-td



Switching Actuators N 53x

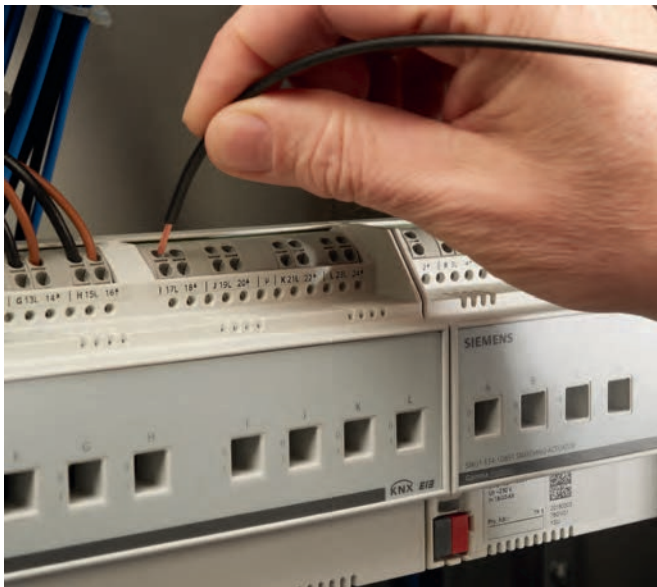
The new DIN Switching Actuators N 53x are intended for installation in distribution boxes or small cabinets and are installed by snapping onto a 35 mm top hat rail according to EN 60715-TH35.

All nine switching actuators have the following common features.

- The rated contact operating voltage of the switching actuators is AC 230 V
- The products are equipped with maintenance-free terminals
- The terminals are designed for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5 ... 2.5 mm². Stranded and multi-core conductors can be pushed into the terminals without ferrules
- One relay contact per output as switching element (ON/OFF)
- Per output there is a mechanical display of the switching status via a slide switch, which can also be used for direct manual operation (ON/OFF switching) of the switching output
- The electronics of the devices are powered via the bus voltage
- All switching actuators are connected to the bus via bus terminal block
- The device has a red LED for indicating activation of addressing mode or device operation
- The housing is of plastic, N-system
- Color RAL 7035 (light grey)
- DIN rail mounted device for mounting on rail TH35 according to DIN EN 60715
- Type of protection: IP 20

Automation functions

The switching actuators provide many control functions per output. The basic function of the new DIN rail mounted devices is switching with status feedback. Very powerful relays are also employed for switching capacitive loads. Via ETS configuration the basic function can be expanded by control functions (logic, timer, scenes, central switching control), override functions (manual ON, continuous OFF, blocking, forced control) up to diagnostic functions (counting of operating hours and switching cycles without and with threshold monitoring). The extent of the control, override and diagnostic functions is illustrated in detail below.



Control functions

The new switching actuators provide automation of lighting or control of motors. These control functions are available for that purpose:

- Switching input: control input for ON respectively OFF commands
- Control value input: A control value input with configurable thresholds for On and Off switching can be used as an alternative to a switching input. The control value input is a control input for an analog control value e.g. temperature, percent value, power, illuminance and integer numbers. The control value input is transformed via an upper and a lower threshold into an ON respectively an OFF command.
- Alternatively available operating types:
 - Normal operation
 - Timer operation
 - Flashing operation
- Logic operations (AND, OR, NAND, XOR, NOR, FILTER, TRIGGER)
- Central switching
- 8-bit scene control
- day / night operation

Each output of the actuator can be individually set to one of these operating modes:

- Normal operation
- Timer operation
- Flashing operation

In the operation mode „normal operation“ the timer functions for delayed On and Off switching and timer night mode operation are available.

In the operation mode „timer operation“ the functions timer day operation and timer night operation are available. In the operation mode „Flashing“ the output is cyclically turned on and off with configurable on and off duty cycles. In timer day or night operation switching On of the output can be time limited (e.g. for cleaning lighting), if applicable with warning before switching off via off and on switching of the output (single flashing).

Per output there is an integrated 8-bit scene control with each output assignable to up to 8 scenes.

Override control functions

To realize special functions which have a higher priority than standard control functions. Up to six different override function blocks plus forced control can be activated to override the control functions.

Per actuator output up to six different override functions (1 to 6) can be freely selected. The override control function 6 has the highest priority, the override function 1 the lowest. With the switching actuators the forced control function always has second highest priority between the override functions with priority 5 and 6. For each one of the activated override functions one of the following functions can be chosen:



- Manual override ON
- Permanent OFF
- Blocking function
- Central override
- User-defined override function
- Forced control

This allows to flexibly configure a different priority dependent override for each actuator output. For the override functions a control valve input can be selected instead of a switching control input. Override functions can be used to address special cases in room and building control like fire alarm, evacuation or maintenance work. For instance, in case of a fire by switching off loads the ignition respectively support energy for the fire is removed. In case of evacuation the evacuation route lighting can be force controlled switched on. To avoid person and property damage during maintenance work an output can be switched off and switching on of the output can be blocked during maintenance.

Output devices

Technical specifications

Binary output devices

Switching actuators										Modular switching actuators					
Type	N 530D31	N 530D51	N 530D61	N 532D31	N 532D51	N 532D61	N 534D31	N 534D51	N 534D61	Main modules			Expansions		
															
Design	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Modular installation devices for mounting on TH35 EN 60715 mounting rail	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Interface for connection of a switch actuator expansion										■	■	■	■	■	■
Dimensions															
Width (1 MW = 18 mm)	4 MW	8 MW	12 MW	4 MW	8 MW	12 MW	4 MW	8 MW	12 MW	3 MW	3 MW	3 MW	3 MW	3 MW	3 MW
Display/control elements															
Direct operation (local operation)										■	■	■	■ ¹⁾	■ ¹⁾	■ ¹⁾
Mechanical local operation	■	■	■	■	■	■	■	■	■						
Mechanical switching position indication	■	■	■	■	■	■	■	■	■						
LED for indicating direct operation										■	■	■			
LED for indicating the selected device										■	■	■			
LED for status indication per output										■	■	■	■ ¹⁾	■ ¹⁾	■ ¹⁾
Power supply															
Bus-powered electronics	■	■	■	■	■	■	■	■	■	■	■	■	■ ¹⁾	■ ¹⁾	■ ¹⁾
Bus connection															
Integrated bus coupling units	■	■	■	■	■	■	■	■	■	■	■	■			
Bus connection via bus terminal	■	■	■	■	■	■	■	■	■	■	■	■			
Outputs															
Load output															
Floating relay contacts	4	8	12	4	8	12	4	8	12	3	3	3	3	3	3
Rated contact voltage, AC [V]	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230
Rated contact current															
• AX (200 µF) acc. to EN 50428 [AX]	6 ³⁾	6 ³⁾	6 ³⁾	10 ²⁾	10 ²⁾	10 ²⁾	16	16	16	10 ²⁾	16	20	10 ²⁾	16	20
• AC1 (p.f. = 0.8) acc. to EN 50428 [A]	10	10	10	16	16	16	16	16	16	16	16	20	16	16	20
• AC3 (p.f. = 0.45) acc. to DIN EN 60497-4-1 [A]	6	6	6	10	10	10	16	16	16	10	16	16	10	16	16
• 24 V DC (resistive load) [A]	10	10	10	10	10	10	10	10	10	10	16	20	10	16	20
Three-phase switching (3 outputs simultaneously)										■	■	■	■	■	■

¹⁾ Via main module

²⁾ 140 µF

³⁾ 70 µF

⁴⁾ On request

...Continuation of the table			Switching actuators								Modular switching actuators					
Type	N 530D31	N 530D51	N 530D61	N 532D31	N 532D51	N 532D61	N 534D31	N 534D51	N534D61	Main modules			Expansions			
										N 562/11	N 512/11	N 513/11	N 562/21	N 512/21	N 513/21	
Application program ¹⁾	9A0101	9A0201	9A0301	9A0101	9A0201	9A0301	9A0101	9A0201	9A0301	982002			2)			
Output functions																
Max. number of group addresses	2000	2000	2000	2000	2000	2000	2000	2000	2000	511	511	511				
Max. number of assignments	2000	2000	2000	2000	2000	2000	2000	2000	2000	511	511	511				
Max. number of expansion modules that can be butt-mounted										4	4	4				
Blocking function	■	■	■	■	■	■	■	■	■							
Configurable behavior in the event of a bus voltage failure	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Configurable behavior in the event of a bus voltage recovery	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Behavior in the event of mains voltage failure																
• Positive OFF switching of the outputs																
• Unchanged switching state of outputs	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Heating control																
Controlling electrothermal actuators										■	■	■	■	■	■	
Scene control																
Integrated 8-bit scene control	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Scenes to be integrated per channel	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
Time functions																
OFF delay	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
ON delay	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Timer mode (automatic stairwell switch)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Night mode (lighting for cleaning)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Warning of impending OFF	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Logical functions																
Positively driven operation	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Logic function (1 object)	■	■	■	■	■	■	■	■	■							
Logic function (2 objects)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Can be inverted per output (NO contact/NC contact)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Status																
Transmitting status per channel	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Operating hours counter with limit monitoring per channel	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Switching cycle counter with limit monitoring per channel	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Load current recording / monitoring per channel										■	■	■	■	■	■	

¹⁾ For current application programs, see www.siemens.com/gamma-td.

²⁾ Via main module

Output devices

Overview and selection guides

Binary output devices

Binary output devices

Type	N 567/01	N 567/12	N 567/11	N 567/22	N 510/03	N 510/04	N 512	N 511/02	N 502/02	UP 510/03	UP 510/13	UP 562/31	UP 511/10	RS 510/23	JB 510C23	RL 512/23	JB 512C23	RL 513D23	JB 513C23
Enclosure data																			
Design	N	N	N	N	N	N	N	N	N	UP	UP	UP	UP	RS	JB	RL	JB	RL	JB
Modular installation devices for mounting on TH35 EN 60715 mounting rail	■	■	■	■	■	■	■	■	■										
For installation in flush-mounting switch and socket boxes with Ø 60 mm										■	■	■	■						
Modular installation device for mounting in AP 118 automation module box or AP 641 room control box ¹⁾														■		■		■	
Modular installation device for mounting in Junction Box 4" x 4"															■		■		■
10-pole BTI socket (BTI - Bus Transceiver Interface) for plugging of bus terminal devices with BTI connector										■									
Dimensions																			
• Width/Ø [mm] (1 MW = 18 mm)	4 MW	4 MW	4 MW	8 MW	4 MW	4 MW	8 MW	8 MW	8 MW	71	50	Ø 53	Ø 53	50.2	70	47,8	70	47,8	70
• Height [mm]										71	50.9	28	28	48.8	90	86,5	90	86,5	90
• Depth [mm]										42	41.3			35.5	44.6	36,2	44.6	36,2	44.6
Mounting type																			
Screw fixing										■									
Display/control elements																			
Direct operation (local operation)	■	■	■	■				■	■										
Mechanical local operation					■	■	■												
Mechanical switching position indication					■	■	■												
LED for status indication per output	■	■	■	■				■	■										
LED for indicating direct operation	■	■	■	■				■	■										
Power supply																			
Bus-powered electronics					■	■	■			■	■	■	■	■	■	■	■	■	■
Electronics powered via an integrated power supply unit for supply voltage 230 V AC	■	■	■	■				■	■										
Bus connection																			
Integrated bus coupling units	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Bus connection via bus terminal	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Bus connection via contact system to data rail	■	■	■	■	■	■	■	■	■										
Outputs																			
Load output																			
Floating relay contacts	4 ²⁾	8 ²⁾	8 ²⁾	16 ²⁾	4	4	8	8	8 ²⁾	2	2	2	1	2	2	1	1	3	3
Rated contact voltage, AC [V]	230	230	230	230	230	230	230 ³⁾	230	230	230	230	230	230	230	277	230	347	230	277
Rated contact current [A]	8	2	8	10	16	16	16	16	16	10	10	6	16	10	10	16	20	20	10
Inputs																			
Max. cable length, unshielded, twisted [m]									100			5	5						
Pushbutton inputs																			
For signal input (floating contacts)									8			2	2						
Determination of switching state by means of the voltage generated in the device												■	■						
For voltage input 12...230 V AC/DC									8										

¹⁾ The AP 641 room control box and AP 118 automation module box must be ordered separately, see Chapter Quick-assembly system - Room control box - Module boxes

²⁾ Except channel A

³⁾ Also available as cUL version: AC 120 V / AC 277V / AC 347 V, 20 A, Order No.: 5WG1512-1CB01

...Continuation of the table

Type	N 567/01	N 567/12	N 567/11	N 567/22	N 510/03	N 510/04	N 512		N 511/02	N 502/02	UP 510/03	UP 510/13	UP 562/31	UP 511/10	RS 510/23 ²⁾	RL 512/23 ³⁾	RL 513/23 ⁴⁾
	980303	980304	980302	981C01	906401	906401	900701	908301	981D01	981601	982E01	982E01	207101	207201	982E01	982D01	982F02
Application program¹⁾																	
Output functions																	
Max. number of group addresses	100	100	100	106	55	55	52	49	106	120	120	120	26	26	120	120	120
Max. number of assignments	100	100	100	106	56	56	52	49	74	120	120	120	27	27	120	120	120
Blocking function													■	■			
Configurable behavior in the event of a bus voltage failure					■	■	■			■	■	■	■	■	■	■	■
Configurable behavior in the event of a bus voltage recovery					■	■	■	■	■	■	■	■	■	■	■	■	■
Configurable behavior in the event of a mains voltage recovery	■	■	■	■					■	■							
Behavior in the event of mains voltage failure																	
• Positive OFF switching of the outputs	■	■															
• Unchanged switching state of outputs			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Heating control																	
Controlling electrothermal actuators																	
Scene control																	
Integrated 8-bit scene control	■	■	■	■					■	■	■	■			■	■	■
Scenes to be integrated per channel	8	8	8	8					8	8	8	8			8	8	8
Time functions																	
OFF delay	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
ON delay	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Timer mode (automatic stairwell switch)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Night mode (lighting for cleaning)	■	■	■	■					■	■	■	■			■	■	■
Warning of impending OFF	■	■	■	■				■	■	■	■	■			■	■	■
Logical functions																	
Positively driven operation					■	■		■			■	■	■	■	■	■	■
Logic function (1 object)	■	■	■	■			■	■		■			■	■			
Logic function (2 objects)					■	■			■		■	■	■	■	■	■	■
Can be inverted per output (NO contact/NC contact)					■	■	■	■	■	■	■	■	■	■	■	■	■
Status																	
Transmitting status per channel	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

¹⁾ For current application programs, see www.siemens.com/gamma-td

²⁾ Identical functions as JB 510C23

³⁾ Identical functions as JB 512C23

⁴⁾ Identical functions as JB 513C23

Load data for switching actuators per channel

Type	N 530D31 N 530D51 N 530D61	N 532D31 N 532D51 N 532D61	N 534D31 N 534D51 N 534D61	N 562/11 N 562/21	N 512/11 N 512/21	N 513/11 N 513/21	N 562/01	N 510/03	N 510/04	N 512 ¹⁾	N 511/02						
Contact current																	
Rated current, AC [A]	6 AX	10 AX	16/20 AX	10 AX ³⁾	16 AX	20 AX	10	16	16	16	16						
AC1 operation (p.f. = 0.8) [A]	10	16	16	16	16	20	2)	2)	2)	16	2)						
AC3 operation (p.f. = 0.45) [VA]	2300	2500	3680	2300	3680	3680	500	2500	3680	3680	800						
24 V DC (resistive load) [A]	6	10	10	10	16	20	10	10	10	10	16						
Maximum switch-on peak current																	
• t = 150 µs [A]	400	400	600	450	450	450	200	400	600	600	200						
• t = 250 µs [A]	320	320	480	350	350	350	160	320	480	480	160						
• t = 600 µs [A]	200	200	300	220	220	2200	100	200	300	300	100						
Contact voltage																	
Rated voltage, AC [V]	230	230	230	230	230	230	230	230	230	230	230						
Service life																	
Mechanical service life Switching operations in millions	1	1	1	1	1	1	50	1	1	1	30						
Electrical service life Switching operations in millions	2)	2)	2)	0.1	0.1	0.1	0.1	2)	2)	2)	0.1						
Power loss																	
Maximum power loss per device at rated power [W]	1	2	2	2	4	6	3	6	8	3	3	3	1	5	5	9	10
Switching capacities/load types, loads																	
Resistive load [W]	2300	3680	3680	3680	3680	4600	2300	3680	3680	3680	3680						
Minimum switching capacity [V/mA]	12/100	12/100	12/100	12/100	12/100	12/100	24/10	12/100	12/100	12/100	24/100						
DC switching capacity [VA]	24/10	24/10	24/10	24/10	24/16	24/20	30/10	24/10	24/10	24/10	24/16						
Maximum capacitive load [µF]	70	140	200	200	200	200	35	140	200	200	35						
Incandescent lamps																	
Incandescent lamps [W]	2300	3680	3680	2300	3680	3680	1000	25 x 100	3680	3680	1000						
Halogen lamp 230 V [W]	2300	3680	3680	2300	3680	3680	1000	25 x 100	3680	3680	1000						
LV halogen lamp with conventional transformer (inductive) [VA]	500	500	2000	1200	2000	2000	500	500	2000	2000	500						
T5/T8 fluorescent lamps																	
Uncorrected [VA]	1380	2300	3680	2300	3680	3680	500	2500	3680	3680	500						
Parallel corrected (at max. possible C) [W]	1300 (140 µF)	1300 (140 µF)	2500 (200 µF)	1500	2500	2500	2 x 58	1300 (140 µF)	2500 (200 µF)	2500 (200 µF)	2 x 58						
DUO circuit [VA]	1380	2300	3680	1500	3680	3680	1000	2500	3680	3680	1000						
Compact lamps																	
Uncorrected [VA]	1380	1600	3680	1600	3680	3680	500	1600	3680	3680	500						
Parallel corrected (at max. possible C) [W]	1100 (140 µF)	1100 (140 µF)	3000 (200 µF)	1100	2500	2500	300 (35 µF)	1100 (140 µF)	3000 (200 µF)	3000 (200 µF)	3000 (200 µF)						

¹⁾ Also available as UL version: 120 V AC, 20 A, Order No.: 5WG1512-1CB01

²⁾ On request

³⁾ Further information see chapter Output devices

⁴⁾ The number of ECG types takes into account the use of miniature circuit breakers with characteristic B

For complete technical specifications, see: www.siemens.com/gamma-td

... Continuation of the table

Type	N 567/01	N 567/11	N 567/12	N 567/22	N 502/02	UP 510/03 UP 510/13 RS 510/23 JB 510C23	UP 511/10	UP 562/31	RL 512/23 JB 512C23	RL513D23 JB 513C23
Contact current										
Rated current, AC [A]	8	8	2	10	16	10	16	6	16 AX	10
AC1 operation (p.f. = 0.8) [A]	¹⁾	¹⁾	¹⁾	¹⁾	¹⁾	¹⁾	¹⁾	¹⁾	¹⁾	¹⁾
AC3 operation (p.f. = 0.45) [VA]	500	500	200	500	500	500	500	500	3680	500
24 V DC (resistive load) [A]	8	8	2	10	¹⁾	¹⁾	¹⁾	¹⁾	¹⁾	¹⁾
Maximum switch-on peak current										
• t = 150 µs [A]	200	200	100	200	200	200	450	450	450	200
• t = 250 µs [A]	160	160	80	160	160	160	320	320	320	160
• t = 600 µs [A]	100	100	50	100	100	100	220	220	220	100
Contact voltage										
Rated voltage, AC [V]	230	230	230	230	230	230	230	230	230	230
Service life										
Mechanical service life Switching operations in millions	2	10	20	30	30	10	2	2	1	10
Electrical service life Switching operations in millions	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Power loss										
Maximum power loss per device at rated power [W]	5	4	5	9	13	3	2	1	3	3
Switching capacities/load types, loads										
Resistive load [W]	1840	1840	460	2300	3680	2300	3680	1380	3680	2300
Minimum switching capacity [V/mA]	5/100	24/10	5/10	24/100	24/100	24/10	¹⁾	¹⁾	12/100	24/10
DC switching capacity [VA]	24/8	30/8	24/8	24/10	24/16	30/10	¹⁾	¹⁾	24/16	30/10
Maximum capacitive load [µF]	35	35	12	35	35	35	105	105	200	35
Incandescent lamps										
Incandescent lamps [W]	1000	1000	500	1000	1000	1000	2500	1380	3680	1000
Halogen lamp 230 V [W]	1000	1000	500	1000	1000	1000	2200	1380	3680	1000
LV halogen lamp with conventional transformer (inductive) [VA]	200 ... 500	200 ... 500	200	500	500	200 ... 500	1000	1000	2000	200 ... 500
T5/T8 fluorescent lamps										
Uncorrected [VA]	500	500	200	500	500	500	28 x 58	1380	3680	500
Parallel corrected (at max. possible C) [W]	2 x 58	2 x 58	200 (12 µF)	2 x 58	2 x 58	2 x 58	15 x 58	15 x 58	2500	2 x 58
DUO circuit [VA]	1000	1000	200 (12 µF)	1000	1000	1000	28 x 58	1380	3680	1000
Compact lamps										
Uncorrected [VA]	500	500	200	500	500	500	¹⁾	¹⁾	3680	500
Parallel corrected (at max. possible C) [W]	300 (35 µF)	300 (35 µF)	200 (12 µF)	300 (35 µF)	300 (35 µF)	300 (35 µF)	¹⁾	¹⁾	2500	300

¹⁾ On request

²⁾ The number of ECG types takes into account the use of miniature circuit breakers with characteristic B

For complete technical specifications, see: www.siemens.com/gamma-td

Switching actuator

N 53x/..

- One relay contact per output as switching element
- Rated contact operating voltage AC 230 V
- Rated contact frequency: 50/60 Hz
- Per output with mechanical display of the switching status via slide switches, which can also be used for direct manual operation of the switching output
- Maintenance-free terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5 ... 2.5mm²
- One phase terminal per output
- Bus-powered electronics
- Integrated bus coupling unit, bus connection via bus terminal block
- Red LED for display of the activation of the addressing mode as well as the operational readiness
- Housing: plastic, color RAL 7035 (light grey), N-system
- DIN rail mounted device for mounting on rail TH35 according to DIN EN 60715
- Type of protection: IP 20

Per output

- selectable operating mode (normal mode, time switch mode, flashing mode)
- selectable relay mode (NC/NO)
- variable On and Off delay times
- two selectable logic operations (AND, OR, NAND, NOR, XOR, FILTER, TRIGGER)
- selectable sending of status objects on request, cyclically and/or automatically after a change
- selectable switching state on bus voltage failure
- selectable start value of the switching object on bus voltage recovery
- optional addition of a night mode object for time-limited switching On of the output, i.e. the illumination, at night
- variable On period at night or time switch mode
- selectable addition of an object to change the On period at night or time switch mode
- selectable post-triggering (1x, 2x, 3x, 4x, 5x) of the On period in time switch mode
- selectable warning signal prior to imminent switching-off by brief off and on switching (flashing) at night or in time switch mode and/or via an optional warning object

Per output selectable functions:

- For manual override ON
- For permanent OFF switching
- Blocking of the output
- For switching on or off in forced mode
- Counting of operating hours and threshold monitoring
- Counting of load cycles and threshold monitoring
- Integrated 8-bit scene control with up to 8 scenes per output
- Construction site function switching
- Object for monitoring of device function
- Object for targeted retrieval of status values

Output devices

Binary output devices

Switching actuators / DIN rail mounted devices

N 530D31

Switching actuator 4 x AC 230 V, 6 AX, C-Load



Rated contact current according to DIN EN 60669: 6 AX (70 μ F fluorescent lamp load), 10 A (resistive load)



Stock No.	Product No.	DT
5WG1530-1DB31	N 530D31	C

N 530D51

Switching actuator 8 x AC 230 V, 6 AX, C-Load



Rated contact current according to DIN EN 60669: 6 AX (70 μ F fluorescent lamp load), 10 A (resistive load)



Stock No.	Product No.	DT
5WG1530-1DB51	N 530D51	C

N 530D61

Switching Actuator 12 x AC 230 V, 6 AX, C-Load



Rated contact current according to DIN EN 60669: 6 AX (70 μ F fluorescent lamp load), 10 A (resistive load)



Stock No.	Product No.	DT
5WG1530-1DB61	N 530D61	C

Switching Actuator 4 x AC 230 V, 10 AX, C-Load

N 532D31

Rated contact current according to DIN EN 60669: 10 AX (140 µF fluorescent lamp load), 10 A (resistive load)



Stock No.	Product No.	DT
5WG1532-1DB31	N 532D31	C

Switching Actuator 8 x AC 230 V, 10 AX, C-Load

N 532D51

Rated contact current according to DIN EN 60669: 10 AX (140 µF fluorescent lamp load), 10 A (resistive load)



Stock No.	Product No.	DT
5WG1532-1DB51	N 532D51	C

Switching Actuator 12 x AC 230 V, 10 AX, C-Load

N 532D61

Rated contact current according to DIN EN 60669: 10 AX (140 µF fluorescent lamp load), 10 A (resistive load)



Stock No.	Product No.	DT
5WG1532-1DB61	N 532D61	C

Output devices

Binary output devices

Switching actuators / DIN rail mounted devices

N 534D31

Switching Actuator 4 x AC 230 V, 16/20 AX, C-Load

Rated contact current according to DIN EN 60669: 16 AX / 20 AX (200 µF fluorescent lamp load)



Stock No.	Product No.	DT
5WG1534-1DB31	N 534D31	C

N 534D51

Switching Actuator 8 x AC 230 V, 16/20 AX, C-Load

Rated contact current according to DIN EN 60669: 16 AX / 20 AX (200 µF fluorescent lamp load)



Stock No.	Product No.	DT
5WG1534-1DB51	N 534D51	C

N 534D61

Switching Actuator 12 x AC 230 V, 16/20 AX, C-Load

Rated contact current according to DIN EN 60669: 16 AX / 20 AX (200 µF fluorescent lamp load)



Stock No.	Product No.	DT
5WG1534-1DB61	N 534D61	C

N 567/..



Switch actuator

- One potential-free relay contact per output channel
- Electronics powered via an integrated power supply unit for 230 V AC
- Pushbutton for switching between bus operation and local operation
- A yellow LED indicating local operation
- 1 red LED per output channel to indicate switch status
- One pushbutton per output channel to activate the output through a UM-function in local operating mode
- Operational with an 230 V AC supply, (even with no bus voltage and faulty or not activated bus communication)
- Choice between identical or individually parameterized outputs
- Operating mode selectable for each channel (normal operation, time switch operation)
- Adjustable switching on/off delay
- Selectable logic link (AND/OR) between two communication objects and presettable logic operator for bus voltage return
- Possibility to add an additional night operation object per output channel for time limited activation of output (lighting) at night
- Selectable warning signal prior to imminent switching off in form of three times short off/on switching (flashing)
- Possibility to add one additional status indicator object per output channel, sending of status objects on request and/or automatically after change
- Possibility to add additional object to drive the integrated 8-bit scene controller, integrated 8 bit scene control and linking each output channel to up to 8 scenes
- Unchanged switch state for all output channels in case of power failure
- Selectable switch state after return of power for each output channel
- Integrated bus coupling units, bus connection via bus terminal or contact system to data rail, only 50% of standard busload
- Modular installation devices for mounting on TH35 EN 60715 mounting rail

Range overview N567/..

Product Title	Dimension width (1 MW = 18 mm)	Stock No.	Product No.	DT
Switch actuator, 4x230 V AC, 8 A	4 MW	5WG1567-1AB01	N 567/01	A
Switch actuator, 8x230 V AC, 8 A	4 MW	5WG1567-1AB11	N 567/11	A
Switch actuator, 8x230 V AC, 2 A	4 MW	5WG1567-1AB12	N 567/12	A
Switch actuator, 16x230 V AC, 10 A	8 MW	5WG1567-1AB22	N 567/22	A

N 511/02



Switching actuator, 8 x AC 230 V, 16 A

- One relay contact per output as switching element
- Rated operating voltage of relay contact: 230 V AC
- Rated current of relay contact: 16 A, p.f. = 1
- Integrated power supply for the electronics, connected to 230 V AC
- Push button to switch between bus operation and direct operation
- Yellow LED to indicate direct operation activated
- 1 red LED per output to indicate the switching state
- One push button per output to switch the output via a toggling function in direct operation mode, functional if 230 V AC present, (even if bus voltage absent or interrupted or bus communication not yet activated)
- Selection whether outputs are to be configured identically or individually
- Operation mode selectable for each output (normal mode, time switch mode)
- Selectable switching behaviour for each output (NO contact/NC contact)
- Adjustable On and Off delay times
- Selectable logic operation (AND/OR) for two communication objects and variable start value of the logic operation at bus voltage recovery
- Selectable additional night mode object for each output for time-limited switching on of the illumination at night
- Adjustable On period for night or time switch operation mode
- Selectable warning signal prior to imminent switching-off by means of three-times short off and on switching (flashing) at night or time switch operation mode
- Possibility to add one additional status indication object per output for status reporting
- Sending of status objects on request and/or automatically after a change
- Integrated 8-bit scene control and linking of each output into up to 8 scenes
- Unchanged switching state of all outputs if there is a power failure
- Adjustable switching state per output after mains voltage recovery
- Integrated bus coupling unit
- Bus connection both via bus terminal and contact system to a data rail
- Only half a standard bus load
- Rail-mounted device for mounting on rail TH 35 according to DIN EN 60715

Base function	Only Switching
Rated voltage	AC 230 V
Rated current	16 A
Number of channels	8
Switch-off warning	Yes
Dimension width (1 MW = 18 mm)	8 MW

Stock No.	Product No.	DT
5WG1511-1AB02	N 511/02	A

Load switch

N 510/..

- 4 Floating relay contacts
- Switching contacts can also be operated manually via slide switches
- Can be inverted per output (NO contact/NC contact)
- Configurable timer mode with configurable on/off delay
- Logic operation (AND/OR) of two communication objects and adjustable start value of operation
- Status object
- Positively driven operation
- Configurable behavior in the event of a bus voltage failure
- Bus-powered electronics
- Integrated bus coupling units, Bus connection via bus terminal or contact system to data rail



Dimension width (1 MW = 18 mm)

4 MW

Range overview N 510/..

Product Title	Stock No.	Product No.	DT
Load switch, 4xAC 230 V, 16 A	5WG1510-1AB03	N 510/03	A
Load switch, 4xAC 230 V, 16 A, C load	5WG1510-1AB04	N 510/04	A

Load switch

N 512..01

- 8 Floating relay contacts
- Switching contacts can also be operated manually via slide switches
- Can be inverted per output (NO contact/NC contact)
- Configurable timer mode with configurable on/off delay
- Logic operation (AND/OR) of two communication objects and adjustable start value of operation in the event of bus voltage recovery
- Status object
- Positively driven operation
- Switching option on bus voltage failure and bus voltage recovery
- Bus-powered electronics
- Integrated bus coupling units, Bus connection via bus terminal or contact system to data rail
- Modular installation devices for mounting on TH35 EN 60715 mounting rail



Dimension width (1 MW = 18 mm)

8 MW

Range overview N 512..01

Product Title	Stock No.	Product No.	DT
Load switch, 8xAC 230 V, 16 A, C load	5WG1512-1AB01	N 512/01	A
Load switch, 8xAC 120 V / AC 277 V / AC 347 V, 20 A, C load (cUL listed)	5WG1512-1CB01	N 512C01	A

N 5../11



Switch actuator, main module

- 3 Floating relay contacts
- Rated contact voltage, 230 V AC
- Interface for connecting a switching actuator submodule and software for controlling up to 4 switching actuator submodules
- Selectable 3-phase switching function (simultaneous switching of 3 outputs)
- Direct operation (local operation)
- LED for indicating direct operation
- LED for indicating the selected device
- LED for status indication per output
- Selectable 1- to 3-stage fan speed control function
- Function for controlling thermo-electrical drives
- Integrated 8-bit scene control
- Time functions: off delay, on delay, timer mode (automatic stairwell switch), night mode (lighting for cleaning), Warning of impending off
- Logical functions: Positively driven operation, Logic function (2 objects), Can be inverted per output (NO contact/NC contact)
- Per channel: transmitting status, Operating hours counter with limit monitoring, Switching cycle counter with limit monitoring, Load current recording, Load current monitoring
- Power supply for its own electronics and for the electronics of the connected switching actuator submodules via the bus voltage
- Bus connection via bus terminal

Dimension width (1 MW = 18 mm)

3 MW

Range overview N 562/11, N 512/11, N 513/11

Product Title	Stock No.	Product No.	DT
Switch actuator, main module, 3 x AC 230/400 V, 10 AX, C load, Load-check	5WG1562-1AB11	N 562/11	A
Switch actuator, main module, 3 x AC 230/400 V, 16 AX, C load, Load-check	5WG1512-1AB11	N 512/11	A
Switch actuator, main module, 3 x AC 230/400 V, 20 AX, C load, Load-check	5WG1513-1AB11	N 513/11	A

Switch actuator, submodule

N 5../21

- 3 Floating relay contacts
- Rated contact voltage, 230 V AC
- Interface for connecting a switching actuator submodule and software for controlling up to 4 switching actuator submodules
- Selectable 3-phase switching function (simultaneous switching of 3 outputs)
- Direct operation (local operation via main module)
- LED for indicating direct operation for each output via main module
- Selectable 1- to 3-stage fan speed control function
- Function for controlling thermo-electrical drives
- Integrated 8-bit scene control
- Time functions: off delay, on delay, Timer mode (automatic stairwell switch), Night mode (lighting for cleaning), Warning of impending off
- Logical functions: Positively driven operation, Logic function (2 objects), Can be inverted per output (NO contact/NC contact)
- Per channel: transmitting status, Operating hours counter with limit monitoring, Switching cycle counter with limit monitoring, Load current recording, Load current monitoring
- Power supply for its own electronics and for the electronics of the connected switching actuator submodules via the bus voltage
- Bus connection via bus terminal



Dimension width (1 MW = 18 mm)

3 MW

Range overview N 562/21, N 512/21, N 513/21

Product Title	Stock No.	Product No.	DT
Switch actuator submodule, 3xAC 230/400 V, 10 AX, C load, Load-check	5WG1562-1AB21	N 562/21	A
Switch actuator submodule, 3xAC 230/400 V, 16AX, C load, load-check	5WG1512-1AB21	N 512/21	A
Switch actuator submodule, 3xAC 230/400 V, 20 AX, C load, load-check	5WG1513-1AB21	N 513/21	A

UP 510/..3



Binary Output, 2 x AC 230 V, 10 A

- Rated contact voltage 230 V AC
- 2 floating relay contacts
- Rated contact current 10 A
- Screwless terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5...2.5 mm²
- Bus-powered electronics
- Integrated bus coupling units, bus connection via bus terminal
- For insertion in flush-mounting switch and socket boxes 60 mm in diameter and 60 mm deep
- Configurable behavior in the event of a bus voltage failure/recovery
- Unchanged switching state of outputs in the event of system voltage failure
- Integrated 8-bit scene control
- Time functions: off delay, on delay, timer mode (automatic stairwell switch), night mode (lighting for cleaning), Warning of impending off
- Logical functions: Positively driven operation, logic function (1 object), logic function (2 objects), can be inverted per output (NO contact/NC contact)
- Transmitting status per channel

Range overview UP 510/..3

Product Title	Dimensions (W x H x D) [mm]	Stock No.	Product No.	DT
Binary Output, 2xAC 230 V, 10 A, with mounting frame and BTI interface	71 x 71 x 42	5WG1510-2AB03	UP 510/03	A
Binary Output, 2xAC 230 V, 10 A	50x50,9x41,3	5WG1510-2AB13	UP 510/13	A

Binary Output, 2 x AC 230 V, 10 A (resistive load)

RS 510/23



- 2 floating relay contacts
 - Rated contact frequency: 50/60 Hz
 - Contact rated current according to DIN EN 60669-1: 10 A (resistive load)
 - Bus-powered electronics
 - Integrated bus coupling unit, bus connection via bus terminal
 - Type of protection: IP 20
 - Rated contact voltage AC 230 V
 - Screw-less terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5 ... 2.5 mm²
 - With bus connection module
 - Modular installation device for mounting in AP 118 automation module box or AP 641 room control box
- For each output:
 - Selectable operating mode (normal mode/time switch mode)
 - Selectable relay mode (NO contact/NC contact)
 - Status object as optional addition
 - Variable On and Off delay times
 - Selectable logic operation (AND/OR) of two communication objects
 - Selectable switching state at bus voltage failure and recovery
 - Optional addition of night mode object for time-limited switching On of the output (and hence the illumination) at night
 - Variable On period at night or time switch mode
 - Selectable post-triggering of the On period (On period extension) in time switch mode
 - Selectable warning signal prior to imminent switching-off by means of three-times short off and on switching (flashing) at night or in time switch mode
 - Selectable function:
 - Including additional communication object for manual override of an output
 - Forced control, including additional communication object for switching an output on or off in forced mode
 - Counting of operating hours and with threshold monitoring of the operating hours
 - Counting of load cycles and with threshold monitoring of the load cycles
 - Integrated 8-bit scene control and linking of each output into up to 8 scenes

The AP 641 room control box and AP 118 automation module box must be ordered separately.
See chapter Modular Installation System - Room control box - Module boxes.

Base function	Only Switching
Rated voltage	AC 230 V
Rated current	10 A
Number of channels	2
Switch-off warning	Yes
Dimensions (W x H x D)	50,2 x 48,8 x 35,5 mm

Stock No.	Product No.	DT
5WG1510-2AB23	RS 510/23	A

JB 510C23



Binary Output, 2 x AC 120...277 V, 10 A (resistive load)

- 2 floating relay contacts
- Rated contact frequency: 50/60 Hz
- Contact rated current according to DIN EN 60669-1: 10 A (resistive load)
- Bus-powered electronics
- Integrated bus coupling unit, bus connection via bus terminal
- Type of protection: IP 20
- Rated contact operating voltage AC 120...277 V
- As built-in device with 1/2 inch thread connection for mounting to or in a UL/NEMA Junction Box with feedthrough of the function wires through the 1/2 inch threaded connector
- For each output:
 - Selectable operating mode (normal mode/time switch mode)
 - Selectable relay mode (NO contact/NC contact)
 - Status object as optional addition
 - Variable On and Off delay times
 - Selectable logic operation (AND/OR) of two communication objects
 - Selectable switching state at bus voltage failure and recovery
 - Optional addition of night mode object for time-limited switching On of the output (and hence the illumination) at night
 - Variable On period at night or time switch mode
 - Selectable post-triggering of the On period (On period extension) in time switch mode
 - Selectable warning signal prior to imminent switching-off by means of three-times short off and on switching (flashing) at night or in time switch mode
- Selectable function:
 - Including additional communication object for manual override of an output
 - Forced control, including additional communication object for switching an output on or off in forced mode
 - Counting of operating hours and with threshold monitoring of the operating hours
 - Counting of load cycles and with threshold monitoring of the load cycles
- Integrated 8-bit scene control and linking of each output into up to 8 scenes

Dimensions (W x H x D)

70 x 90 x 44,6 mm

Stock No.	Product No.	DT
5WG1510-4CB23	JB 510C23	A

Switching Actuator, 1 x AC 230 V, 16 AX, C load

RL 512/23



- One relay contact as switching element
- Bus-powered electronics
- Integrated bus coupling unit, Bus connection via bus terminal block
- Type of protection: IP 20
- Rated contact voltage 230 V AC
- Rated contact frequency: 50/60 Hz
- Rated contact current 16 AX / 20 A
- Screw-less terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5...2.5 mm²
- For mounting in AP 118 automation module box or AP 641 room control box
- Selectable operating mode (normal mode, time switch mode)
- Selectable relay mode (NO contact / NC contact)
- Status object as an optional addition
- Variable On and Off delay times
- Selectable logic operation (AND/OR) of two communication objects
- Selectable switching state at bus voltage failure and recovery
- Optional addition of a night mode object for time-limited switching On of the output (and hence the illumination) at night
- Variable On period at night or time switch mode
- Selectable post-triggering of the On period (On period extension) in time switch mode
- Selectable warning signal prior to imminent switching-off by means of three-times short off and on switching (flashing) at night or in time switch mode
- Selectable function:
 - Including additional communication object for manual override of an output
 - Selectable forced control, including additional communication object for switching an output on or off in forced mode
 - Selectable counting of operating hours with threshold monitoring of the operating hours
 - Selectable counting of load cycles with threshold monitoring of the load cycles
- Integrated 8-bit scene control and linking of each output into up to 8 scenes

The AP 641 room control box and AP 118 automation module box must be ordered separately.
See chapter Modular Installation System - Room control box - Module boxes.

Base function	Only Switching
Rated voltage	AC 230 V
Rated current	16 A
Number of channels	1
Switch-off warning	Yes
Dimensions (W x H x D)	86,5 x 47,8 x 36,2 mm

Stock No.	Product No.	DT
5WG1512-4AB23	RL 512/23	A

JB 512C23

**Switching Actuator, 1 x AC 120...277 V, 20 A or 1 x AC 347 V, 15 AX, C load**

- One relay contact as switching element
- Bus-powered electronics
- Integrated bus coupling unit, Bus connection via bus terminal block
- Type of protection: IP 20
- Rated contact operating voltage AC 120...277 V, AC 347 V
- Rated contact frequency: 50/60 Hz
- Fluorescent lamp load acc. to DIN EN 60669-1: 20 AX (200 µF) at AC 120/277 V, 15 AX (200 µF) at AC 347 V
- As built-in device with 1/2 inch thread connection for mounting to or in a UL/NEMA Junction Box with feedthrough of the function wires through the 1/2 inch threaded connector
- Selectable operating mode (normal mode, time switch mode)
- Selectable relay mode (NO contact / NC contact)
- Status object as an optional addition
- Variable On and Off delay times
- Selectable logic operation (AND/OR) of two communication objects
- Selectable switching state at bus voltage failure and recovery
- Optional addition of a night mode object for time-limited switching On of the output (and hence the illumination) at night
- Variable On period at night or time switch mode
- Selectable post-triggering of the On period (On period extension) in time switch mode
- Selectable warning signal prior to imminent switching-off by means of three-times short off and on switching (flashing) at night or in time switch mode
- Selectable function:
 - Including additional communication object for manual override of an output
 - Selectable forced control, including additional communication object for switching an output on or off in forced mode
 - Selectable counting of operating hours with threshold monitoring of the operating hours
 - Selectable counting of load cycles with threshold monitoring of the load cycles
- Integrated 8-bit scene control and linking of each output into up to 8 scenes

Dimensions (W x H x D)

70 x 90 x 44,6 mm

Stock No.	Product No.	DT
5WG1512-4CB23	JB 512C23	A

Binary Output, 3 x 6 A, AC 230 V

RL 513D23



- 3 floating relay contact
 - One relay contact per output as switching element
 - Contact rated current according to DIN EN 60669-1: 6 A (resistive load)
 - Bus-powered electronics
 - Integrated bus coupling unit, bus connection via bus terminal block
 - Type of protection: IP 20
 - Rated contact operating voltage AC 230 V
 - Rated contact frequency: 50/60 Hz
 - Screw-less terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5...2.5 mm²
 - For mounting in AP 118 automation module box or AP 641 room control box
-
- For each output:
 - Selectable operating mode (normal mode, time switch mode)
 - Selectable relay mode (NO contact / NC contact)
 - Status object as an optional addition
 - Variable On and Off delay times
 - Selectable logic operation (AND/OR) of two communication objects
 - Selectable switching state at bus voltage failure and recovery
 - Optional addition of a night mode object for time-limited switching On of the output (and hence the illumination) at night
 - Variable On period at night or time switch mode
 - Selectable post-triggering of the On period (On period extension) in time switch mode
 - Selectable warning signal prior to imminent switching-off by means of three-times short off and on switching (flashing) at night or in time switch mode
 - Selectable function:
 - Including additional communication object for manual override of an output
 - Selectable forced control, including additional communication object for switching an output on or off in forced mode
 - Selectable counting of operating hours and with threshold monitoring of the operating hours
 - Selectable counting of load cycles and with threshold monitoring of the load cycles
 - Integrated 8-bit scene control and linking of each output into up to 8 scenes

The AP 641 room control box and AP 118 automation module box must be ordered separately.
See chapter Modular Installation System - Room control box - Module boxes.

Base function	Only Switching
Rated voltage	AC 230 V
Rated current	6 A
Number of channels	3
Switch-off warning	Yes
Dimensions (W x H x D)	86,5 x 47,8 x 36,2 mm

Stock No.	Product No.	DT
5WG1513-4DB23	RL 513D23	A

JB 513C23

**Binary Output, 3 x 10 A, AC 120...277 V**

- 3 floating relay contact
 - One relay contact per output as switching element
 - Contact rated current according to DIN EN 60669-1: 6 A (resistive load)
 - Bus-powered electronics
 - Integrated bus coupling unit, bus connection via bus terminal block
 - Type of protection: IP 20
 - One relay contact per output as switching element
 - Rated contact operating voltage AC 120...277 V
 - Rated contact frequency: 50/60 Hz
 - As built-in device with 1/2 inch thread connection for mounting to or in a UL/NEMA Junction Box with feedthrough of the function wires through the 1/2 inch threaded connector
-
- For each output:
 - Selectable operating mode (normal mode, time switch mode)
 - Selectable relay mode (NO contact / NC contact)
 - Status object as an optional addition
 - Variable On and Off delay times
 - Selectable logic operation (AND/OR) of two communication objects
 - Selectable switching state at bus voltage failure and recovery
 - Optional addition of a night mode object for time-limited switching On of the output (and hence the illumination) at night
 - Variable On period at night or time switch mode
 - Selectable post-triggering of the On period (On period extension) in time switch mode
 - Selectable warning signal prior to imminent switching-off by means of three-times short off and on switching (flashing) at night or in time switch mode
 - Selectable function:
 - Including additional communication object for manual override of an output
 - Selectable forced control, including additional communication object for switching an output on or off in forced mode
 - Selectable counting of operating hours and with threshold monitoring of the operating hours
 - Selectable counting of load cycles and with threshold monitoring of the load cycles
 - Integrated 8-bit scene control and linking of each output into up to 8 scenes

Dimensions (W x H x D)

70 x 90 x 44,6 mm

Stock No.	Product No.	DT
5WG1513-4CB23	JB 513C23	A

Combi switching actuator, 8 x AC 230 V, 16 A, 8 x binary inputs

N 502/02



- 8 inputs AC/DC 12...230 V
- 8 relay contact outputs
- Rated contact voltage AC 230 V
- Rated contact operating current 16 A, p.f. = 1
- Electronics power supply via an integrated power supply unit for AC 230 V
- Device functional even without bus connection or if bus voltage absent or bus communication interrupted or not yet activated
- Push button to switch between bus and direct mode
- Push button for each output to switch the output in direct mode via a toggling function by a short actuation and for changing the output mode between remote control relay and time switch relay by holding down the push button for some seconds
- Device preset at the factory for direct switching of an output through a toggling function via the input of the same name
- Selectable function for each input when using the Engineering Tool Software (ETS):
 - Switching status / binary value transmission
 - Switching, short / long operation
 - Single button dimming, single button sun protection control, 1-button group control (sequence control)
 - 1-bit scene control
 - 8-bit scene control, 8-bit value, edge-triggered, 8-bit value, short / long operation
 - 16-bit floating point value, edge-triggered, 16-bit value, short / long operation, 16-bit value, edge-triggered, 16-bit floating point value, short / long operation
- Selectable function for each pair of inputs:
 - 2-button dimming with stop telegram or with cyclical sending
 - 2-pushbutton shutter/blind control
- Selectable blocking / releasing of each input via a corresponding blocking object
- Sending of the input objects after a change of status
- Selectable logic operation (AND/OR) for one input with a further communication object and with variable start value of the logic operation at bus voltage recovery
- Setting by means of the ETS, whether all outputs are to be configured identically or individually
- Selectable mode for each output (normal mode, time switch mode)
- Optional addition of a night mode object for each output for time-limited switching On of the output (and hence the illumination) at night
- Variable On and Off delay times for each output
- Variable On period in night mode or in time switch mode
- Selectable warning signal prior to imminent switching-off by means of three-times short off and on switching (flashing) in night mode or in time switch mode
- Optional status object per output for status reporting
- Sending of status objects on request and/or automatically after a change
- Integrated 8-bit scene control and linking of each output with up to 8 scenes
- Selectable switching state for each output at mains or bus power failure as well as after bus or mains voltage recovery
- Integrated bus coupling unit with only half a standard bus load
- Bus connection via bus terminal or contact system to data rail
- Modular installation devices for mounting on TH35 EN 60715 mounting rail

Base function	Only Switching
Rated voltage	AC 230 V
Rated current	16 A
Number of channels	8
Number of inputs potentialfree	8
Switch-off warning	Yes
Dimension width (1 MW = 18 mm)	8 MW

Stock No.	Product No.	DT
5WG1502-1AB02	N 502/02	A

UP 5..



Switch actuator

- Rated contact voltage AC 230 V
- 2 binary inputs for potential-free contacts
- 20 cm long wires for connecting phase conductor, output, inputs and bus
- Output to be configured as NO or NC contact
- Selectable preferred output state at bus voltage failure and recovery
- Switching status object
- Selectable additional functions:
 - On/off delay
 - Time-switch
 - Logic operation, function forced positioning
- Selectable function of the binary inputs:
 - Acting as secondary inputs directly on the switching outputs or acting as independant binary inputs with bus communication
 - Free allocation of the functions switching, dimming, solar protection control, send value and scene control to the inputs
 - Two independent switching objects per input
 - Blocking object for each input
 - Separately selectable behaviour per input at bus voltage recovery
 - Telegram rate limitation for both inputs
- Integrated bus coupling units, bus-powered electronics
- Enclosed bus terminal for bus connection
- Installation in a flush-mounting wall or ceiling box with Ø 60 mm

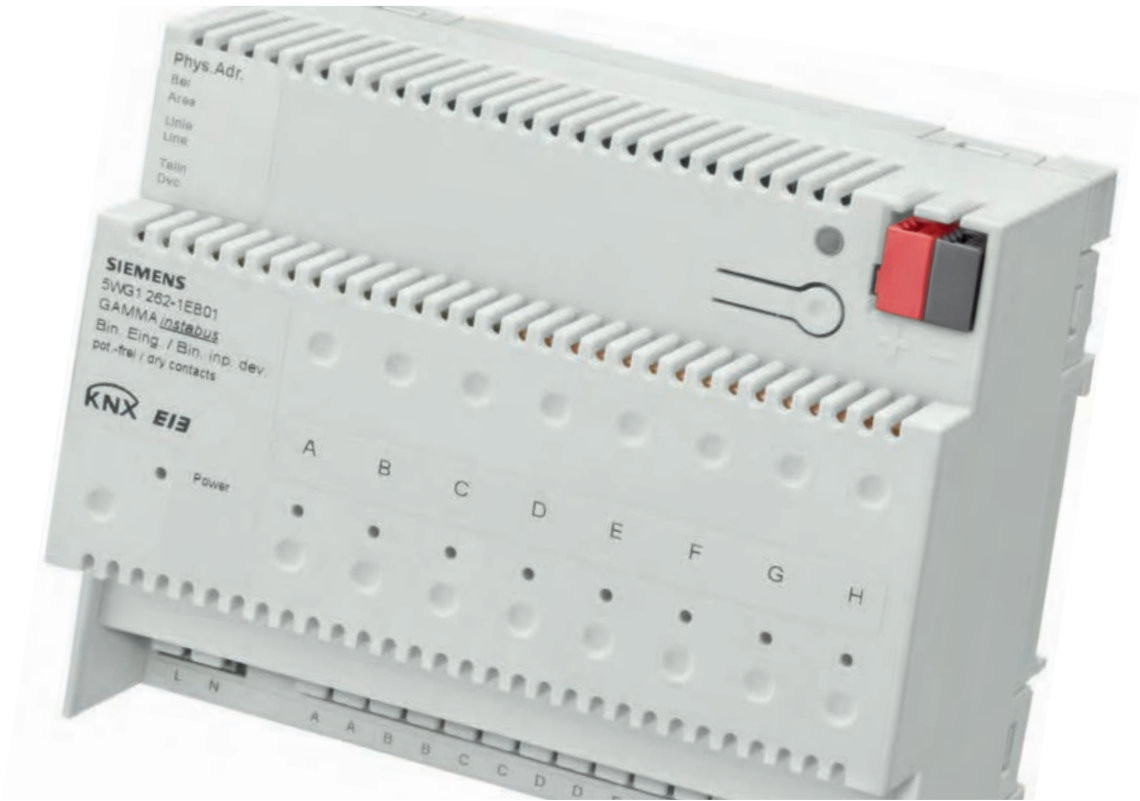
Dimension (Ø x H)

53 x 28 mm

Range overview UP 5..

Product Title	Stock No.	Product No.	DT
Switching actuator, 1 x AC 230 V, 16 A; 2 x binary input	5WG1511-2AB10	UP 511/10	A
Switch actuator, 2 x AC 230 V, 6 A; 2 x binary input	5WG1562-2AB31	UP 562/31	A

Input devices



Technical specification	Binary input devices	3-2
Binary input devices	Binary inputs/DIN rail mounted devices	3-5
	Binary inputs/Modular installation system	3-6
	Pushbutton interface	3-7
	Combination actuators	3-8

Input devices

Technical specification

Binary input devices

3

Binary input devices

Type	N 262E01	N 262E11	N 263E01	N 263E11	N 264E11	RL 260/23	JB 260C23	UP 220/21	UP 220D31	N 501	N 502/02	UP 511/10	UP 562/31	UP 520/31	UP 525/31
Enclosure data															
Design	N	N	N	N	N	RL	JB	UP	UP	N	N	UP	UP	UP	UP
Modular installation devices for mounting on TH35 EN 60715 mounting rail	■	■	■	■	■					■	■				
For inserting into flush-mounting switch and socket boxes with Ø = 60 mm								■	■			■	■	■	■
Modular installation device for mounting in AP 118 automation module box or AP 641 room control box ²⁾						■									
Modular installation device for mounting in Junction Box 4" x 4"							■								
Dimensions															
• Width [mm] (1 MW = 18 mm)	6 MW	6 MW	6 MW	6 MW	6 MW	47.8	70	42	42	8 MW	8 MW	Ø 53	Ø 53	Ø 53	Ø 53
• Height [mm]						86.5	90	42	42						
• Depth [mm]						36.2	44.6	8.5	8.5			28	28	28	28
Display/control elements															
LED for status indication per input	■	■	■	■	■					■	■				
Power supply															
Bus-powered electronics						■	■	■	■			■	■	■	■
Electronics powered via an integrated power supply unit for supply voltage 230 V AC	■	■	■	■	■					■	■				
Bus connection															
Integrated bus coupling units	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Bus connection via contact system to data rail	■	■	■	■	■					■	■				
Bus connection via bus terminal	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Inputs															
Max. cable length, unshielded, twisted [m]	100	100	100	100	100	100	100	10	10	100	100	5	5	5	5
Pushbutton inputs															
For signal input (floating contacts)	8	16			8			2 ³⁾	4 ³⁾			2	2	2	2
Determination of switching state by means of the voltage generated in the device	■	■			■			■	■			■	■	■	■
For voltage input			■	■	■	■	■			■	■				
• 230 V AC															
• 24 V AC/DC															
• 12...230 V AC/DC			8 ⁶⁾		8 ⁶⁾	4	4			8	8				
• 12...230 V AC/12...115 V DC				16 ⁶⁾											

¹⁾ Also available as c-UL version, Order No.: 5WG1261-1CB01

²⁾ The AP 641 room control box and AP 118 automation module box must be ordered separately, see Chapter Quick-assembly system - Room control box-Module boxes

³⁾ Inputs, alternatively can be used as outputs for controlling LEDs up to a maximum of 2 mA

⁴⁾ Pushbutton inputs with shared ground (N)

⁵⁾ Pushbutton inputs with shared ground (COM-)

⁶⁾ The pushbutton inputs are mutually insulated from the base

... Continuation of the table

Type	N 262E01	N 262E11	N 263E01	N 263E11	N 264E11	RL 260/23 ²⁾	UP 220/21	UP 220D31	N 501	N 502/02	UP 511/10	UP 562/31	UP 520/31	UP 525/31
	980903	980D03	980903	980D03	980D03	983101	982301	982201	981701	981601	207201	207101	207301	301901
Application program¹⁾														
Input functions														
Max. number of group addresses	97	97	97	97	97	120	120	120	220	120	26	26	26	26
Max. number of assignments	97	97	97	97	97	120	120	120	220	120	27	27	27	27
Telegram rate limitations	■	■	■	■	■						■	■	■	■
Configurable debounce time	■	■	■	■	■						■	■	■	■
Locking of inputs using blocking objects	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Adjustable duration of long button press	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Configurable contact type (NO contact/NC contact)	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Transmission parameters														
Adjustable cyclic transmission	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Configurable transmission in the event of changes to the input	■	■	■	■	■	■			■	■				
Configurable transmission in the event of bus voltage recovery	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Transmission delay with adjustable delay time														
Configurable event-controlled transmission						■	■							
Switching														
Switching ON/OFF														
• Rising edge	■	■	■	■	■	■	■	■	■	■	■	■	■	■
• Falling edge	■	■	■	■	■	■	■	■	■	■	■	■	■	■
• Rising and falling edge	■	■	■	■	■	■	■	■	■	■	■	■	■	■
• Short/long button press can be evaluated	■	■	■	■	■	■	■	■	■	■				
Switching OVER														
• Rising edge	■	■	■	■	■	■	■	■	■	■	■	■	■	■
• Falling edge	■	■	■	■	■	■	■	■	■	■	■	■	■	■
• Rising and falling edge	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Value transmission														
8 bit														
• Rising edge	■	■	■	■	■	■	■	■	■	■	■	■	■	■
• Falling edge	■	■	■	■	■	■	■	■	■	■				
• Rising and falling edge	■	■	■	■	■	■	■	■	■	■				
• Short/long button press can be evaluated	■	■	■	■	■	■	■	■	■	■				
16 bit														
• Rising edge	■	■	■	■	■	■	■	■	■	■				
• Falling edge	■	■	■	■	■	■	■	■	■	■				
• Rising and falling edge	■	■	■	■	■	■	■	■	■	■				
• Configurable short/long button press	■	■	■	■	■	■	■	■	■	■				
Dimming														
1-pushbutton dimming	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2-pushbutton dimming with stop telegram (4 bit)	■	■		■	■	■	■	■	■	■	■	■	■	■
2-pushbutton dimming with cyclic transmission (4 bit)						■	■	■	■	■	■	■	■	■
2-pushbutton dimming with value setting (8 bit)						■	■	■						
Short/long button press can be evaluated	■	■	■	■	■	■	■	■	■	■				
Shutter/blind														
1-pushbutton shutter/blind control	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2-pushbutton shutter/blind control	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Short/long button press can be evaluated	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Scene														
Store and call up scene, 8-bit	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Store and call up scene, 1-bit in conjunction with scene module	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Pulse counting														
Pulse counting with/without limit value monitoring (8 bit, 16 bit, 32 bit)	■	■	■	■	■	■	■	■	■	■				
Group control														
1-pushbutton group control	■	■	■	■	■	■	■	■	■	■				

¹⁾ For current application programs, see www.siemens.com/gamma-td

²⁾ Identical functions as JB 260C23

Binary input device

- Length of unshielded connecting cable per input of max. 100 m
- LED per binary input for status display
- Input functions: Telegram rate limitations, configurable debounce time, locking of inputs using blocking objects, adjustable duration of long button press, Configurable contact type (NO contact/NC contact)
- Transmission parameters: Adjustable cyclic transmission, Configurable transmission in the event of changes to the input, Configurable transmission in the event of bus voltage recovery
- Short/long button press can be evaluated
- Switching on/off/over
- Value transmission 8 bit, 16 bit
- Dimming: single button dimming, 2-pushbutton dimming with stop telegram (4 bit)
- 1-/2-pushbutton shutter/blind control
- Store and call up scene, 1-bit in conjunction with scene module
- Pulse counting with/without limit value monitoring (8 bit, 16 bit, 32 bit)
- 1-pushbutton group control
- Integrated power supply for 230 V AC to supply the electronics
- Integrated bus coupling units, Bus connection via contact system to data rail, bus connection via bus terminal

Dimension width (1 MW = 18 mm)

6 MW

N 26..E/..1



3

Range overview N26..E/..1

Product Title	Stock No.	Product No.	DT
Binary input device, 8 x potential-free contacts	5WG1262-1EB01	N 262E01	A
Binary input device, 16 x potential-free contacts	5WG1262-1EB11	N 262E11	A
Binary input device, 8 x AC/DC 12...230 V	5WG1263-1EB01	N 263E01	A
Binary input device, 16 x AC 12...230 V / DC 12...115 V	5WG1263-1EB11	N 263E11	A
Binary input device, 8 x AC/DC 12...230 V + 8 x potential-free contacts	5WG1264-1EB11	N 264E11	A

Input devices

Binary input devices

Binary inputs/Modular installation system

3

RL 260/23



Binary Input, 4 x AC/DC 12...230 V

- 4 Inputs for AC/DC 12...230 V
- Max. cable length, unshielded, twisted 100 m
- Bus-powered electronics
- Integrated bus coupling unit, with bus connection via bus terminal block
- Type of protection: IP 20
- Screw-less terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5...2.5 mm²
- For mounting in AP 118 automation module box or AP 641 room control box
- The following functions can be selected per input:
 - Switching state/send binary value/Transmission of the input objects after change
 - Switch edge, short/long switch, 8-bit value edge, 8-bit value short/long
 - Dimming, shading control, single button group control
 - 1/8-bit scene control
 - 16-bit floating-point value edge and 16-bit floating-point short/long
 - Pulse counting with/without limit value monitoring (8/16/32 Bit)
- The following functions can be selected per input pair:
 - 2-pushbutton dimming with stop telegram and 2-pushbutton shading control
- Optional blocking of each input by means of the respective blocking object
- Optional cyclic transmission of input objects

The AP 641 room control box and AP 118 automation module box must be ordered separately.
See Chapter Modular Installation System - Room control box - Module boxes.

Dimensions (W x H x D) 86,5 x 47,8 x 36,2 mm

Stock No.	Product No.	DT
5WG1260-4AB23	RL 260/23	A

JB 260C23



Binary Input 4 x AC/DC 12...230 V

- 4 Inputs for AC/DC 12...230 V
- Max. cable length, unshielded, twisted 100 m
- Bus-powered electronics
- Integrated bus coupling unit, with bus connection via bus terminal block
- Type of protection: IP 20
- As built-in device with 1/2 inch thread connection for mounting to or in a UL/NEMA Junction Box with feedthrough of the function wires through the 1/2 inch threaded connector

Dimensions (W x H x D) 70 x 90 x 44,6 mm

Stock No.	Product No.	DT
5WG1260-4CB23	JB 260C23	A

UP 220/..

3



Pushbutton interface

- Inputs / outputs each configurable for potential-free contacts or for control of an LED
- Generation of the sensing voltage for potential-free contacts
- For inserting into flush-mounting switch and socket boxes with $\varnothing = 60$ mm
- Inputs max. 10 m cable length, unshielded, twisted
- Input functions: Locking of inputs using blocking objects, Adjustable duration of long button press, Configurable contact type (NO contact/NC contact)
- Transmission parameters: Adjustable cyclic transmission, Configurable transmission in the event of bus voltage recovery
- Short/long button press can be evaluated
- Switching on/off/toggle
- Value transmission 8 Bit, 16 Bit
- Single button dimming
- 2-pushbutton dimming with stop telegram (4 bit)
- 1-/2-pushbutton shutter/blind control
- Szene store and call up scene: 8 Bit, in conjunction with scene module 1 Bit
- Pulse counting with/without limit value monitoring (8 bit, 16 bit, 32 bit)
- 1-pushbutton group control
- Bus-powered electronics
- Integrated bus coupling unit, bus connection via bus terminal

Dimensions (W x H x D)

42 x 42 x 8,5 mm

Range overview UP 220/..

Product Title	Stock No.	Product No.	DT
Pushbutton interface, 2 x potential-free contact, output for LED control	5WG1220-2AB21	UP 220/21	A
Pushbutton interface, 4 x potential-free contact, output for LED control	5WG1220-2DB31	UP 220D31	A

Recommendation: LED light insert, for switches and pushbutton inserts, red, 1.5 V DC, 1 mA

N 502/02



Combi switching actuator, 8 x AC 230 V, 16 A, 8 x binary inputs

- 8 inputs AC/DC 12...230 V
- 8 relay contact outputs
- Rated contact voltage AC 230 V
- Rated contact operating current 16 A, p.f. = 1
- Electronics power supply via an integrated power supply unit for AC 230 V
- Device functional even without bus connection or if bus voltage absent or bus communication interrupted or not yet activated
- Push button to switch between bus and direct mode
- Push button for each output to switch the output in direct mode via a toggling function by a short actuation and for changing the output mode between remote control relay and time switch relay by holding down the push button for some seconds
- Device preset at the factory for direct switching of an output through a toggling function via the input of the same name
- Selectable function for each input when using the Engineering Tool Software (ETS):
 - Switching status / binary value transmission
 - Switching, short / long operation
 - Single button dimming, single button sun protection control, 1-button group control (sequence control)
 - 1-bit scene control
 - 8-bit scene control, 8-bit value, edge-triggered, 8-bit value, short / long operation
 - 16-bit floating point value, edge-triggered, 16-bit value, short / long operation, 16-bit value, edge-triggered, 16-bit floating point value, short / long operation
- Selectable function for each pair of inputs:
 - 2-button dimming with stop telegram or with cyclical sending
 - 2-pushbutton shutter/blind control
- Selectable blocking / releasing of each input via a corresponding blocking object
- Sending of the input objects after a change of status
- Selectable logic operation (AND/OR) for one input with a further communication object and with variable start value of the logic operation at bus voltage recovery
- Setting by means of the ETS, whether all outputs are to be configured identically or individually
- Selectable mode for each output (normal mode, time switch mode)
- Optional addition of a night mode object for each output for time-limited switching On of the output (and hence the illumination) at night
- Variable On and Off delay times for each output
- Variable On period in night mode or in time switch mode
- Selectable warning signal prior to imminent switching-off by means of three-times short off and on switching (flashing) in night mode or in time switch mode
- Optional status object per output for status reporting
- Sending of status objects on request and/or automatically after a change
- Integrated 8-bit scene control and linking of each output with up to 8 scenes
- Selectable switching state for each output at mains or bus power failure as well as after bus or mains voltage recovery
- Integrated bus coupling unit with only half a standard bus load
- Bus connection via bus terminal or contact system to data rail
- Modular installation devices for mounting on TH35 EN 60715 mounting rail

Base function	Only Switching
Rated voltage	AC 230 V
Rated current	16 A
Number of channels	8
Number of inputs potentialfree	8
Switch-off warning	Yes
Dimension width (1 MW = 18 mm)	8 MW

Stock No.	Product No.	DT
5WG1502-1AB02	N 502/02	A

N 501/01

3



Combination blind actuator, 4 x AC 230 V, 6 A, 8 x binary inputs

- 8 inputs for DC or AC in the range from 12 to 230 V
- 8 relay contact outputs locked in pairs against each other for controlling 4 x AC 230V sunblind drives
- Contact rated voltage AC 230 V
- Contact rated current 6 A, p.f. = 1
- Electronics powered by a 230 V AC integrated power supply
- Device functional even without bus connection or if the bus communication fails
- Preset on delivery for direct output control for each blind button function via momentary contact switches connected to the inputs
- Key for switching between bus and direct mode
- Button for each relay contact output, for switching the output in direct mode
- Selectable function for each input when using the ETS:
 - Switching status, send binary value
 - Switching on leading edge, switching Short/Long
 - 1-pushbutton dimming, sunblind control, group control
 - 1-bit/8-bit scene control
 - 8-bit/16-bit value leading edge, Short/Long
 - 16-bit floating point value leading edge, Short/Long
- Or for each pair of inputs:
 - Acting directly on the corresponding outputs as blind button
 - 2-button dimming with stop telegram or with cyclical sending
 - 2-pushbutton sunblind control
- Selectable blocking of each input via a corresponding blocking object
- Sending of input objects after change
- Selectable cyclical input object sending
- Individual or shared configuration of actuator channels
- Communication objects for each blind channel for driving the sun protection into the end positions or for stopping the procedure and adjusting the blind slats in steps
- Communication objects for setting position of slats and blinds in percentage information
- Automatic opening of the blind slats to a preconfigured nominal setting after uninterrupted driving down of the blind from the top to the bottom end position, with integrated 1-bit scene control for storing and calling up (reproduction) of 2 interim blind and slat settings
- Integrated 1-bit/8-bit scene control, 8 scenes can be integrated per channel
- Optional „Sun“ object for integration in a sunlight tracking control system
- Differentiation between automatic and manual mode and with automatic switchover from automatic to manual mode for the channel in question by pressing a bus button for manual control of the corresponding sun protection
- Manual mode taking precedence over automatic position commands
- Optional central command for each device or each channel for switching the relevant channels to automatic mode and driving the sun protection into the up or down end position
- Alarm: move to safety position, Locking in this position for as long as alarm is active
- Travel lock (e. g. for cleaning the outer shutter/blinds)
- Status objects for each channel for querying or for automatic sending of sun protection and slat settings as a percentage value
- Optional status objects for reporting that the up or down position has been reached
- Integrated bus coupling unit, Bus connection via bus terminal or contact system to data rail
- Modular installation devices for mounting on TH35 EN 60715 mounting rail

Rated voltage	AC 230 V
Rated current	6 A
Number of channels	4
Number of inputs potentialfree	8
Sun position tracking	Yes
Wind alarm	Yes
Dimension width (1 MW = 18 mm)	8 MW

Stock No.	Product No.	DT
5WG1501-1AB01	N 501/01	A

UP 5..



Switch actuator

- Rated contact voltage AC 230 V
- 2 binary inputs for potential-free contacts
- 20 cm long wires for connecting phase conductor, output, inputs and bus
- Output to be configured as NO or NC contact
- Selectable preferred output state at bus voltage failure and recovery
- Switching status object
- Selectable additional functions:
 - On/off delay
 - Time-switch
 - Logic operation, function forced positioning
- Selectable function of the binary inputs:
 - Acting as secondary inputs directly on the switching outputs or acting as independant binary inputs with bus communication
 - Free allocation of the functions switching, dimming, solar protection control, send value and scene control to the inputs
 - Two independent switching objects per input
 - Blocking object for each input
 - Separately selectable behaviour per input at bus voltage recovery
 - Telegram rate limitation for both inputs
- Integrated bus coupling units, bus-powered electronics
- Enclosed bus terminal for bus connection
- Installation in a flush-mounting wall or ceiling box with Ø 60 mm

Dimension (Ø x H)

53 x 28 mm

Range overview UP 5..

Product Title	Stock No.	Product No.	DT
Switching actuator, 1 x AC 230 V, 16 A; 2 x binary input	5WG1511-2AB10	UP 511/10	A
Switch actuator, 2 x AC 230 V, 6 A; 2 x binary input	5WG1562-2AB31	UP 562/31	A

Venetian blind actuator 1 x AC 230 V, 6 A, 2 x binary inputs

UP 520/31



3

- Electrically interlocked relay contacts as switching elements
- Contact rated operational voltage AC 230 V
- Contact rated current 6 A at $\cos \phi = 1$
- Selectable type of sunblind (Venetian blind / roller shutter)
- Configurable stop time at change of movement direction
- Object for activation / de-activation of the sun protection function
- Configurable sunblind position after activation / de-activation of the sun protection function
- Two safety objects
- Selectable cyclical monitoring of the safety objects
- Moving into a configurable end position on activation or deactivation of the safety function
- Configurable reaction at bus voltage failure and recovery
- 2 binary inputs for potential-free contacts
- Selectable function of the binary inputs: acting as secondary inputs directly on the switching outputs or acting as independant binary inputs with bus communication
- Free allocation of the functions switching, dimming, solar protection control, send value and scene control to the inputs
- Two independent switching objects per input
- Blocking object for each input
- Separately selectable behaviour per input at bus voltage recovery
- Telegram rate limitation for both inputs
- About 20 cm long wires for connecting phase conductor, outputs, inputs and bus
- Bus-powered electronics
- Integrated bus coupling unit
- Enclosed bus terminal for bus connection
- For installation in a flush-mounting wall or ceiling box with 60 mm diameter

Dimension (Ø x H)

53 x 28 mm

	Stock No.	Product No.	DT
	5WG1520-2AB31	UP 520/31	A

UP 525/31



Universal dimmer UP 525/31, 210 VA, AC 230 V, 50 Hz (R,L,C load)

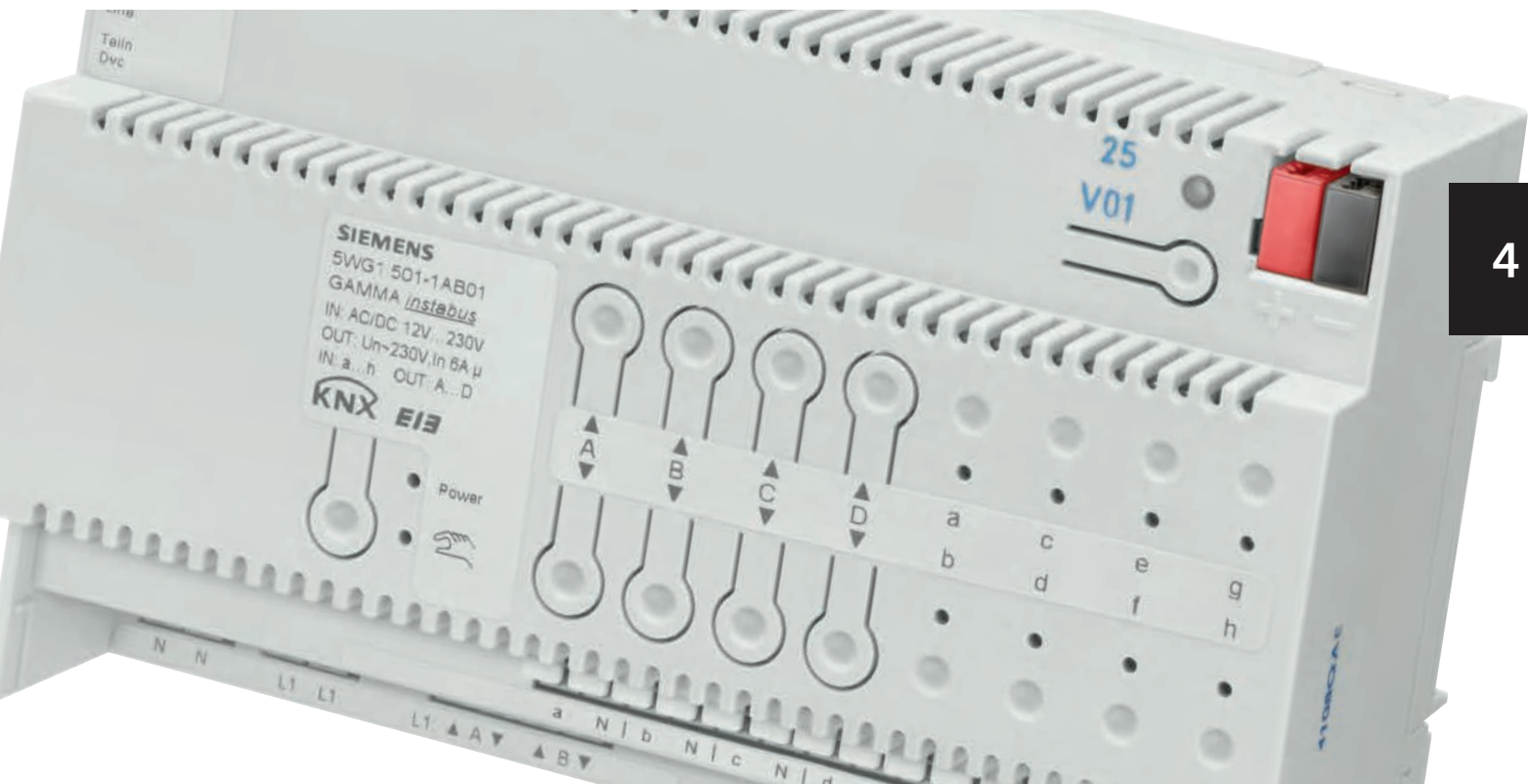
- One output for switching and dimming resistive, inductive or capacitive loads
- With semiconductor output for switching and dimming of lamps
- Rated operational voltage AC 230 V, 50/60 Hz
- Connected load 50...210 VA
- Settable switching and dimming behaviour
- Selectable mode of operation (normal mode, timer mode)
- Soft on, Soft off
- Dimming or jumping to a new dimming value
- Time-delayed switch-off when dimming below a settable dimming value
- Status objects for switching and dimming value
- Short-circuit message
- Message of a load failure
- Integrated 8-bit scene control
- Object for blocking the output
- Configurable brightness value at start and end of a blocking phase
- Adjustable behaviour of the output after bus voltage recovery
- 2 binary inputs for potential-free contacts
- Selectable function of the binary inputs: acting as secondary inputs directly on the switching outputs or acting as independant binary inputs with bus communication
- Free allocation of the functions switching, dimming, solar protection control, send value and scene control to the inputs
- Two independent switching objects per input
- Blocking object for each input
- Separately selectable behaviour per input at bus voltage recovery
- Telegram rate limitation for both inputs
- About 20 cm long wires for connecting phase conductor, output, inputs and bus
- Bus-powered electronics
- Integrated bus coupling unit, bus connection via bus terminal
- For installation in a flush-mounting wall or ceiling box with Ø 60 mm

Dimension (Ø x H)

53 x 28 mm

Stock No.	Product No.	DT
5WG1525-2AB31	UP 525/31	A

Combination devices



4

Technical specification	Input/output devices	4-2
Input/output devices		4-3

Combination devices

Technical specifications

Input/output devices

4

Input/output devices

Type	N 501/01	N 502/02	N 605/01	UP 511/10	UP 562/31	UP 520/31	UP 525/31	UP 220/21	UP 220D31
Application program ¹⁾	981701	981601	906101	207201	207101	207301	301901	982301	982201
Enclosure data									
Design	N	N	N	UP	UP	UP	UP	UP	UP
Modular installation device for mounting on TH35 EN 60715 mounting rail.	■	■	■						
For installation in flush-mounting switch and socket boxes with Ø = 60 mm				■	■	■	■	■	■
Dimensions									
• Width/Ø [mm] (1 MW = 18 mm)	8 MW	8 MW	6 MW	Ø 53	Ø 53	Ø 53	Ø 53	Ø 42	Ø 42
• Depth [mm]				28	28	28	28	8.5	8.5
Display/control elements									
LED for status indication per input	■	■							
LED for status indication per output	■	■	■						
LED for operation/status display	■	■	■						
Pushbuttons for local operation on the device	■	■	■						
Power supply									
Electronics powered via an integrated power supply unit for supply voltage 230 V AC	■	■	■						
Bus-powered electronics				■	■	■	■	■	■
Bus-dependent operation possible	■	■ ²⁾	■						
Bus connection									
Integrated bus coupling units	■	■	■	■	■	■	■	■	■
Bus connection via bus terminal	■	■	■	■	■	■	■	■	■
Bus connection via contact system to data rail	■	■							
Outputs									
Load output									
Floating relay contact		8 ³⁾		1	2	1	1		
Silent semiconductor switch			6						
Electrically interlocked relays (for reversing direction of rotation)	4								
Load types									
Rated contact voltage, AC [V]	230	230	230	230	230	230	230		
Rated contact current [A]	6	16		16	6	6			
Max. short-time current			1.5						
Switching capacity for permanent loading [W]			12						
Protection									
Electronic protection of outputs against overload and short circuit			■			■	■		
Universal inputs/outputs									
Adjustable universal inputs/outputs									
Inputs									
Max. cable length, unshielded, twisted [m]	100	100	50	5	5	5	5	10	10
For signal input (floating contact)			2 x 3	2	2	2	2	2 ⁴⁾⁵⁾	4 ⁴⁾⁵⁾
Determination of switching state by means of the voltage generated in the device			■	■	■	■	■	■	■
For voltage input AC/DC 12...230 V	8	8							
PT1000 temperature sensor input									

¹⁾ For current application programs, see www.siemens.com/gamma-td

²⁾ Each input affects the output of the same name, adjustable as timer or impulse relay

³⁾ Except channel A

⁴⁾ The inputs are mutually insulated from the base

⁵⁾ Inputs, alternatively can be used as outputs for controlling LEDs up to a maximum of 2 mA

N 502/02



4

Combi switching actuator, 8 x AC 230 V, 16 A, 8 x binary inputs

- 8 inputs AC/DC 12...230 V
- 8 relay contact outputs
- Rated contact voltage AC 230 V
- Rated contact operating current 16 A, p.f. = 1
- Electronics power supply via an integrated power supply unit for AC 230 V
- Device functional even without bus connection or if bus voltage absent or bus communication interrupted or not yet activated
- Push button to switch between bus and direct mode
- Push button for each output to switch the output in direct mode via a toggling function by a short actuation and for changing the output mode between remote control relay and time switch relay by holding down the push button for some seconds
- Device preset at the factory for direct switching of an output through a toggling function via the input of the same name
- Selectable function for each input when using the Engineering Tool Software (ETS):
 - Switching status / binary value transmission
 - Switching, short / long operation
 - Single button dimming, single button sun protection control, 1-button group control (sequence control)
 - 1-bit scene control
 - 8-bit scene control, 8-bit value, edge-triggered, 8-bit value, short / long operation
 - 16-bit floating point value, edge-triggered, 16-bit value, short / long operation, 16-bit value, edge-triggered, 16-bit floating point value, short / long operation
- Selectable function for each pair of inputs:
 - 2-button dimming with stop telegram or with cyclical sending
 - 2-pushbutton shutter/blind control
- Selectable blocking / releasing of each input via a corresponding blocking object
- Sending of the input objects after a change of status
- Selectable logic operation (AND/OR) for one input with a further communication object and with variable start value of the logic operation at bus voltage recovery
- Setting by means of the ETS, whether all outputs are to be configured identically or individually
- Selectable mode for each output (normal mode, time switch mode)
- Optional addition of a night mode object for each output for time-limited switching On of the output (and hence the illumination) at night
- Variable On and Off delay times for each output
- Variable On period in night mode or in time switch mode
- Selectable warning signal prior to imminent switching-off by means of three-times short off and on switching (flashing) in night mode or in time switch mode
- Optional status object per output for status reporting
- Sending of status objects on request and/or automatically after a change
- Integrated 8-bit scene control and linking of each output with up to 8 scenes
- Selectable switching state for each output at mains or bus power failure as well as after bus or mains voltage recovery
- Integrated bus coupling unit with only half a standard bus load
- Bus connection via bus terminal or contact system to data rail
- Modular installation devices for mounting on TH35 EN 60715 mounting rail

Base function	Only Switching
Rated voltage	AC 230 V
Rated current	16 A
Number of channels	8
Number of inputs potentialfree	8
Switch-off warning	Yes
Dimension width (1 MW = 18 mm)	8 MW

Stock No.	Product No.	DT
5WG1502-1AB02	N 502/02	A

N 501/01



4



Combination blind actuator, 4 x AC 230 V, 6 A, 8 x binary inputs

- 8 inputs for DC or AC in the range from 12 to 230 V
- 8 relay contact outputs locked in pairs against each other for controlling 4 x AC 230V sunblind drives
- Contact rated voltage AC 230 V
- Contact rated current 6 A, p.f. = 1
- Electronics powered by a 230 V AC integrated power supply
- Device functional even without bus connection or if the bus communication fails
- Preset on delivery for direct output control for each blind button function via momentary contact switches connected to the inputs
- Key for switching between bus and direct mode
- Button for each relay contact output, for switching the output in direct mode
- Selectable function for each input when using the ETS:
 - Switching status, send binary value
 - Switching on leading edge, switching Short/Long
 - 1-pushbutton dimming, sunblind control, group control
 - 1-bit/8-bit scene control
 - 8-bit/16-bit value leading edge, Short/Long
 - 16-bit floating point value leading edge, Short/Long
- Or for each pair of inputs:
 - Acting directly on the corresponding outputs as blind button
 - 2-button dimming with stop telegram or with cyclical sending
 - 2-pushbutton sunblind control
- Selectable blocking of each input via a corresponding blocking object
- Sending of input objects after change
- Selectable cyclical input object sending
- Individual or shared configuration of actuator channels
- Communication objects for each blind channel for driving the sun protection into the end positions or for stopping the procedure and adjusting the blind slats in steps
- Communication objects for setting position of slats and blinds in percentage information
- Automatic opening of the blind slats to a preconfigured nominal setting after uninterrupted driving down of the blind from the top to the bottom end position, with integrated 1-bit scene control for storing and calling up (reproduction) of 2 interim blind and slat settings
- Integrated 1-bit/8-bit scene control, 8 scenes can be integrated per channel
- Optional „Sun“ object for integration in a sunlight tracking control system
- Differentiation between automatic and manual mode and with automatic switchover from automatic to manual mode for the channel in question by pressing a bus button for manual control of the corresponding sun protection
- Manual mode taking precedence over automatic position commands
- Optional central command for each device or each channel for switching the relevant channels to automatic mode and driving the sun protection into the up or down end position
- Alarm: move to safety position, Locking in this position for as long as alarm is active
- Travel lock (e. g. for cleaning the outer shutter/blinds)
- Status objects for each channel for querying or for automatic sending of sun protection and slat settings as a percentage value
- Optional status objects for reporting that the up or down position has been reached
- Integrated bus coupling unit, Bus connection via bus terminal or contact system to data rail
- Modular installation devices for mounting on TH35 EN 60715 mounting rail

Rated voltage	AC 230 V
Rated current	6 A
Number of channels	4
Number of inputs potentialfree	8
Sun position tracking	Yes
Wind alarm	Yes
Dimension width (1 MW = 18 mm)	8 MW

Stock No.	Product No.	DT
5WG1501-1AB01	N 501/01	A

Thermal drive actuator

- Can be operated with *instabus* Room temperature controllers
- Direct operation (local operation), LED for operation/status display
- Rated voltage 230 V AC, 6 silent semiconductor switch
- Electronic protection of outputs against overload and short circuit
- 6 signal inputs (floating contacts), Determination of switching state by means of the voltage generated in the device, max. 50 m cable length, unshielded, twisted
- Funktionen Ausgänge: Switching (on/off per channel), Configurable transmission of input status objects
- Configurable behavior in the event of a bus voltage failure/recovery
- Electronics powered via an integrated power supply unit for supply voltage 230 V AC
- Integrated bus coupling units, Bus connection via bus terminal
- Modular installation device for mounting on TH35 EN 60715 mounting rail

Dimension width (1 MW = 18 mm) 6 MW

N 605/..



Range overview N 605..

Product Title	Stock No.	Product No.	DT
Thermal drive actuator, 6 inputs, 6 outputs	5WG1605-1AB01	N 605/01	C

UP 220/..



Pushbutton interface

- Inputs / outputs each configurable for potential-free contacts or for control of an LED
- Generation of the sensing voltage for potential-free contacts
- For inserting into flush-mounting switch and socket boxes with $\varnothing = 60$ mm
- Inputs max. 10 m cable length, unshielded, twisted
- Input functions: Locking of inputs using blocking objects, Adjustable duration of long button press, Configurable contact type (NO contact/NC contact)
- Transmission parameters: Adjustable cyclic transmission, Configurable transmission in the event of bus voltage recovery
- Short/long button press can be evaluated
- Switching on/off/toggle
- Value transmission 8 Bit, 16 Bit
- Single button dimming
- 2-pushbutton dimming with stop telegram (4 bit)
- 1-/2-pushbutton shutter/blind control
- Scene store and call up scene: 8 Bit, in conjunction with scene module 1 Bit
- Pulse counting with/without limit value monitoring (8 bit, 16 bit, 32 bit)
- 1-pushbutton group control
- Bus-powered electronics
- Integrated bus coupling unit, bus connection via bus terminal

Dimensions (W x H x D)

42 x 42 x 8,5 mm

Range overview UP 220/..

Product Title	Stock No.	Product No.	DT
Pushbutton interface, 2x potential-free contact, output for LED control	5WG1220-2AB21	UP 220/21	A
Pushbutton interface, 4x potential-free contact, output for LED control	5WG1220-2DB31	UP 220D31	A

Recommendation: LED light insert, for switches and pushbutton inserts, red, 1.5 V DC, 1 mA

Accessories for UP 220/..

Product Title	Stock No.	Product No.	DT
LED light insert	5TG7318	5TG7318	B

Switch actuator

- Rated contact voltage AC 230 V
- 2 binary inputs for potential-free contacts
- 20 cm long wires for connecting phase conductor, output, inputs and bus
- Output to be configured as NO or NC contact
- Selectable preferred output state at bus voltage failure and recovery
- Switching status object
- Selectable additional functions:
 - On/off delay
 - Time-switch
 - Logic operation, function forced positioning
- Selectable function of the binary inputs:
 - Acting as secondary inputs directly on the switching outputs or acting as independant binary inputs with bus communication
 - Free allocation of the functions switching, dimming, solar protection control, send value and scene control to the inputs
 - Two independent switching objects per input
 - Blocking object for each input
 - Separately selectable behaviour per input at bus voltage recovery
 - Telegram rate limitation for both inputs
- Integrated bus coupling units, bus-powered electronics
- Enclosed bus terminal for bus connection
- Installation in a flush-mounting wall or ceiling box with Ø 60 mm

Dimension (Ø x H) 53 x 28 mm

Range overview UP 5..

Product Title	Stock No.	Product No.	DT
Switching actuator, 1 xAC 230 V, 16 A; 2 xbinary input	5WG1511-2AB10	UP 511/10	A
Switch actuator, 2 xAC 230 V, 6 A; 2 xbinary input	5WG1562-2AB31	UP 562/31	A

UP 5..



4

UP 520/31



Venetian blind actuator 1 x AC 230 V, 6 A, 2 x binary inputs

- Electrically interlocked relay contacts as switching elements
- Contact rated operational voltage AC 230 V
- Contact rated current 6 A at cos phi = 1
- Selectable type of sunblind (Venetian blind / roller shutter)
- Configurable stop time at change of movement direction
- Object for activation / de-activation of the sun protection function
- Configurable sunblind position after activation / de-activation of the sun protection function
- Two safety objects
- Selectable cyclical monitoring of the safety objects
- Moving into a configurable end position on activation or deactivation of the safety function
- Configurable reaction at bus voltage failure and recovery
- 2 binary inputs for potential-free contacts
- Selectable function of the binary inputs: acting as secondary inputs directly on the switching outputs or acting as independant binary inputs with bus communication
- Free allocation of the functions switching, dimming, solar protection control, send value and scene control to the inputs
- Two independent switching objects per input
- Blocking object for each input
- Separately selectable behaviour per input at bus voltage recovery
- Telegram rate limitation for both inputs
- About 20 cm long wires for connecting phase conductor, outputs, inputs and bus
- Bus-powered electronics
- Integrated bus coupling unit
- Enclosed bus terminal for bus connection
- For installation in a flush-mounting wall or ceiling box with 60 mm diameter

Dimension (Ø x H) 53 x 28 mm

Stock No.	Product No.	DT
5WG1520-2AB31	UP 520/31	A

Universal dimmer UP 525/31, 210 VA, AC 230 V, 50 Hz (R,L,C load)

- One output for switching and dimming resistive, inductive or capacitive loads
- With semiconductor output for switching and dimming of lamps
- Rated operational voltage AC 230 V, 50/60 Hz
- Connected load 50...210 VA
- Settable switching and dimming behaviour
- Selectable mode of operation (normal mode, timer mode)
- Soft on, Soft off
- Dimming or jumping to a new dimming value
- Time-delayed switch-off when dimming below a settable dimming value
- Status objects for switching and dimming value
- Short-circuit message
- Message of a load failure
- Integrated 8-bit scene control
- Object for blocking the output
- Configurable brightness value at start and end of a blocking phase
- Adjustable behaviour of the output after bus voltage recovery
- 2 binary inputs for potential-free contacts
- Selectable function of the binary inputs: acting as secondary inputs directly on the switching outputs or acting as independant binary inputs with bus communication
- Free allocation of the functions switching, dimming, solar protection control, send value and scene control to the inputs
- Two independent switching objects per input
- Blocking object for each input
- Separately selectable behaviour per input at bus voltage recovery
- Telegram rate limitation for both inputs
- About 20 cm long wires for connecting phase conductor, output, inputs and bus
- Bus-powered electronics
- Integrated bus coupling unit, bus connection via bus terminal
- For installation in a flush-mounting wall or ceiling box with Ø 60 mm

Dimension (Ø x H) 53 x 28 mm

UP 525/31



4

	Stock No.	Product No.	DT
	5WG1525-2AB31	UP 525/31	A

Lighting



Overview	Dimmers	5-2
	DALI control output	5-5
	Light level controls	5-13
Technical specification	Dimmers	5-3
	Switch/dimming actuators	5-10
	Light level controls	5-14
Dimmers		5-17
Switching/dimming actuators	DALI control output	5-23
	Control output 1...10 V DC	5-27
Light level controls		5-31



Channel bundling of up to four channels for high output

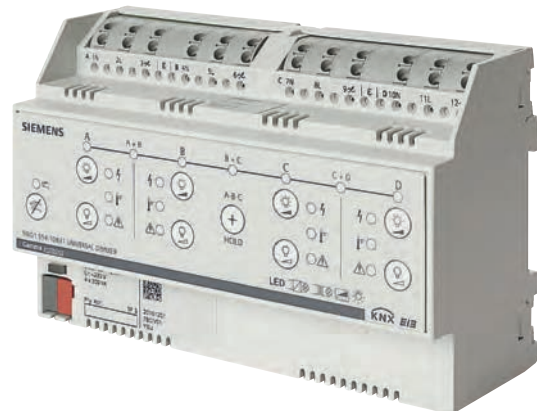
Strong illumination can be realized by bundling channels up to 100 VA. Bundling two channels increases the output to 300 VA and 500 VA. Bundling three channels increases the output to 750 VA and four channels to 1,000 VA. Adjacent channels can be bundled as follows: A+B|C|D, A|B+C|D, A|B|C+D, A +B|C+D, A+B+C|D, A|B+C+D and A+B +C+D.

Universal dimmer for LEDs and conventional illuminants

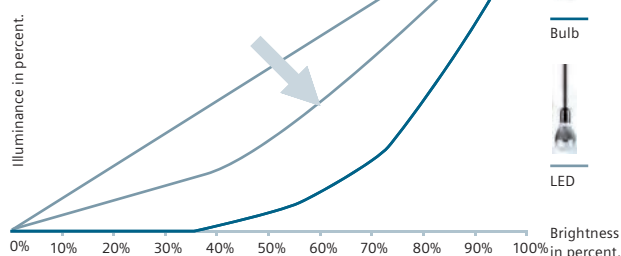
The new universal dimmer N 554 in the new design with DIN rail-mounted devices expands the Siemens GAMMA instabus lighting control product range. Its four independent channels enable the new product to deliver seamless dimming adjustment for dimmable LED retrofit bulbs and bulbs in all other dimmable categories, with no minimum load. The universal dimmer's front panel makes it easy to check and operate. Channel bundling allows outputs to be combined so the load can be increased up to 1,000 VA.

Intuitive front panel

Status LEDs and push-buttons permit convenient operation at the front panel to check the installation. With one click, users can switch and dim the ballasts, configure the channel bundling, and detect faults. Channel bundling can be adjusted directly, without ETS.















LED dimming behavior adjustable comparable to a bulb



Adjustable dimming curves

For greater comfort and flexibility, the universal dimmer offers the option to adjust the dimming behavior of LEDs so that it resembles that of conventional bulbs. The graph shows the typical dimming behavior of an LED compared with a bulb. In the ETS, users can adjust the setting of the LED dimming curve to parametrize the control of brightness relative to dimness. These bulbs can be dimmed brighter or darker in the mid-dim region.

Dimmers

	 N 528D01 N 528C01	 N 554D31	 UP 525/03	 UP 525/13	 UP 525/31	 RS 525/23
Type						
Enclosure data						
Design	N	N	UP	UP	UP	RS
Modular installation devices for mounting on TH35 EN 60715 mounting rail	■	■				
For installation in flush-mounting switch and socket boxes with Ø = 60 mm			■	■	■	
10-pole BTI socket (BTI - Bus Transceiver Interface) for plugging of bus terminal devices with BTI connector			■			
Modular installation device for mounting in AP 118 automation module box or AP 641 room control box ¹⁾						■
Interface for connection of a universal dimmer expansion						
Dimensions						
• Width/Ø [mm] (1 MW = 18 mm)	4 MW	8MW	71	50	Ø 53	50
• Height [mm]			71	41.3	28	35
• Depth [mm]			41.5	50.9		
Mounting type						
Screw fixing			■			
Power supply						
Bus-powered electronics	■	■	■	■	■	■
Electronics powered via an integrated power supply unit, for supply voltage 230 V AC						
Power loss						
max. power loss [W]	6	7	2	2	2	2
Bus connection						
Integrated bus coupling units	■	■	■	■	■	■
Bus connection via bus terminal	■	■	■	■	■	■
Outputs						
Load output						
Number of channels	2	4	1	1	1	1
Load type						
Load						
Contact rated voltage, AC [V]	230 or 120	230	230	230	230	230
Dimmer output [VA]	0... 300 ²⁾ or 0...150	0... 300 ²⁾	10... 250	10... 250	50... 210	10... 250
Protection						
Electronic protection of outputs against overload and short circuit	■	■	■	■	■	■
Inputs						
Max. cable length, unshielded, twisted [m]					5	
For signal inputs (floating contact)					2	
Determination of switching state by means of the voltage generated in the device					■	
For conventional pushbuttons 230 V AC						

¹⁾ The AP 641 room control box and AP 118 automation module box must be ordered separately, see Chapter Quick-assembly system - Room control box - Module boxes







²⁾ Max. 500 VA or 250 VA one channel only used

Lighting

Technical specifications

Dimmers

Continuation of the table ...

						
Type	N 528D01 N 528C01	N 554D31	UP 525/03	UP 525/13	UP 525/31	RS 525/23
Application program ¹⁾	9839xx ¹⁾	910A01	982C01	982C01	301901	982C01
Output functions						
Max. number of group addresses	127	2000	120	120	26	120
Max. number of assignments	127	2000	120	120	27	120
Blocking function	■	■	■	■	■	■
Configurable behavior in the event of a bus voltage failure	■	■	■	■	■	■
Configurable behavior in the event of a bus voltage recovery	■	■	■	■	■	■
Switching						
Switching ON/OFF	■	■	■	■	■	■
Configurable starting value	■	■	■	■	■	■
Blocking object per channel	■	■	■	■	■	■
Dimming						
BRIGHTER/DARKER dimming	■	■	■	■	■	■
Adjustable dimming range	■	■	■	■	■	■
Minimum dimming value (basic brightness)	■	■	■	■	■	■
Maximum dimming value	■	■	■	■	■	■
Configurable dimming curves		6				
Dim or startup 8-bit value	■	■	■	■	■	■
Logic gates per channel		2				
Scenes						
1-bit scene						
8-bit scene	■	■	■	■	■	■
Scenes to be integrated per channel	8	8	8	8	8 ²⁾	8
Status						
Transmitting switch and dimming status	■	■	■	■	■	■
Fault indications overload/short circuit/ overtemperature on bus		■			■	

¹⁾ For current application programs, see www.siemens.com/gamma-td

²⁾ Only assignment of scene number 1...8 possible

KNX and DALI – a strong team

The Digital Addressable Lighting Interface (DALI) was introduced in 2004 to replace the classic 1...10 V interface on the market. The manufacturer neutral DALI bus is a system control electronic control gear (ballast or ECG) in lighting technology. International standard IEC 62386 specifies the DALI communication interface. In addition to ECGs, the DALI interface also supports selected sensors.

DALI communication allows all DALI devices to be simultaneously controlled with same command (broadcast). When controlled via broadcast, all DALI devices respond as if they were jointly controlled via one 1...10 V interface. A second control method under DALI is to assign a DALI device to one of up to 16 groups (group addressing) or to control each individual DALI device (individual addressing).

DALI is not limited to receiving just switching and dimming commands, but can also report status information on lighting status or fault states, e.g. in the event a luminaire or ECG fails.

DALI can assign DALI devices to up to 16 scenes. The specific settings for each scene are then stored in the individual DALI devices and can be started with a single command allowing complex scenes or very fast command processing. And yet the expense of dimming with KNX and DALI does not exceed 1...10 V. In fact, if you compare wiring expenses for DALI and 1...10 V as well as the difference in costs for materials and work, you can implement a project with DALI at approximately one third less than with 1...10 V.

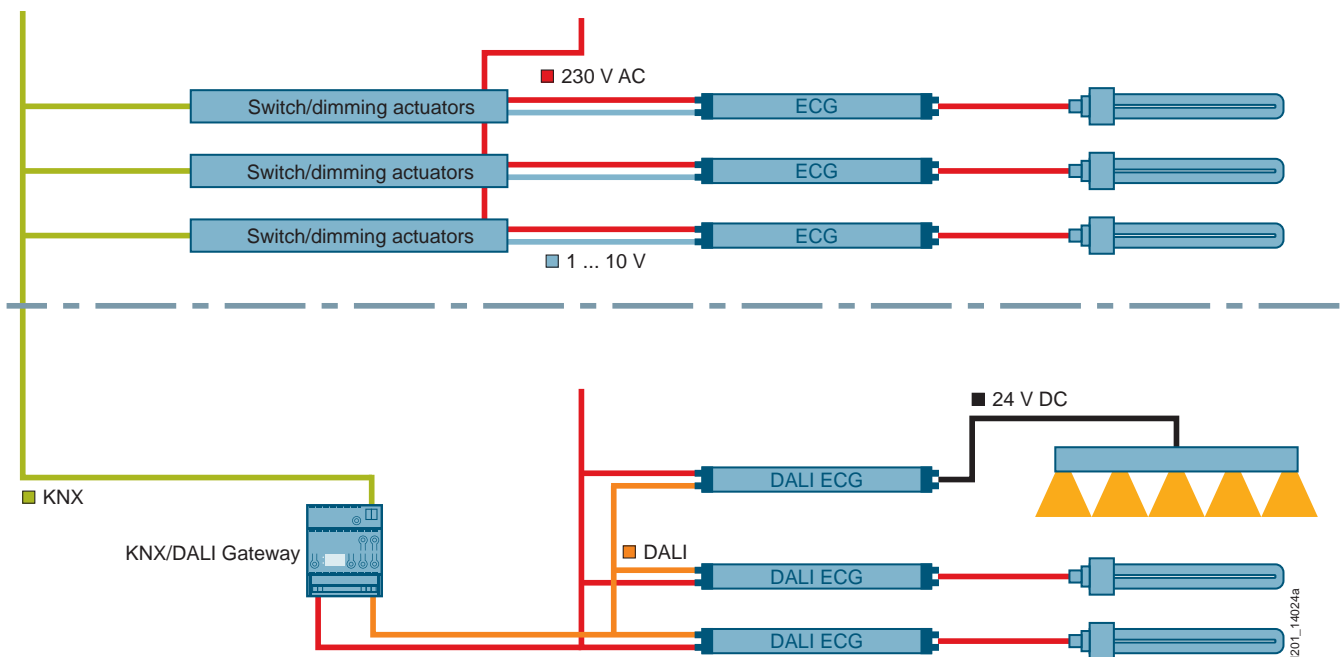
In the simplest level, a control device for lighting control with DALI can include a brightness sensor, presence detector, or a combination of brightness sensor/presence detector that controls a group of luminaires by occupancy and daylight. For these simple, local applications, where DALI from one sensor is used as the interface to one or more DALI devices, the broadcast is used as a replace for classic control via 1...10 V. In this regard, these applications are not considered networked systems.

In just one DALI line, up to 64 individual DALI ECGs (slaves) can be connected by the connected control device/gateway (master). The ECG receives an address generated automatically during DALI commissioning and in another commissioning step, receives a short address of 0...63 based on the initial address. The device assignment is random since the address assignment is automatic and the individual ECG/luminaires must be initially identified as the commissioning process proceeds. Individual ECG are addressed either based on the short address (individual control) or based on a DALI group address (group addressing). To this end, any number of ECG from one line may be assigned in up to 16 DALI groups. The group addressing in the DALI system ensures that switching and dimming actions are executed by the various luminaires within a system at the same time (i.e. without delay). Individual luminaire values can be compiled in individual DALI ECG, in addition to addressing by short addresses and group addresses and initiated via scene addressing.

With the release of DALI edition 2 all DALI devices will be tested and certified properly. Especially ECGs will be more compatible to KNX/DALI Gateways caused by these standardized tests. DALI edition 2 ECG are backwards compatible to DALI edition 1 ECG.

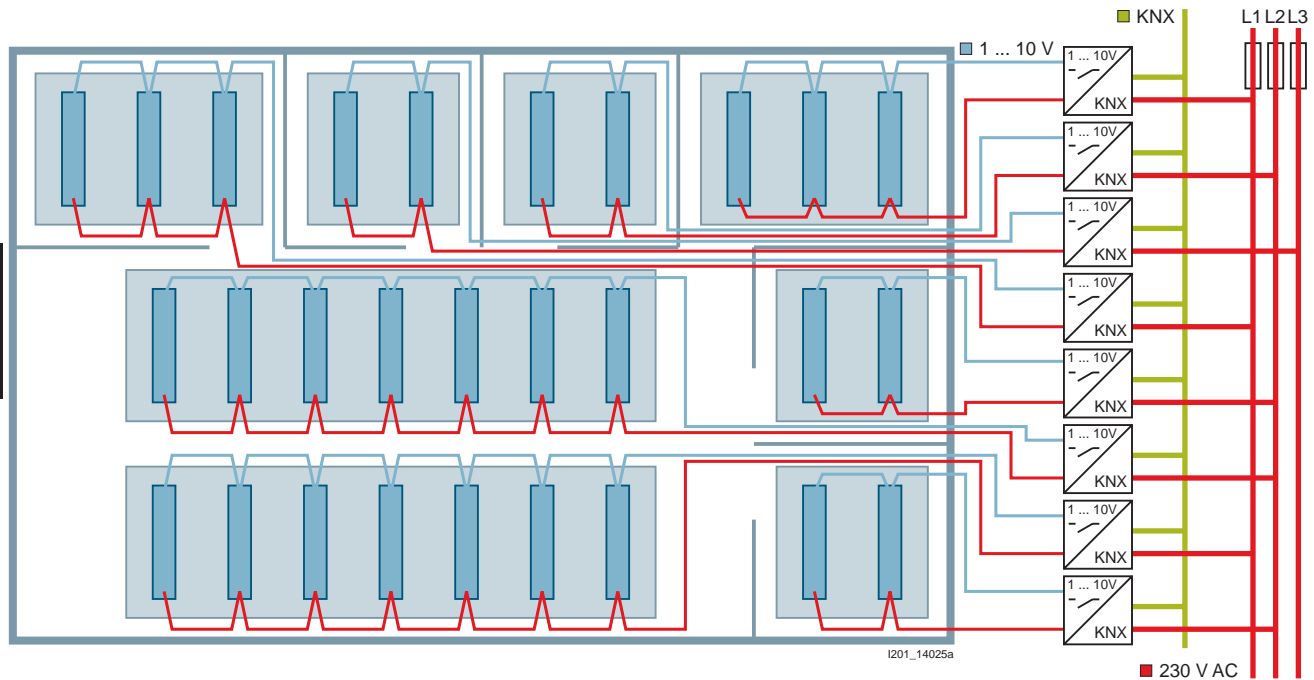
Additional information on DALI is available in the DALI technical manual at: www.dali-ag.org

Compare 1...10 V control system to DALI with KNX

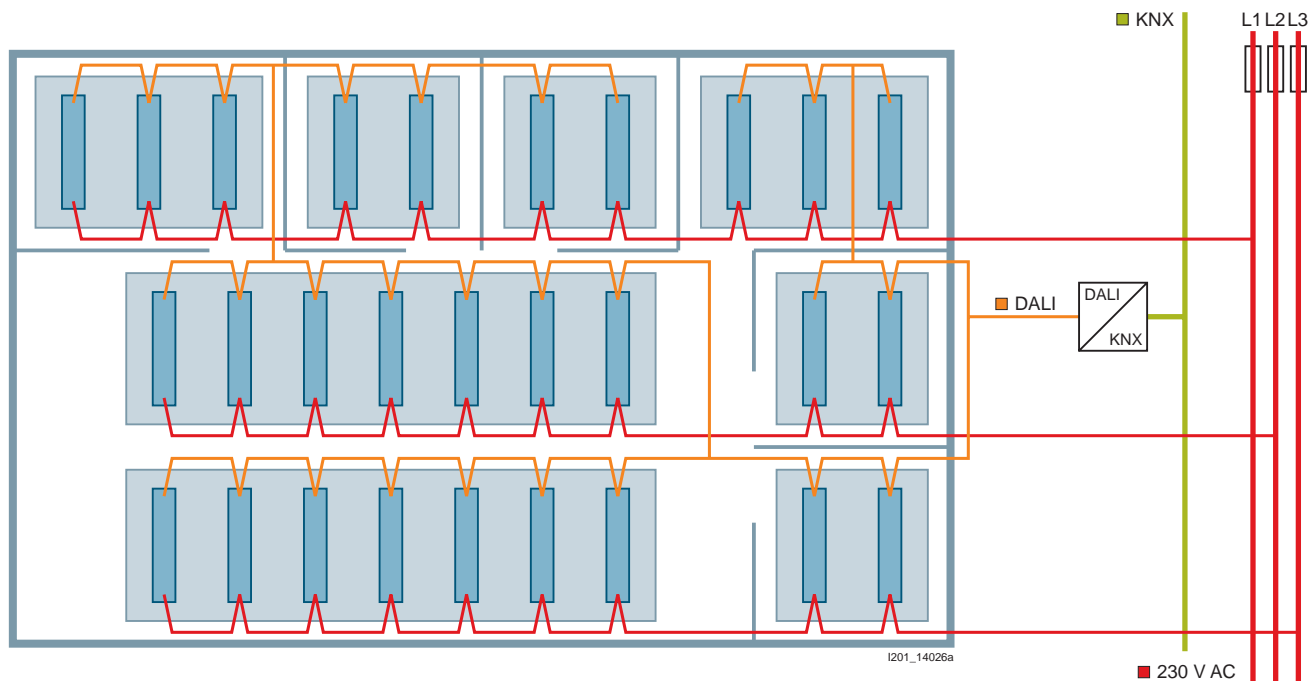


Lighting Overview DALI control output

Wiring of lighting groups 1...10 V control with KNX



Wiring of lighting groups with DALI with KNX



Modern lighting systems can be controlled efficiently and conveniently with DALI. Their efficiency can be increased even more when combined with the advantages of KNX. That's why KNX/DALI gateways from Siemens offer both standards directly: for DALI digital lighting (IEC 62386) and for KNX building control (ISO/IEC 14543-3 or DIN EN 50090). It's possible to integrate DALI lighting into KNX installations quickly and easily.

Benefits:

- Lighting groups are not hardwire-connected
- Possible to plan control lines and power supply separately
- Even, uniform load distribution throughout the power supply network
- Lower fire load thanks to fewer cables
- Planning is simpler and faster
- Integration of emergency lighting into the general lighting
- Support for selected sensors with DALI interface
- Switching off standby when lighting is turned off
- Replacement of defective single-channel ballasts without software

Lighting Overview DALI control output

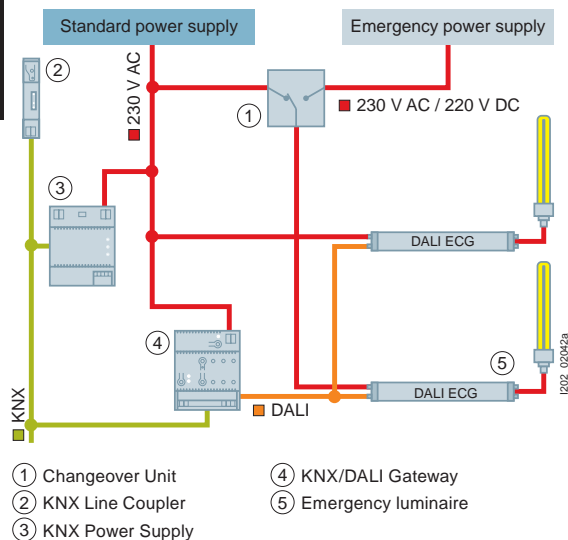
Emergency lighting with KNX and DALI

Simple solution with KNX/DALI gateway

The KNX/DALI Gateway supports both luminaires, which are used in common lighting as emergency lights, and self-contained emergency lighting. In normal mode the failure indication messages during test can be prevented.

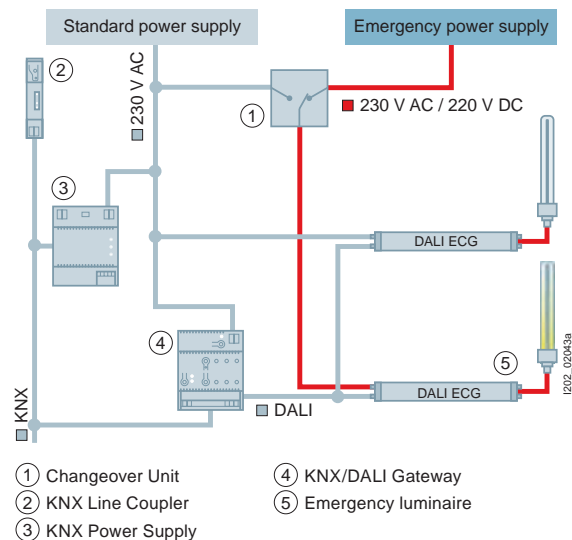
Normal mode

- Lighting control with DALI
- Feedback of fault indications and failure of lighting and ECGs to building control



Emergency operation

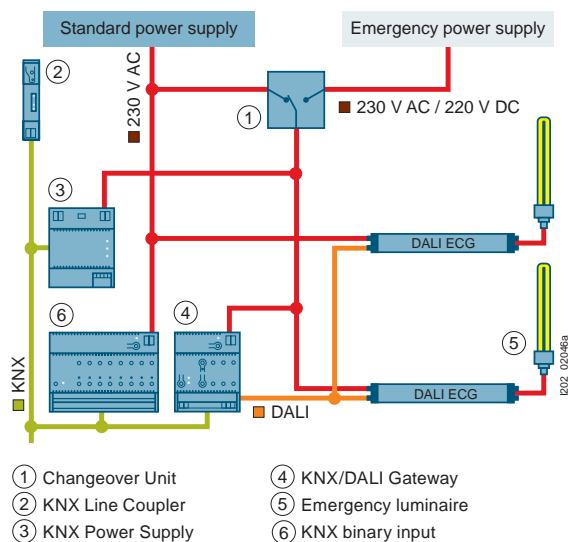
- Automatic emergency lighting in the event of DALI voltage failure
- Parameterization of dimming value of DALI-ECG for emergency lighting via KNX/DALI gateway



Intelligent solution via safety supply and KNX/DALI gateway with status indication in emergency mode

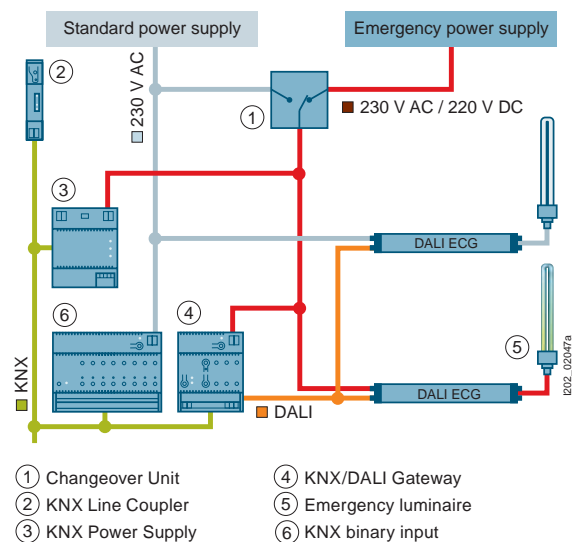
Normal mode

- Lighting control with DALI
- Feedback of fault indications and failure of lighting and ECGs to building control



Emergency operation

- Parameterization of dimming value of DALI-ECG in emergency operation via KNX/DALI gateway
- The continued transmission of status indications in emergency operation is possible because there is no interruption of supply to KNX and DALI.

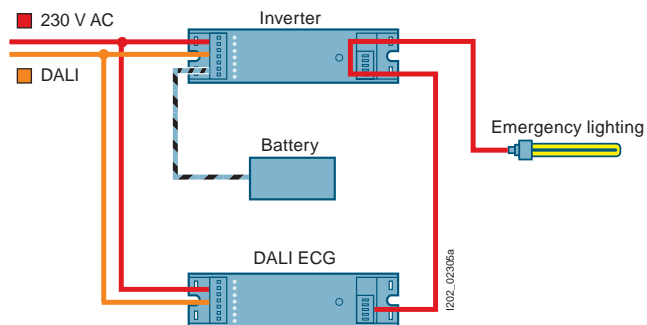


Emergency lighting with single battery and KNX/DALI gateway

In case of self-contained emergency lighting according to IEC 62386-202 the mandatory self-tests are supported. The test results will be transmitted via KNX or stored in the KNX/DALI gateway. The test result memory can be read and saved using ETS.

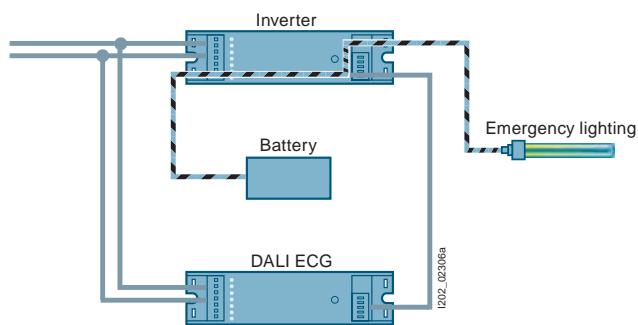
Normal mode with two DALI devices

- Lighting control with DALI
- Initiate/record/save tests

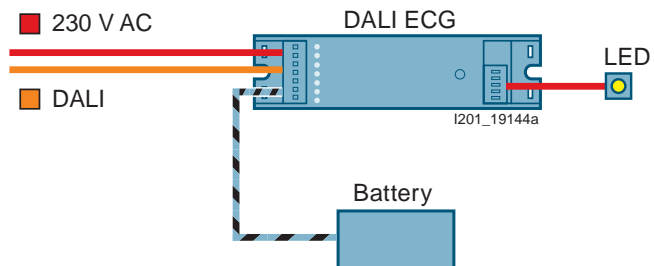


Emergency operation with two DALI devices

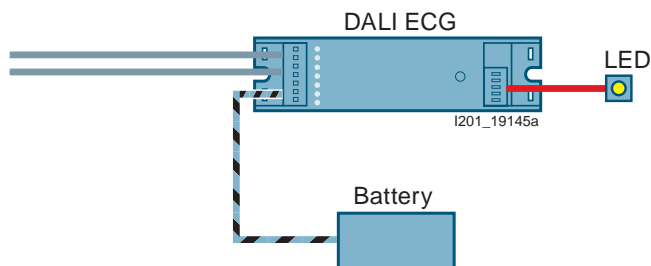
- Automatic emergency lighting acc. to parameterization via KNX/DALI gateway



Normal mode with one DALI device



Emergency mode with one DALI device









Lighting

Technical specifications

Switching/dimming actuators







Switching/dimming actuators

	DALI control outputs				Control outputs 1...10 V	
						
Type	N 141/21	N 141/03	N 141/31	N 525E01	N 526E02	N 526/02
Name	Twin plus	plus	Twin			
Enclosure data						
Design	N	N	N	N	N	N
Modular installation devices for mounting on TH35 EN 60715 mounting rail	■	■	■	■	■	■
Dimensions						
Width [mm] (1 MW = 18 mm)	4 MW	4 MW	4 MW	4 MW	8 MW	6 MW
Display/control elements						
Mechanical switching position indication for status indication per output					■	
LED for status indication per output	■	■	■	■		■
LEDs for fault indication (lighting failure) per output				■		
Pushbuttons for local operation on the device	■	■	■	■		■
Direct operation (local operation)	■	■	■	■		■
Mechanical local operation with switching position indication					■	
Power supply						
Bus-powered electronics					■	
Electronics powered via an integrated power supply unit	■	■	■	■		■
DALI outputs powered via an integrated power supply unit	■	■	■	■		
Power loss						
maximum power loss [W]	11	6	11	6	9	6
Bus connection						
Integrated bus coupling units	■	■	■	■	■	■
Bus connection via contact system to data rail				■	■	
Bus connection via bus terminal	■	■	■	■	■	■
Outputs						
Control output						
1...10 V DC					8	3
DALI outputs (lines)	2	1	2	8		
Max. ECG per output (units)	64	64	64	8	60 ¹⁾	20 ¹⁾
Load output³⁾						
Floating relay contacts					8	3 ²⁾
Contact rated voltage, AC [V]					230	230
Contact rated current [A]					16	6

¹⁾ Osram Dynamik 58 W

²⁾ Except channel C

Continuation of the table ...

	DALI control outputs				Control outputs 1...10 V		
							
Type	N 141/21	N 141/03	N 141/31	N 525E01	N 526E02	N 526/02	
Application program ¹⁾	9834xx ¹⁾	9837xx ¹⁾	9833xx ¹⁾	983Dxx	980801	981301	905303
Name	Twin plus	plus	Twin	Twin			
Functions							
Max. number of group addresses	3000	3000	3000	3000	108	250	35
Max. number of assignments	3000	3000	3000	3000	107	250	47
Integrated constant light level control	16	16					3
Configurable behavior in the event of a bus voltage failure	■	■	■	■	■	■	■
Configurable behavior in the event of a bus voltage recovery	■	■	■	■	■	■	■
Configurable behavior in the event of a system voltage failure	■	■	■	■	■		
Configurable behavior in the event of a system voltage recovery	■	■	■	■	■		■
Control functions							
Broadcast	■	■	■	■	■		
Groups	32	16	32	32			
Individual ECG	128	64		128			
Switching							
Switching ON/OFF	■	■	■	■	■	■	■
Configurable starting value	■	■	■	■	■	■	■
Switching ON/OFF possible via BRIGHTER/DARKER dimming	■	■	■	■	■	■	■
Dimming							
BRIGHTER/DARKER dimming	■	■	■	■	■	■	■
Adjustable dimming time	■	■	■	■	■	■	■
Brightness limitation, adjustable min. dimming value/max. dimming value	■	■	■	■	■	■	■
Value transmission							
Set 8-bit value	■	■	■	■	■	■	■
Scene control							
Integrated 8-bit scene control	■	■	■	■	■	■	■
Scenes to be integrated per DALI output	16	16	16	16	16		
Scenes to be integrated per channel						8	
Effect control							
Integrated effect control (one-off or cyclic chaselight operation, color control)	4	4					
Emergency lighting							
Support for prescribed test sequences for emergency lights	■	■		■			
Controlling single battery lights	■	■		■			
Saves test results of emergency lighting	■	■					
Status							
DALI short circuit	■	■	■	■	■ ²⁾		
DALI power supply	■	■	■	■	■		
Status output (ON/OFF, value, lamp fault, ECG fault)					■	■ ³⁾	■ ³⁾
Status group (ON/OFF, value, lamp fault, ECG fault)	■	■	■	■			
Status ECG (ON/OFF, value, lamp fault, ECG fault)	■	■	■	■			
Time functions							
ON/OFF delay	■	■	■	■	■	■	■
Timer mode, 1-step (stairwell circuits)	■	■	■	■	■	■	
Timer mode, 2-step	■	■	■	■	■	■	
Night mode (lighting for cleaning)	■	■	■	■	■	■	■
Warning of impending OFF	■	■	■	■	■	■	
Further functions							
DALI sensors ^{4)/} 2-point-control	■	■	■	■			
Stand-by shut down (areas)	12	6		12			
Function burn-in	■	■		■			
Renew defective ECG without software	■	■	■	■	■	■	■
Stand-alone mode	■	■	■	■			
Pre-loaded applications	■	■					

¹⁾ For current application programs, see www.siemens.com/gamma-td

²⁾ Per channel

³⁾ Status ON/OFF, value



⁴⁾ Only selected DALI sensors are supported, see APB www.siemens.com/gamma-td

Lighting

Technical specifications

Switching/dimming actuators

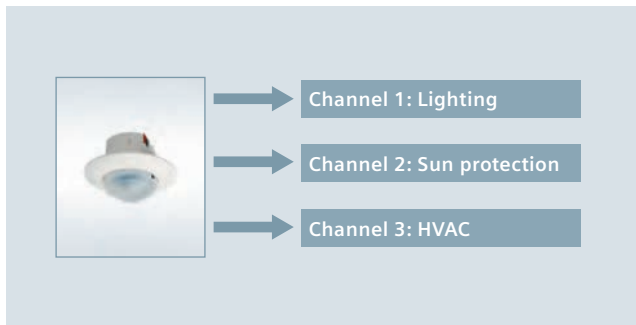
Switching/dimming actuators

		
Type	N 526E02	N 526/02
Contact current		
Rated current, AC [A]	16	6
Maximum switch-on peak current		
• t = 150 µs [A]	400	200
• t = 250 µs [A]	320	160
• t = 600 µs [A]	200	100
Contact voltage		
Rated voltage, AC [V]	230	230
Service life		
Mechanical service life Switching operations in millions	1	10
Electrical service life Switching operations in millions	¹⁾	0.4
Power loss		
Maximum power loss per device at rated power [W]	9	6
Switching capacities/load types, loads		
Resistive load [W]	3680	1380
Minimum switching capacity [V/mA]	12/100	¹⁾
DC switching capacity [V/A]	24/10	30/6
Maximum capacitive load [µF]	140	163
Incandescent lamps		
Incandescent lamps [W]	25 x 100	1380
Halogen lamp 230 V [W]	25 x 100	1380
LV halogen lamp with conventional transformer (inductive) [VA]	500	500
T5/T8 fluorescent lamps		
Uncorrected [VA]	2500	1380
Parallel corrected (at max. possible C)[W]	1300 (140µF)	1380 (163µF)
DUO circuit [VA]	2500	1380
Compact lamps		
Uncorrected [VA]	1600	1380
Parallel corrected (at max. possible C)[W]	1100 (140µF)	1380 (163µF)

¹⁾ On request

The figures relate per channel. Complete technical data see: www.siemens.com/gamma-td

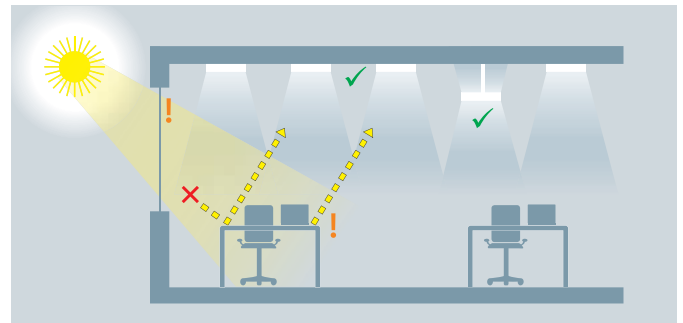
Presence- and daylightdependent control



The presence detector with integrated brightness control regulates up to three independent output channels for various functions in the room, such as lighting, sun protection and HVAC systems. The automation serves to optimally adjust the room temperature and brightness to the room's actual use on a presence-dependent basis. That means optimum comfort and always a pleasant room climate, yet with low energy consumption.

At the start and end of every movement, each output channel individually actuates the respective functions. The follow-up times and brightness thresholds can be set independently of each other.

Brightness sensors



Mounting guidelines for brightness sensors

- Make sure that the brightness sensor measures only indirect, reflected light; direct sunlight distorts the measurement results
- Avoid shiny surfaces that are highly reflective, as this interferes with measurement
- Avoid surfaces that are too dark with low light reflection properties, as this impedes measurement of the current brightness level
- Keep in mind that thermal protection glass can influence the daylight measurement; the tripping value will be lower

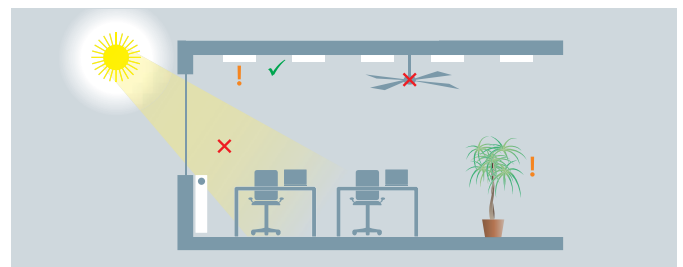
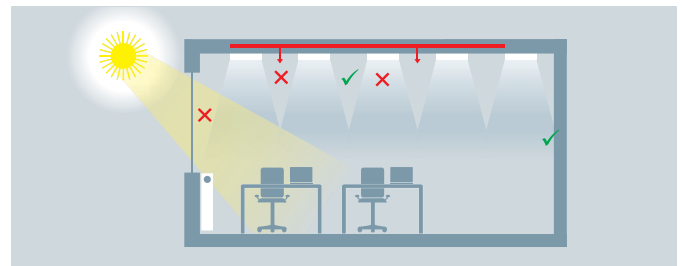
Motion and presence detectors

Mounting guidelines for motion and presence detectors in a room

- Do not expose motion detectors to direct sunlight
- Do not mount any lamps within the detection zone
- Avoid placing any sources of rapid temperature changes within the detection zone, e.g. air vents, fan heaters or incandescent and halogen lamps
- Ensure that the direction of air flows moves laterally to the detection zone
- Detection depends on the temperature difference between the surrounding ambient zone and the object to be detected
- The detection zone of a presence detector should not be impeded or blocked by shelves, plants or glass walls
- Minimum distance of 50 cm from cables and radiators

Mounting guidelines for motion detectors on a building

- Do not mount motion detectors on moving supports, such as poles
- In outdoor applications, mount presence detectors on stable walls
- The detection range of a presence detector should be free of interferences







Lighting

Technical specifications

Light level controls

5

Light level controls

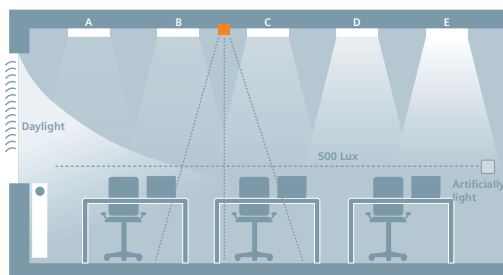
				
Type	UP 258E22	UP 258D12	UP 255D21	AP 254/02
Enclosure data				
Design	UP/AP	UP/AP	UP/AP	AP
Dimensions				
• Width/Ø [mm](1 MW = 18 mm)	88	88	88	72
• Height [mm]	63 ¹⁾	63 ¹⁾	63 ¹⁾	110
• Depth [mm]				54
Power supply				
Bus-powered electronics	■	■	■	■
Bus connection				
Integrated bus coupling units	■	■	■	■
Bus connection via bus terminal	■	■	■	■
Control				
Integrated constant light level control	1-channel		1-channel	
Integrated two-step control	1-channel	1-channel	1-channel	
Light level controls dependent on surrounding light				■
Offset groups	4 channels		4 channels	
Sensors				
Outdoor brightness				■
Brightness (Contrast measurement)	■	■	■	
Motion ²⁾	■	■		
Presence ²⁾	■	■		
IR receiver ³⁾	■	■	■	

¹⁾ For flush mounting, mounting height approx. 31 mm, for surface mounting with AP 258E01 surface-mounting enclosure, approx. 73 mm.

²⁾ Detection range see chapter Physical Sensors


³⁾ Use with IR remote control S 255/11

Constant light control for up to five light groups



- Integrated constant light level controller with main lighting group and up to four lighting subgroups with one brightness sensor
- Automatic assignment of the artificial light distribution in the room to enable constant light level control of the up to five lighting groups via control characteristics
- Entry of five brightness values, measured under the lights during pure daylight, as a parameter in ETS
- Automatic measurement of artificial lighting in the room when it is dark (without daylight) through targeted on/off switching of the lighting groups and simultaneous measurement at the brightness sensor of the detector

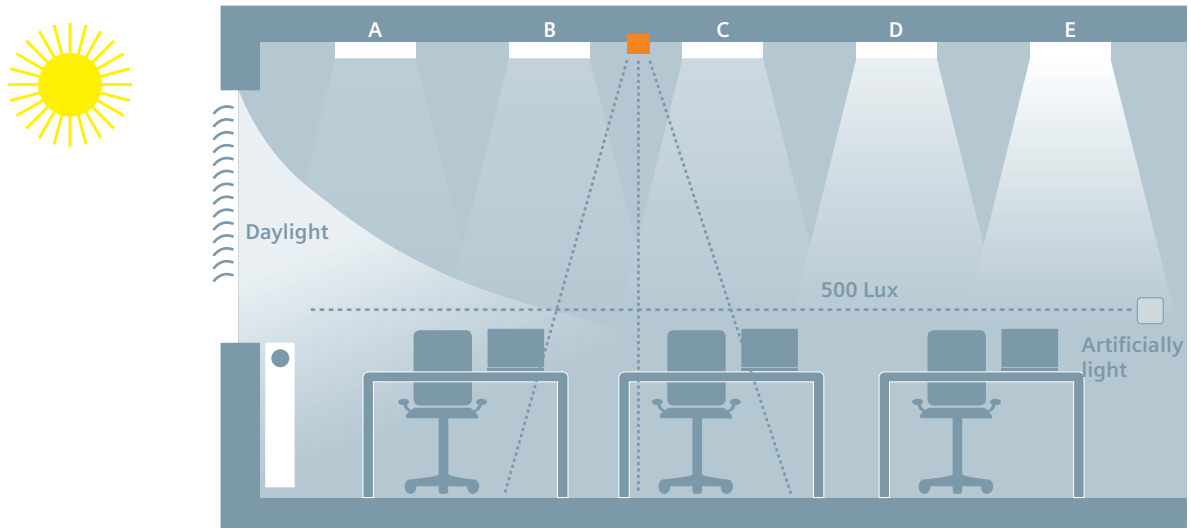
Function overview

		Independent output channels				Integrated light controller		IR receiver
Type		Motion Channel 1 (Lighting)	Presence Channel 2 (Sun protection)	HVAC Channel 3 (HVAC)	Locking function	2-step light control (switching) one lighting group	Constant light level control (dimming) up to five lighting groups A - E	
UP 258E22	Brightness sensor Motion sensor	■	■	■	■	■	■	■
UP 258D12	Brightness sensor Motion sensor	■	■	■	■	■	—	■
UP 255D21	Brightness sensor	—	—	—	—	■	■	■

- Device variants have identical functional units
- Shared motion and brightness sensor for the output channels movement and presence
- Brightness-independent output channel for HVAC systems with special evaluation logic

- A switching 2-step light control and dimming constant light controller independently usable
- IR receiver for convenient operation of room functions

Constant light control for up to five light groups

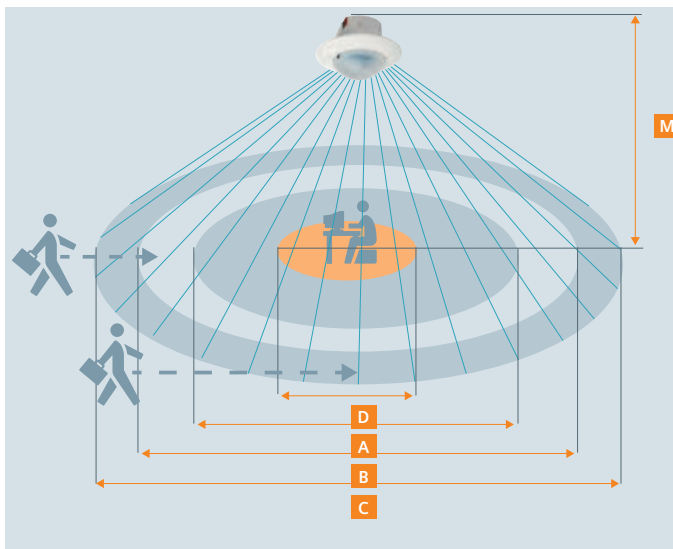


5

- Integrated constant light level controller with main lighting group and up to four lighting subgroups with one brightness sensor
- Automatic assignment of the artificial light distribution in the room to enable constant light level control of the up to five lighting groups via control characteristics

- Entry of five brightness values, measured under the lights during pure daylight, as a parameter in ETS
- Automatic measurement of artificial lighting in the room when it is dark (without daylight) through targeted on/off switching of the lighting groups and simultaneous measurement at the brightness sensor of the detector

Function overview



The maximum detection ranges to be achieved are as follows divided:

- A** Sitting person: moving hand ~ 25 cm at working desk height 0.8 m
- B** Walking person straight: Step ~ 1 m straight to detector at floor level
- C** Walking person: Step ~ 1 m across the detector at floor level
- D** Brightness area at working desk height 0.8 m
- M** Mounting height from floor level

Maximum achievable detection ranges
for UP 258E22 / UP 258D12 (in meters)

M	A	B	C	D
5,0	–	Ø 8,5	Ø 14	Ø 3,0
4,0	–	Ø 7,5	Ø 12	Ø 2,3
3,5	Ø 5,5	Ø 6,5	Ø 10	Ø 2,0
3,0	Ø 5,0	Ø 6,0	Ø 8	Ø 1,6
2,5	Ø 4,5	Ø 5,0	Ø 7	Ø 1,2

Universal Dimmer, 4 x 300 VA / 1 x 1000 VA, AC 230 V

N 554D31



5

- Four outputs for switching and dimming of resistive, inductive and capacitive loads
- Automatic adjustment to leading edge or trailing edge control, depending on the type of load
- Rated operational voltage AC 230 V
- Rated frequency 50 and 60 Hz
- Rated power at +45°C ambient temperature: up to 300 VA per output, up to 1000 VA with bundling of adjacent outputs, without minimum load per output
- Electronic protection per output against overload, short circuit and temperature rise
- Maintenance-free terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5...2.5mm²
- Manual operation buttons on the device for switching, dimming and activation of direct mode operation
- Bus-powered electronics
- DIN-rail mounted device for mounting on rail TH35 according to DIN EN 60715
- Building site function for bundling the outputs and switching the building site lighting without prior configuration of the device via ETS
- Object for surveillance of device function
- Object for retrieval of status values
- Per output with selectable operation mode (normal mode, one- or two-level timer mode, blinking)
- Adjustable ON-/OFF-delay
- Object Central Switching with separately configurable on/off delay selectable
- Separately adjustable dimming time from 0% to 100% for switching on/off and dimming brighter/darker
- Switch an output on or off by dimming brighter/darker
- Configurable dimming curves for optimization of the dimming operation of lights
- Additional status object switching and/or status object dimming value
- Additional object for dimming with individually adjustable dimming time
- Configurable maximum and minimum dimming value via parameter and object
- Selectable object for limiting the maximum dimming value
- Selectable object for reporting of overload, short circuit and temperature rise
- Adjustable blocking time for sending status objects after restart and bus voltage recovery
- Integrated 8-bit scene control, linking of the output in up to 8 scenes
- Additional night mode object for time-limited switching on the output at night
- Post-triggering of the On period (On period extension) in time switch mode up to a selectable maximum On period extension via repeated (2x, 3x, 4x, 5x) post-triggering
- Selectable warning signal prior to imminent switching-off by brief off and on switching (flashing) or by cutting the current dimming value in half at night or in time switch mode
- Selectable counting with threshold monitoring: operating hours, load cycles

Base function	Universal Dimmer
Rated voltage	AC 230 V
Rated current	1.3 A
Number of channels	4
Counting of operation hours / switching cycles	Yes
Switch-off warning	Yes
Constant light level control	Yes
Dimension width (1 MW = 18 mm)	8 MW

Stock No.	Product No.	DT
5WG1554-1DB31	N 554D31	C

N 528D01



5



Universal Dimmer, 2 x 300 VA, AC 230 V

- Two outputs for switching and dimming resistive, inductive or capacitive loads
- Automatic adjustment to leading edge or trailing edge control, depending on the type of load
- Rated operational voltage AC 230 V
- Rated frequency 50 / 60 Hz
- Rated power at +35°C ambient temperature: 300 VA per output or 500 VA for single output usage, without any minimal load per output
- Electronic protection of each output against overload, short circuit and temperature rise
- Screw terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5 ... 2.5 mm²
- Bicolor LED for indicating the switch status (red = on, green = off) or an error (orange, blinking) per output
- Bus-powered electronics
- Integrated bus coupling unit, bus connection via bus terminal block
- Device for DIN-rail mounting on a TH35 mounting rail according to DIN EN 60715
- Per output with selectable mode (normal mode, one- or two-level timer mode, blinking)
- Adjustable ON- and OFF-delay
- Separately adjustable dimming time from 0% to 100% for switching on/off and dimming brighter/darker
- The ability to switch an output on or off by dimming brighter/darker
- Adjustable dimming value when switching on
- Immediate activation (jumping) or dimming to a new dimming value
- Selectable additional status object switching and/or status object dimming value for each output
- Additional object for each output for blocking/releasing the output
- Sending of status objects on request and/or automatically after a change
- Adjustable blocking time for sending status objects after restart and bus voltage recovery
- Adjustable dimming value for each output in the event of bus voltage failure and recovery
- Additional night mode object for time-limited switching on the output (and hence illumination) at night
- Adjustable ON period at night or with timer mode
- Selectable warning of imminent switching off the illumination by dimming to 50% of the previous dimming value during night mode or timer mode
- Integrated 8-bit scene control and integration of each output in up to 8 scenes
- Separately adjustable dimming time for scene control
- Selectable counting of operating hours and with threshold monitoring of the operating hours
- Selectable counting of load cycles and with threshold monitoring of the load cycles
- Optional disabling of the ripple control compensation in an electrical grid with frequency fluctuations
- Building site function for switching the building site lighting on and off even if the bus devices have not yet been commissioned with ETS

Switch-off warning	Yes
Dimension width (1 MW = 18 mm)	4 MW

Stock No.	Product No.	DT
5WG1528-1DB01	N 528D01	B

Universal Dimmer, 1 x AC 230 V, 10 ... 250 VA

UP 525/..3

- One output for switching and dimming resistive, inductive or capacitive loads
- Automatic adjustment to leading edge or trailing edge control, depending on the type of load
- Rated operational voltage 230 V AC
- Rated frequency 50...60 Hz
- Rated power at +35°C ambient temperature: 10...250 VA
- Electronic protection of the output against overload, short circuit and temperature rise
- Screwless terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5...2.5 mm²
- Bus-powered electronics
- Integrated bus coupling units, bus connection via bus terminal
- For insertion in flush-mounting switch and socket boxes 60 mm in diameter and 60 mm deep
- Reporting of overload, short circuit and temperature rise via the bus
- Selectable mode for each output (normal mode, one- or two-level timer mode, blinking)
- Adjustable on- and off-delay
- Separately adjustable dimming time from 0% to 100% for switching on / off and dimming brighter / darker
- Two dimming value objects, each with individually adjustable dimming time from 0...100%
- The ability to switch an output on or off by dimming brighter / darker
- Adjustable dimming value when switching on
- Immediate activation (jumping) or dimming to a new dimming value
- Selectable additional status object switching and / or status object dimming value for each output
- Additional object for each output for blocking / releasing the output
- Sending of status objects on request and / or automatically after a change
- Adjustable blocking time for sending status objects after restart and bus voltage recovery
- Adjustable dimming value for each output in the event of bus voltage failure and recovery, as well as for mains voltage recovery
- Additional night mode object for time-limited switching on the output (and hence illumination) at night
- Adjustable on period at night or with timer mode
- Selectable warning of imminent switching off the illumination by dimming to 50% of the previous dimming value during night mode or timer mode
- Integrated 8-bit scene control and integration of each output in up to 8 scenes
- Separately adjustable dimming time for scene control
- Selectable counting of operating hours and with threshold monitoring of the operating hours
- Selectable counting of load cycles and with threshold monitoring of the load cycles



5

Range overview UP 525/..3

Product Title	Stock No.	Product No.	DT
Universal Dimmer, 1 x AC 230 V, 10 ... 250 VA, with mounting frame and BTI interface	5WG1525-2AB03	UP 525/03	A
Universal Dimmer, 1 x AC 230 V, 10...250 VA	5WG1525-2AB13	UP 525/13	A

N 528C01



Universal dimmer, 2 x 150 VA, AC 120 V

- Two outputs for switching and dimming resistive, inductive or capacitive loads
- Automatic adjustment to leading edge or trailing edge control, depending on the type of load
- Rated operational voltage AC 120 V
- Rated frequency 50 / 60 Hz
- Rated power at +35°C ambient temperature: 150 VA per output or 250 VA for single output usage, without any minimal load per output
- Electronic protection of each output against overload, short circuit and temperature rise
- Screw terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5 ... 2.5mm², AWG 20-13
- Bicolor LED for indicating the switch status (red = on, green = off) or an error (orange, blinking) per output
- Bus-powered electronics
- Integrated bus coupling unit
- Bus connection via bus terminal block
- As a device for DIN-rail mounting on a TH35 mounting rail according to DIN EN 60715
- Per output with selectable mode (normal mode, one- or two-level timer mode, blinking)
- Adjustable ON- and OFF-delay
- Separately adjustable dimming time from 0% to 100% for switching on / off and dimming brighter / darker
- The ability to switch an output on or off by dimming brighter / darker
- Adjustable dimming value when switching on
- Immediate activation (jumping) or dimming to a new dimming value
- Selectable additional status object switching and / or status object dimming value for each output
- Additional object for each output for blocking / releasing the output
- Sending of status objects on request and / or automatically after a change
- Adjustable blocking time for sending status objects after restart and bus voltage recovery
- Adjustable dimming value for each output in the event of bus voltage failure and recovery
- Additional night mode object for time-limited switching on the output (and hence illumination) at night
- Adjustable ON period at night or with timer mode
- Selectable warning of imminent switching off the illumination by dimming to 50% of the previous dimming value during night mode or timer mode
- Integrated 8-bit scene control and integration of each output in up to 8 scenes
- Separately adjustable dimming time for scene control
- Selectable counting of operating hours and with threshold monitoring of the operating hours
- Selectable counting of load cycles and with threshold monitoring of the load cycles
- Optional disabling of the ripple control compensation in an electrical grid with frequency fluctuations
- Building site function for switching the building site lighting on and off even if the bus devices have not yet been commissioned with ETS

Dimension width (1 MW = 18 mm)

4 MW

Stock No.	Product No.	DT
5WG1528-1CB01	N 528C01	A

Universal Dimmer, 1 x AC 230 V, 10...250 VA, (R,L,C load)

RS 525/23



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- Output for switching and dimming resistive, inductive or capacitive loads
 - Automatic adjustment to leading edge or trailing edge control, depending on the type of load
 - Rated frequency 50...60 Hz
 - Electronic protection of the output against overload, short circuit and temperature rise
 - Bus-powered electronics
 - Integrated bus coupling unit, Bus connection via bus terminal block
 - Type of protection: IP 20
 - Rated operational voltage AC 230 V
 - Rated power at +35°C ambient temperature: 10...250 VA
 - Screw-less terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5 ... 2.5 mm²
 - With bus connection module
 - Modular installation device for mounting in AP 118 automation module box or AP 641 room control box
- Selectable mode for each output (normal mode, one- or two-level timer mode, blinking)
 - Adjustable on- and off-delay
 - Separately adjustable dimming time from 0...100 % for switching on / off and dimming brighter / darker
 - Two dimming value objects, each with individually adjustable dimming time from 0...100 %
 - The ability to switch an output on or off by dimming brighter/darker
 - Adjustable dimming value when switching on
 - Immediate activation (jumping) or dimming to a new dimming value
 - Selectable additional status object switching and / or status object dimming value for each output
 - Additional object for each output for blocking / releasing the output
 - Sending of status objects on request and / or automatically after a change
 - Adjustable blocking time for sending status objects after restart and bus voltage recovery
 - Adjustable dimming value for each output in the event of bus voltage failure and recovery, as well as for mains voltage recovery
 - Additional night mode object for time-limited switching on the output (and hence illumination) at night
 - Adjustable on period at night or with timer mode
 - Selectable warning of imminent switching off the illumination by dimming to 50 % of the previous dimming value during night mode or timer mode
 - Integrated 8-bit scene control and integration of each output in up to 8 scenes
 - Separately adjustable dimming time for scene control
 - Selectable counting of operating hours and with threshold monitoring of the operating hours
 - Selectable counting of load cycles and with threshold monitoring of the load cycles

The AP 641 room control box and AP 118 automation module box must be ordered separately.
See chapter Modular Installation System - Room control box - Module boxes.

Base function	Universal Dimmer
Rated voltage	AC 230 V
Rated current	1 A
Number of channels	1
Switch-off warning	Yes
Constant light level control	Yes
Dimensions (W x H x D)	50,2 x 48,8 x 35,5 mm

Stock No.	Product No.	DT
5WG1525-2AB23	RS 525/23	A

UP 525/31



5

Universal dimmer UP 525/31, 210 VA, AC 230 V, 50 Hz (R,L,C load)

- One output for switching and dimming resistive, inductive or capacitive loads
- With semiconductor output for switching and dimming of lamps
- Rated operational voltage AC 230 V, 50/60 Hz
- Connected load 50...210 VA
- Settable switching and dimming behaviour
- Selectable mode of operation (normal mode, timer mode)
- Soft on, Soft off
- Dimming or jumping to a new dimming value
- Time-delayed switch-off when dimming below a settable dimming value
- Status objects for switching and dimming value
- Short-circuit message
- Message of a load failure
- Integrated 8-bit scene control
- Object for blocking the output
- Configurable brightness value at start and end of a blocking phase
- Adjustable behaviour of the output after bus voltage recovery
- 2 binary inputs for potential-free contacts
- Selectable function of the binary inputs: acting as secondary inputs directly on the switching outputs or acting as independant binary inputs with bus communication
- Free allocation of the functions switching, dimming, solar protection control, send value and scene control to the inputs
- Two independent switching objects per input
- Blocking object for each input
- Separately selectable behaviour per input at bus voltage recovery
- Telegram rate limitation for both inputs
- About 20 cm long wires for connecting phase conductor, output, inputs and bus
- Bus-powered electronics
- Integrated bus coupling unit, bus connection via bus terminal
- For installation in a flush-mounting wall or ceiling box with Ø 60 mm

Dimension (Ø x H) 53 x 28 mm

Stock No.	Product No.	DT
5WG1525-2AB31	UP 525/31	A

KNX/DALI Gateway plus / Twin plus

N 141/03, N 141/21

- With emergency lighting, with sensors
- For communication via KNX EIB with electronic ballasts (ECG) with a DALI interface
- DALI outputs acc. to IEC 62386, each for communication with up to 64 DALI ECG and at least 10 sensors
- Integrated power supply with input voltage AC 110-240 V, 50-60 Hz or DC 120-240 V for powering the gateway electronics and DALI output
- Maximum DALI output voltage of 19 V, short circuit resistant
- Incorrect voltage detection during commissioning, whether incorrect power line is connected to a DALI output
- LED display for displaying operation mode and error messages
- Pushbutton for switching between bus and direct operating mode
- One pair of pushbuttons for switching On/Off of all connected DALI ECG
- One LED per DALI output for status signal of all connected luminaries in direct mode
- Configurable assignment of max. 64 DALI ECG per channel to max. 16 DALI groups per channel, exclusive controlled in groups or single (switching, dimming, set dimming value) and feedback for group status and lamp failure
- Configurable behaviour for bus failure (stand-alone mode)
- Configurable pre-loaded applications without software (ETS)
- Configurable function burn-in for all ECG via pushbutton or single via object
- Scheduler for day, week, date and additional astro function
- Control (switching, dimming, set dimming value) of all connected luminaries together in broadcast mode
- Status signal and display of lamp and ECG failure per group and per DALI device
- Transformation of dimming commands into a temporary set point adjustment for ECG with integrated constant light level control and directly connected light level sensor
- One or two level timer
- Up to four integrated one time or cyclical control of repeatable sequences or color effects
- Distinction between self-contained emergency luminaries with one or two DALI devices
- Starting the self-conducted testing of each individual inverter and reporting the test result via bus or save in a persistent memory with memory space monitoring over object
- Distinction between function test, short duration test, and long duration test
- Optional configuration of any DALI ECG to dim to a preset dimming value in case of emergency mode
- Locking of switching and dimming commands as well as configuration while emergency mode is activated
- Activation of emergency mode based on a configurable number of failed DALI ECG
- Lock object to elimination of failure messages interruption of ECG during emergency lighting testing
- Inhibit mode for disabling battery mode of self-contained emergency luminaries over pushbutton
- Per channel up to six stand-by-area analysis for activation of switch actuators
- Integrated scene control for up to 16 scenes per channel
- 16 integrated 2-level-controller for brightness control
- 16 integrated constant light level controller for main luminaries group and up to four additional luminaries groups
- Possible assignment of a CIN to a DALI ECG
- Possibility to reintegrate defective DALI ECG without software (ETS)
- Assignment of DALI ECG to groups and test option for ECG, groups, scenes and effects via ETS during commissioning
- Assignment of DALI sensors and test option of sensors via ETS during commissioning
- Integrated bus coupling unit with only half a standard bus load, bus connection via bus terminal
- Mounting on DIN rail EN 60715-TH35-7.5



5

Dimension width (1 MW = 18 mm)

4 MW

Range overview N 141/03, N 141/21

Product Title	Stock No.	Product No.	DT
KNX/DALI Gateway Twin plus, 2 channels	5WG1141-1AB21	N 141/21	A
KNX/DALI Gateway plus, 1 channel	5WG1141-1AB03	N 141/03	A

N 141/31



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KNX/DALI Gateway Twin

- Communication via KNX EIB with electronic ballasts (ECG) with a DALI interface
- Two (2) DALI output acc. to IEC 62386, each for communication with up to 64 DALI ballasts and at least 10 sensors
- Integrated power supply with input voltage AC 110...240 V, 50...60 Hz or DC 120...240 V for powering the gateway electronics and DALI output
- Maximum DALI output voltage of 19 V, short circuit resistant
- Incorrect voltage detection during commissioning, whether incorrect power line is connected to a DALI output
- LED display for displaying operation mode and error messages
- Pushbutton for switching between bus and direct operating mode
- One pair of pushbuttons for switching On/Off of all connected DALI ballasts
- One LED per DALI output for status signal of all connected luminaries in direct mode
- Configurable behaviour for bus failure (stand-alone mode)
- Control (switching, dimming, set dimming value) of all connected luminaries together in broad-cast mode
- Status signal and display of lamp and ECG failure per group and per DALI device
- One or two level timer
- Integrated scene control for up to 32 scenes
- Assignment of DALI ECG to groups and test option for ECG, groups and scenes via ETS during commissioning
- Possibility to reintegrate defective DALI ECG without software
- Integrated bus coupling unit with only half a standard bus load
- Bus connection via bus terminal
- Mounting on DIN rail EN 60715-TH35-7.5
- Width 4 MW (1 Modular Width = 18 mm)

The following options are selectable, depending on the application program:

- Configurable assignment of max. 128 DALI ECG to max. 32 DALI groups, exclusive controlled in groups or single (switching, dimming, set dimming value) and feedback for group status and lamp failure
- Configurable function burn-in for all ECG via pushbutton or single via object
- Up to twelve stand-by-area analysis for activation of switch actuators
- Distinction between self-contained emergency luminaries with one or two DALI devices
- Optional configuration of any DALI ECG to dim to a preset dimming value in case of emergency mode
- Locking of switching and dimming commands as well as configuration while emergency mode is activated
- Activation of emergency mode based on a configurable number of failed DALI ECG
- Lock object to elimination of failure messages interruption of ECG during emergency lighting testing
- Inhibit mode for disabling battery mode of self-contained emergency luminaries over pushbutton
- 16 integrated 2-level-controller for brightness control
- Assignment of DALI sensors and test option of sensors via ETS during commissioning

Dimension width (1 MW = 18 mm)

4 MW

Stock No.	Product No.	DT
5WG1141-1AB31	N 141/31	A

Accessories for KNX/DALI Gateway

DALI Push button interface 4fold

- Binary input device
- 4 inputs to connect installation buttons
- Supported actions per input
 - Short button press
 - Long button press
- Integrated DALI bus coupling unit for communicating with a central DALI controller/gateway
- Power supply through DALI line with 6 mA DALI bus load
- For flush-mounting wall or ceiling outlet installations with a 60 mm diameter and depth of 60 mm
- Plug-in terminals for connecting the DALI line
- Cable set for connecting pushbuttons

Dimensions (W x H x D)43 x 43 x 11 mm



Stock No.	Product No.	DT
5WG1141-2AB71	UP 141/71	A

Lighting

Switching/dimming actuators

DALI control output

N 525E01

Switch/dimming actuator, 8 x DALI, 8 ECGs per DALI output



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- 8 DALI outputs
- Control capacity for up to 8 DALI-ECGs per DALI output
- Power supplied to the electronics and the DALI outputs through an integrated power supply unit for 230 V AC
- Green LED for status display
- Pushbutton for selecting and switching over 4 DALI outputs respectively between bus and direct mode
- Yellow LED for indicating which 4 DALI outputs the direct mode is activated for
- 1 red LED per DALI output for indicating the circuit state or fault (e.g. lighting medium failure) of the connected group
- Four pushbutton pairs for switching and dimming of 4 DALI outputs in direct mode, functional when 230 V AC is applied (also when no bus voltage is connected and also when bus communication has not yet been started or is interrupted)
- Selection of identical or individual configuration of all DALI outputs
- Selectable operating mode per DALI output (normal mode, 1-level or 2-level time-switch mode)
- Per DALI output with command objects for switching on/off, dimming brighter/darker and setting dimming value
- Per DALI output optionally with up to 4 add-on status objects (circuit state and lighting medium failure, dimming value status and DALI status)
- Sending of status objects on request and/or automatically after change
- Per DALI output with add-on object for time-limited switching on of lighting in night mode (cleaning light)
- Warning approx. 1 minute before imminent switching off, by dimming to 50% of former dimming value in night or timer mode
- Adjustable switching on and/or off of a channel through dimming brighter/darker, dimming value when switching on, actuating or dimming a new dimming value, dimming time from 0% to 100%
- Adjustable behavior on bus voltage or mains voltage failure and bus voltage or mains voltage recovery
- Add-on object and integrated 8bit scene control for saving and restoring up to 16 scenes per DALI output
- Integrated bus coupling unit as only half standard bus load
- Bus connection through bus terminal as well as contact system to data rail
- Device for mounting on rail TH35 DIN EN 60715

Base function	DALI
Rated voltage	AC 120 V AC 230 V
Number of channels	8
Switch-off warning	Yes
Constant light level control	Yes
Dimension width (1 MW = 18 mm)	4 MW

Stock No.	Product No.	DT
5WG1525-1EB01	N 525E01	A

Switch/dimming actuator 8 x AC 230 V, 16 A, 1...10 V, UL standard

N 526E02

- For switching and dimming of eight mutually independent groups (channels) of fluorescent lamps with dimmable electronic control gear (ECG)
- 8 control voltage outputs 1...10 V DC
- Control power min. 60 OSRAM ECG dynamic each
- 8 switching outputs (relay contacts) for 230 V AC, 50/60 Hz, 16 A at p.f. = 1
- Each of them for connection of min. 30 OSRAM ECG dynamic for 58 W fluorescent lamps
- Slide switch per relay output for manual operation and switch position indication
- Selection between identical or individual configuration of all channels
- Command objects for each actuator channel for switching on/off, dimming brighter/darker and set/ value
- One 1-bit and one 8-bit-status object (switching state and dimming value) per output
- Per channel configurable time-limited activation of the lighting during night mode (base lighting)
- Warning 30 seconds prior to imminent switch off by dimming to 50 % of the previous dimming value for each channel with time-limited operation
- Switching on or off of a channel by dimming brighter/darker
- Configurable dimming value upon switching on
- Jumping or dimming to a new dimming value
- Configurable dimming time from 0...100%
- Integrated 8 bit scene control and assignment of each output to up to 8 scenes
- Transmission of status objects on request, cyclically and/or automatically after changes
- Configurable behaviour on bus voltage failure and recovery
- Bus-powered electronics
- Integrated bus coupling unit, bus connection via bus terminal or contact system to data rail
- Modular installation devices for mounting on TH35 EN 60715 mounting rail



5

The data rail must be ordered separately. See chapter system products and accessories - data rails.

Base function	Switching and Dimming 1..10 V
Rated voltage	AC 230 V
Rated current	16 A
Number of channels	8
Constant light level control	Yes
Dimension width (1 MW = 18 mm)	8 MW

	Stock No.	Product No.	DT
	5WG1526-1EB02	N 526E02	A

Lighting

Switching/dimming actuators

Control output 1...10 V DC

N 526/02



5

Switch / dimming actuator, 3 x 230 V AC, 50/60 Hz, 6 A, with integrated constant light level control

- Can be operated per channel as a pure switching/dimming actuator or as a constant light controller in master or slave operation mode
- 3 switch outputs for the connection of max. 30 electronic ballasts for 2 x 36 W FL/max. 20 electronic ballasts for 1 x 58 W FL or max. 15 electronic ballasts for 2 x 36 W FL/max. 10 electronic ballasts for 2 x 58 W FL
- 3 control voltage outputs DC 1-10 V for the connection of max. 50 dimmable electronic ballasts
- 3 inputs for the connection of one brightness sensor GE 255/x each via a 3-core, max. 100 m long cable, which is also used as a power supply for the sensor electronics
- Communication objects for sending the measured brightness values
- Communication objects per actuator channel to control the following operating modes: comfort mode, automatic mode and night operation as well as switching, dimming and value setting
- Time-dependent activation of the lighting during night operation (lighting for cleaners)
- Automatic toggling from automatic to manual operation of the relevant actuator channel when the bus push button is pressed for manual switching and dimming of this channel (constant light control inactive during manual operation)
- Status objects per channel for switching state or dimming value
- Integrated power supply unit for AC 230 V, 50 Hz to supply the actuator electronics and a green LED for operational display
- Push button per actuator channel for local switching of the outputs or for starting a calibration of the sensor, integrated in the actuator housing and able to function even when the bus cable is not installed and when there is a failure of the bus communication
- Connection of the 230 V supply voltage and all the outputs/inputs via screw terminals 0.5 ... 4 mm
- Integrated bus coupling unit, bus connection via bus terminal
- Modular installation devices for mounting on TH35 EN 60715 mounting rail

Base function	Switching and Dimming 1..10 V
Rated voltage	AC 230 V
Rated current	6 A
Number of channels	3
Switch-off warning	Yes
Constant light level control	Yes
Dimension width (1 MW = 18 mm)	6 MW

Stock No.	Product No.	DT
5WG1526-1AB02	N 526/02	A

Switch-/Dimm actuator, 2 x AC 277 V, 20 A, 1...10 V

JB 526C23

- Protruding wires stranded AWG 12
- A phase connection for an output that is equipped with a relay contact per output as a switching element
- Contact rated operational voltage 120 V AC, 230 V AC, 277 V AC, 347 V AC
- Contact rated operational voltage 24 V AC / DC
- Contact rated current according to DIN EN 60669-1: 16 A / 20 A (resistive load)
- Fluorescent lamp load according to DIN EN 60669-1: 16 AX / 20 AX (200 µF) at 230 V AC
- Bus-powered electronics
- Integrated bus coupling unit
- Bus connection via bus terminal
- Red LED for display of the activation of the addressing mode as well as the operational readiness
- Housing: plastics
- For installation in 4" x 4" Junction box (UL/NEMA)
- Degree of protection IP 20



5

- For switching and dimming of fluorescent lamps with dimmable electronic ballasts
 - Independent control voltage DC 0/1- 10 V per output
- Per output
- command objects for switching on/off, dimming brighter/darker and setting dimming value
 - adjustable ON- and OFF-delay
 - switching status object and/or dimming value status object as an optional addition
 - adjustable sending of status objects on demand, cyclically and/or automatically after modification
 - adjustable ON period during night and/or time switch operation
 - selectable counting of operating hours and threshold monitoring of the operating hours
 - aelectable counting of load cycles and threshold monitoring of the load cycles
 - selectable function blocking of the output
 - aelectable mode (normal mode, night mode, one- or two-level timer mode, flashing)
 - separately adjustable dimming time from minimum to 100% for switching on/off, brighter/darker dimming and dimming value setting
 - selectable sending of status objects on request, cyclically and / or automatically after a change or bus voltage recovery
 - selectable warning of impending OFF by dimming to 50% of the previous dimming value during night mode or timer mode
 - separately adjustable dimming time for scene control
 - adjustable dimming curve correction
 - construction site function for switching the construction site lighting on and off even if the bus devices have not yet been commissioned with ETS
 - Integrated 8-bit scene control and integration of each output in up to 8 scenes
 - Optional disabling of the ripple control compensation in an electrical grid with frequency fluctuations

Dimensions (W x H x D)

70 x 90 x 44,6 mm

Stock No.	Product No.	DT
5WG1526-4CB23	JB 526C23	C

Lighting

Switching/dimming actuators

Control output 1...10 V DC

JB 527C23



5

Switch-/Dimming actuator, 1 x AC 277 V, 20 A, 1...10 V

- Protruding wires stranded AWG 12
 - A phase connection for an output that is equipped with a relay contact per output as a switching element
 - Contact rated operational voltage 120 V AC, 230 V AC, 277 V AC, 347 V AC
 - Contact rated operational voltage 24 V AC / DC
 - Contact rated current according to DIN EN 60669-1: 16 A / 20 A (resistive load)
 - Fluorescent lamp load according to DIN EN 60669-1: 16 AX / 20 AX (200 µF) at 230 V AC
 - Bus-powered electronics
 - Integrated bus coupling unit
 - Bus connection via bus terminal
 - Red LED for display of the activation of the addressing mode as well as the operational readiness
 - Housing: plastics
 - For installation in 4" x 4" Junction box (UL/NEMA)
 - Degree of protection IP 20
- For switching and dimming of fluorescent lamps with dimmable electronic ballasts
 - Independent control voltage DC 0/1- 10 V per output
- Per output
- command objects for switching on/off, dimming brighter/darker and setting dimming value
 - adjustable ON- and OFF-delay
 - switching status object and/or dimming value status object as an optional addition
 - adjustable sending of status objects on demand, cyclically and/or automatically after modification
 - adjustable ON period during night and/or time switch operation
 - selectable counting of operating hours and threshold monitoring of the operating hours
 - selectable counting of load cycles and threshold monitoring of the load cycles
 - selectable function blocking of the output
 - selectable mode (normal mode, night mode, one- or two-level timer mode, flashing)
 - separately adjustable dimming time from minimum to 100% for switching on/off, brighter/darker dimming and dimming value setting
 - selectable sending of status objects on request, cyclically and / or automatically after a change or bus voltage recovery
 - selectable warning of impending OFF by dimming to 50% of the previous dimming value during night mode or timer mode
 - separately adjustable dimming time for scene control
 - adjustable dimming curve correction
 - construction site function for switching the construction site lighting on and off even if the bus devices have not yet been commissioned with ETS
 - integrated 8-bit scene control and integration of each output in up to 8 scenes
 - optional disabling of the ripple control compensation in an electrical grid with frequency fluctuations

Dimensions (W x H x D)

70 x 90 x 44,6 mm

Stock No.	Product No.	DT
5WG1527-4CB23	JB 527C23	C

Presence detector / Motion detector with constant light level control

UP 258E22

Passive infrared detector for ceiling mounting indoors

- Optional blinding of parts of the detection area
- Mixed light measurement
- Cyclical sending or sending on change of value of the measured brightness value (Lux)
- Integrated two-position controller
- Constant light level control for a main group of luminaries and up to four additional groups of luminaries
- Lighting control configurable as fully automatic or semi-automatic
- Motion detection for three function blocks (presence detector, motion detector, and HVAC detector)
- 2 per function block selectable functions (A, B) on start of the presence detection and two per function block selectable functions (C, D) on expiration of the presence detection
- Configurable delay of 0...255 seconds between sending of function A and B respectively C and D
- Selection per function (A, B, C, D) switching On/Off, 8-bit value, selectable 8-bit value, 16-bit value, temperature value, brightness value, 8-bit scene control
- Blocking object per function block
- Per function block configurable overshoot time, in each case configurable as a fixed time, as switchable between two times via the bus, or settable to a value via the bus
- Parallel operation of several presence detectors (master-slave, master-master) without additional logic module
- Integrated IR receiver and IR decoder for IR remote controls with six pairs of pushbuttons
- Functions of the IR remote control selectable per pair of pushbuttons or per each single pushbutton of a button pair
- Per pushbutton selectable function toggle, switching on, switching off, 8-bit scene recall, 8-bit value, 16-bit value, temperature value, brightness value
- For each pair of pushbuttons selectable function switching On/Off, 2-button dimming with stop telegram, 2-button solar protection control, variable 8-bit value, 8-bit scene control
- Blocking object for IR decoder
- Test mode for easy start-up
- LED for display of detected movements in test mode, to be configured using ETS
- Integrated bus coupling unit, bus connection via bus terminal, Power supply over the bus line
- Ceiling mounting on a flush-mounting box with 60 mm diameter and min. 40 mm depth or in a housing for surface-mounting (to be ordered separately)
- Monitoring motion range horizontal 360°, vertical approx. 105°
- Monitoring motion of an area of diameter 8 m (depending on mounting/room height)
- Programming button reachable from front

Constant light level control	Yes
Brightness-dependent switching	Yes



5

	Stock No.	Product No.	DT
	5WG1258-2EB22	UP 258E22	C

UP 258D12



Presence detector with brightness sensor

- Passive infrared detector for ceiling mounting indoors
- Mixed light measurement
- Ceiling mounting on a flush-mounting box with 60 mm diameter and min. 40 mm depth or in a housing for surface-mounting (to be ordered separately)
- Integrated IR decoder for S 255/11
- Programming button reachable from front
- Monitoring motion range horizontal 360°, vertical approx. 105°
- Monitoring motion of an area of diameter 8 m (depending on mounting/room height)
- Optional blinding of parts of the detection area
- UP mounting with fixing claws in suspended ceiling
- Bus-powered electronics
- Integrated bus coupling unit, bus connection via bus terminal

Brightness-dependent switching	Yes
Dimension (Ø x H)	88 x 63 mm

Stock No.	Product No.	DT
5WG1258-2DB12	UP 258D12	A

UP 255D21



Brightness sensor with constant light level controller

- Mixed light measurement
- Ceiling mounting on a flush-mounting box with 60 mm diameter and min. 40 mm depth or in a housing for surface-mounting (to be ordered separately)
- Programming button reachable from front
- Integrated IR decoder for S 255/11
- Integrated 2-point control (switching)
- Constant light level control for main group of luminaires and up to 4 additional groups of luminaires incl. automatic calibrating

Constant light level control	Yes
Brightness-dependent switching	Yes
Dimension (Ø x H)	88 x 63 mm

Stock No.	Product No.	DT
5WG1255-2DB21	UP 255D21	A

Accessories for UP 258..

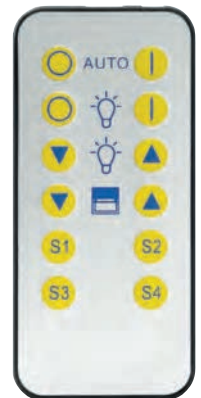
IR remote control

- 6 pushbutton pairs for the remote control of lighting, shutter/blinds and scenes
- Parameterization is via ETS in the UP 258E, UP 258D or UP 255D21 presence detector
- Range: approx. up to 10 m
- Power supply: CR2025 lithium button cell
- Degree of protection (acc. to EN 60529): IP40

Dimensions (W x H x D)

40 x 87 x 6 mm

S 255/11



5

Stock No.	Product No.	DT
5WG1255-7AB11	S 255/11	A

Surface-mounting enclosures

- For fixing the presence detectors UP 258D12 and UP 258E22 and the brightness sensor UP 255D21 as a surface mounting device

Dimension (Ø x H)

88 x 44 mm

AP 258E10



Stock No.	Product No.	DT
5WG1258-7EB01	AP 258E10	A

AP 254/02



Dual sensor for brightness measurement, temperature measurement, sun protection control, lighting control

- Brightness measurement, temperature measurement, sun protection control, lighting control
- For the detection and transmission of brightness and temperature
 - Temperature measuring range -25 °C...+55 °C
 - Brightness measuring range 1 Lux...100 kLux
 - Horizontal sensing angle -60°...+60°, vertical -35°...+66.5°
- For the control of switch, dimming and shutter/blind actuators, depending on the ambient luminosity and/or ambient temperature
- One sun protection channel for the automatic control of sun protection equipment, with
 - Starting and stopping of automation by means of an object or a dusk threshold
 - Up to three brightness thresholds for determining the height and position of the shutters/blinds or roller shutters
 - Optional teach-in of dusk thresholds and brightness thresholds by means of a teach-in facility
 - Blocking object for the temporary deactivation of the sun protection channel function
- Up to four universal channels for the control of switch, dimming and shutter/blind actuators, depending on ambient luminosity and/or temperature. Optionally available with:
 - Threshold switches for brightness
 - Threshold switches for temperature
 - Threshold switches with logical combination of brightness and temperature
 - Optional teach-in of brightness threshold for each universal channel by means of an associated teach-in facility
 - Deactivation option for each universal channel by means of an associated blocking object (1 bit)
 - Optional second object for transmission of a second telegram on fulfillment of threshold conditions
- Bus-powered electronics
- Integrated bus coupling units
- Bus connection via bus terminal
- Surface mounting
- Degree of protection: IP54

Brightness-dependent switching
Dimensions (W x H x D)

Yes
72 x 110 x 54 mm

	Stock No.	Product No.	DT
	5WG1254-3EY02	AP 254/02	A

Solar protection, anti-glare protection, utilization of daylight



Overview and selection guides	General	6-2
Technical specifications	Anti-glare/solar protection actuators	6-4
	Load data for shutter/blind actuators per channel	6-6
Anti-glare/solar protection actuators		6-7
Central weather/solar protection systems		6-18

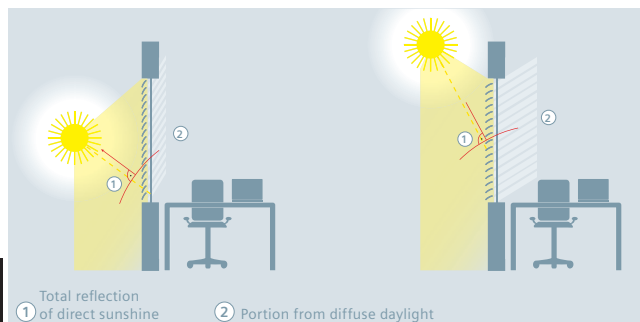
Solar protection, anti-glare protection, utilization of daylight

Overview and selection guides

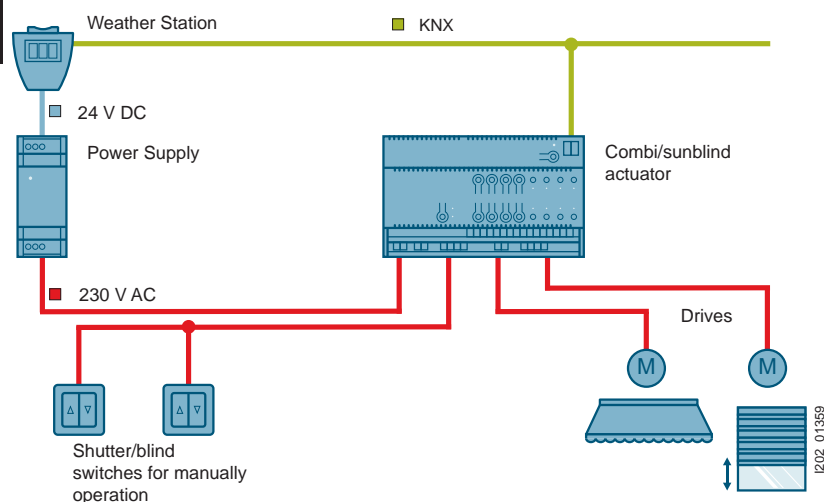
General

Sunlight tracking control

With sunlight tracking control, the position of the sun is tracked so that the blind slats are not completely closed, but rather automatically adjusted to prevent the sun from shining directly into the room. The spacing between the blind slats still allows diffuse daylight to enter the room and contribute to ensuring glare-free room lighting while lowering electricity costs.



6



Benefits

- Reduced energy consumption and costs for room lighting
- Optimum room climate
- Glare-free workplaces

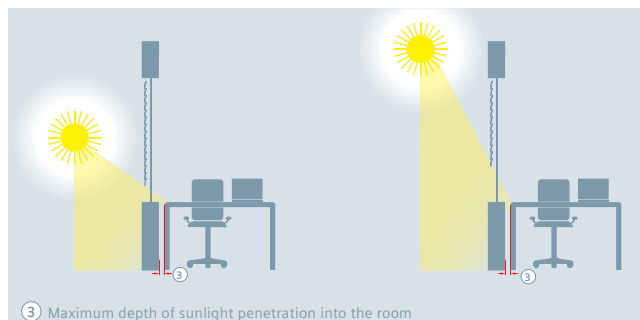
You will need

- Weather station AP 257
- Electronic power supply unit
- Sunblind actuator N 523/11
- Pushbutton, double UP 222/3
- Drives
- Bus

Shadow tracking control

With shadow tracking control, sun protection is not lowered completely but only so far that the sun can still shine into the room for a certain distance (e.g. 50 cm), which can be set by adjustable parameters.

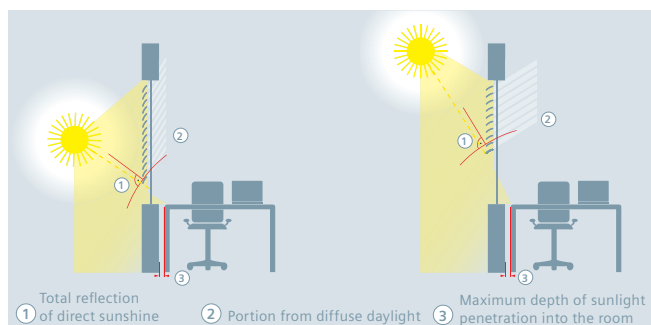
Benefits: This enables room occupants to look outside through the lower part of the window, and plants arranged on the windowsill can still be exposed to direct sunlight, while the room occupants are protected. This creates an optimum room climate, ensures glare-free workplaces and lowers energy demand and costs for room lighting.



6

Sunlight tracking control with shadow tracking control

The functions of sunlight tracking control and shadow tracking control can be performed with the same devices individually or in combination.



You will need

- Weather station AP 257
- Electronic power supply unit
- Sunblind actuator N 523/11
- Pushbutton, double UP 222/3
- Drive
- Bus coupling unit UP 117/12 (for pushbuttons)

Anti-glare/sun protection actuators

	N 522/03	N 523/02	N 523/03	N 523/04 ¹⁾	N 523/11	N 501	N 524	UP 520/03	UP 520/13	UP 520/31	RS 520/23	JB 520C23	RL 521/23	JB 521C23
Type														
Enclosure data														
Design	N	N	N	N	N	N	N	UP	UP	UP	RS	JB	RL	JB
Modular installation devices for mounting on TH35 EN 60715 mounting rail	■	■	■	■	■	■	■							
For installation in flush-mounting switch and socket boxes with Ø = 60 mm								■	■	■				
Modular installation device for mounting in AP 118 automation module box or AP 641 room control box ²⁾											■		■	
Modular installation device for mounting in Junction Box 4" x 4"												■		■
10-pole BTI socket (BTI - Bus Transceiver Interface) for plugging of bus terminal devices with BTI connector								■						
Dimensions														
• Width/Ø [mm] (1 MW = 18 mm)	6 MW	4 MW	4 MW	4 MW	8 MW	8 MW	6 MW	71	50	53	50.2	70	47.8	70
• Height [mm]								71	50.9		35.5	90	86.5	90
• Depth [mm]								42	41.3	28	48.8	44.6	36.2	44.6
Mounting type														
Screw fixing								■						
Display/control elements														
LED for status indication per output	■	■	■	■	■	■	■							
Direct operation (local operation)	■	■	■	■	■	■	■							
Power supply														
Bus-powered electronics								■	■	■	■	■	■	■
Electronics powered via an integrated power supply unit. Supply voltage 230 V AC	■	■	■	■	■	■	■							
Bus connection														
Integrated bus coupling units	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Bus connection via bus terminal	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Bus connection via contact system to data rail	■	■	■	■	■	■	■							
Outputs														
Load output														
Number of channels (one UP and one DOWN each)	4	4 ³⁾	4 ³⁾	4 ³⁾	8 ⁴⁾	4 ³⁾	4	1	1	1	1	1	2	2
Electrically interlocked relays (for reversing direction of rotation)	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Contact rated voltage														
• 230 V AC/50 Hz	■	■	■	■	■	■		■	■	■	■		■	
• 120 V AC												■		■
• 24 V DC							■							
Contact rated current [A]	8	6	6	6	6	6	1 DC	6	6	6	6	6	6	6
Inputs														
Max. cable length, unshielded, twisted [m]						100				5				
For signal inputs (floating contact)										2				
Determination of switching state by means of the voltage generated in the device										■				

¹⁾ Also available as c-UL version, Product No.: 5WG1 523-1CB04²⁾ The AP 641 room control box and AP 118 automation module box must be ordered separately, see Chapter Quick-assembly system - Room control box - enclosure³⁾ 2 floating⁴⁾ 6 floating

Solar protection, anti-glare protection, utilization of daylight
Technical specifications
Anti-glare/solar protection actuators

... Continuation of the table

Type	N 522/03	N 523/02	N 523/03	N 523/04 ²⁾	N 523/11	N 501	N 524	UP 520/03	UP 520/13	UP 520/31	RS 520/23	JB 520C23	RL 521/23	JB 521C23
	981101	980103	980183	981202	980602	981701	980202	982A01	982A01	207301	982A01	982A01	982B01	982B01
Application program¹⁾														
Output functions														
Max. number of group addresses	114	100	100	110	200	220	40	120	120	26	120	120	120	120
Max. number of assignments	156	100	100	125	200	220	65	120	120	27	120	120	120	120
Configurable behavior in the event of a bus voltage failure					■	■	■	■	■	■	■	■	■	■
Configurable behavior in the event of a bus voltage recovery	■					■		■	■	■	■	■	■	■
Configurable behavior in the event of a system voltage recovery	■				■	■	■							
Operating mode														
Automatic mode for sunlight tracking control	■			■	■	■	■	■	■		■	■	■	■
Manual mode	■			■	■	■	■	■	■		■	■	■	■
Standard mode	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Status														
Transmitting status per channel	■	■	■	■	■	■	■	■	■		■	■	■	■
Indication of direct operation with status object	■			■	■	■								
Status position of sun protection, 8-bit	■	■	■	■	■	■	■	■	■		■	■	■	■
Status position of slats, 8-bit	■	■		■	■	■	■	■	■		■	■	■	■
Scene control														
Integrated 1-bit scene control	■	■	■		■	■		■	■		■	■	■	■
Integrated 8-bit scene control	■				■	■		■	■		■	■	■	■
Scenes to be integrated per channel	8	2	2		8	8		8	8		8	8	8	8
Shutter/blind control														
Travel lock (e. g. for cleaning the outer shutter/blinds)	■	■	■	■	■	■		■	■	■	■	■	■	■
Separate raising/lowering protection	■	■	■			■							■	
Alarm														
• Move to safety position	■	■	■	■	■	■	■	■	■	■	■	■	■	■
• Locking in this position for as long as alarm is active	■	■	■	■	■	■	■	■	■	■	■	■	■	■
• Alarm check, wire break, alarm delayed	■	■	■	■	■	■	■	■	■	■	■	■	■	■
• Channels single lockable during alarm	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Individual configuration of actuator channels	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Shared configuration of actuator channels	■	■	■	■	■	■								
Adaptation of objects and functions to drive type	■	■	■	■	■	■	■	■	■		■	■	■	■
Delay time adjustable				■	■									
Suitable for integration in a sunlight tracking control system	■			■	■	■	■	■	■		■	■	■	■
End position detection	■							■	■		■	■	■	■
Sun protection control (UP/DOWN)														
Using position data (8-bit value)	■			■	■	■	■	■	■		■	■	■	■
Travel to end position, stopping, stepwise adjustment	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Slat control (OPEN/CLOSE)														
Using position data (8-bit value)	■			■	■	■	■	■	■		■	■	■	■
Travel to end position, stopping, stepwise adjustment	■	■		■	■	■	■	■	■	■	■	■	■	■
Step adjustable ³⁾	%			n	n	n	%	n	n		n	n	n	n

¹⁾ For current application programs, see www.siemens.com/gamma-td

²⁾ Also available as UL version, Product No.: 5WG1 523-1CB04

³⁾ n = number, % = %-value

Technical specifications

Load data for shutter/blind actuators per channel

Load data for shutter/blind actuators per channel

Type	N 501	N 523/02 N 523/03 N 523/04	N 523/11	N 522/03	N 524	RL 521/23	JB 521C23	UP 520/03 UP520/13 RS 520/23	JB 520C23
Contact current									
Rated current [A]	6 (AC)	6 (AC)	6 (AC)	8 (AC)	1 (DC)	6 (AC)	6 (AC)	6 (AC)	6 (AC)
AC3 operation (p.f. = 0.45)[VA]	200	200	200	200	200	500	500	500	500
Contact voltage									
Rated voltage [V]	AC 230	AC 230	AC 230	AC 230	DC 24	AC 230	AC 120	AC 230	AC 120
Service life									
Mechanical service life Switching operations in millions	20	20	20	20	20	10	10	10	10
Electrical service life Switching operations in millions	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Power loss									
Maximum power loss per device at rated power [W]	7	3	5	8	6	5	5	3	3
Switching capacities/load types, loads									
Resistive load [W]	1380	1380	1380	1840	24	1380	1380	1380	1380
Minimum switching capacity [V/mA]	6/10	6/10	6/10	7/10	8/10	24/10	24/10	24/10	24/10
DC switching capacity [V/A]	24/6	24/6	24/6	24/8	24/1	30/10	30/10	30/10	30/10

For complete technical specifications, see: www.siemens.com/gamma-td

Venetian blind actuator, 4 x AC 230 V, 8 A, with limit position detection and sunlight tracking

N 522/03



6

- For the separate control per actuator channel of a sun protection, damper, door or window drive with a motor for AC 230 V and electromechanical or electronic limit switches
- Integrated electronics for detection of the actuation of an electromechanical limit switch and with auto-calibration of the travel time from one limit switch to the other
- Electrically interlocked relays to reverse the direction of rotation
- Relay contacts rated for nominal voltage AC 230 V, 8 A (resistive load)
- Configuration by the user whether all actuator channels are to be identically or individually parameterized
- Communication objects per actuator channel for moving the sun protection to the limit positions or to stop travel and for step-by-step adjustment of the blind slats
- Communication objects for moving the sun protection and adjusting the blind slats directly to a new position (as precisely as drive mechanics permit) by positioning commands as percentage values
- Automatic opening of blind slats up to a set position after the blinds have been lowered without any stop from the upper to the lower limit position
- Integrated 1-bit scene control for save and recall of 2 favored positions of blind and slats
- Integrated 8-bit scene control and assignment of up to 8 scenes per channel
- Optional object "Sunshine" for activation / deactivation of sunlight tracking of the slats for shading with greatest possible daylight component
- Differentiation between automatic and manual mode and with automatic switchover from automatic to manual mode of the respective actuator channel on activation of a bus pushbutton for manual control of the sun blind
- Priority of manual mode over automatic positioning commands
- Alarm object per device or per channel for moving the sun protection to the configured safety position in the event of a wind alarm e.g. and with blocking of travel to another position as long as alarm pending
- Travel blocking object per device or per channel for blocking the sun protection in its current position (needed during cleaning of an outdoor Venetian blind e.g.)
- Status objects per actuator channel for query or automatic transmission of sun blind and slat position as percentage value
- Electronics powered via an integrated power supply unit for AC 230 V
- Green LED for displaying the 230 V operating voltage
- Pushbutton for switchover between bus mode and direct mode
- Yellow LED for display of activated direct mode
- Two pushbuttons each per actuator channel for drive control in direct mode
- Integrated in the actuator housing and operational if the actuator is supplied with AC 230 V (even if bus voltage missing or communication not operational)
- Integrated bus coupling unit with only half a standard bus load
- Bus connection via bus terminal or contact system to data rail
- Modular installation devices for mounting on TH35 EN 60715 mounting rail

Rated voltage	AC 230 V
Rated current	8
Number of channels	4
Sun position tracking	Yes
Automatic detection of end positions	Yes
Wind alarm	Yes
Dimension width (1 MW = 18 mm)	6 MW

Stock No.	Product No.	DT
5WG1522-1AB03	N 522/03	A

N 523/..

Shutter/blind actuators

- Rated contact current 6 A
- LED for status indication per output
- Direct operation (local operation)
- Electrically interlocked relays (for reversing direction of rotation)
- Transmitting status per channel
- Status Position Sonnenschutz 8 Bit
- Travel lock (e. g. for cleaning the outer shutter/blinds)
- Alarm: Move to safety position, locking in this position for as long as alarm is active
- Individual or shared configuration of actuator channels
- Adaptation of objects and functions to drive type
- Sun protection control (up/down): travel to end position, stopping, stepwise adjustment
- Integrated bus coupling units
- Bus connection via bus terminal or contact system to data rail
- Modular installation devices for mounting on TH35 EN 60715 mounting rail

N 523/02

Venetian blind actuator, 4 x AC 230 V, 6 A

- 4 channels
- For the separate control per actuator channel of a sun protection, damper, door or window drive with a motor for AC 230 V and electromechanical limit switches
- Rated contact voltage AC 230 V, 50 Hz
- Status position of slats, 8-bit
- Integrated 1-bit scene control, 2 Scenes to be integrated per channel
- Separate raising/lowering protection
- Integrated power supply unit for the electronics, connected to AC 230 V
- Sun protection control (up/down) using position data (8-bit value)



Stock No.	Product No.	DT
5WG1523-1AB02	N 523/02	A

N 523/03

Roller shutter actuator, 4 x AC 230 V, 6 A

- 4 channels (one up and one down each)
- Rated contact voltage AC 230 V, 50 Hz
- Integrated 1-bit scene control, 2 Scenes to be integrated per channel
- Integrated power supply unit for the electronics, connected to AC 230 V
- Separate raising/lowering protection



Stock No.	Product No.	DT
5WG1523-1AB03	N 523/03	A

Venetian blind actuator, 4 x AC 230 V, 6 A, with sunlight tracking of slats

N 523/04

- 4 channels
- For the separate control per actuator channel of a sun protection, damper, door or window drive with a motor for AC 230 V and electromechanical limit switches
- Rated contact voltage AC 230 V, 50 Hz
- Automatic mode for sunlight tracking control
- Manual mode
- Indication of direct operation with status object
- Status position of slats, 8-bit
- Suitable for integration in a sunlight tracking control system
- Sun protection control (up/down) using position data (8-bit value)
- Integrated power supply unit for the electronics, connected to AC 230 V
- Slat control (open/close) using position data (8-bit value) or travel to end position, stopping, stepwise adjustment



Stock No.	Product No.	DT
5WG1523-1AB04	N 523/04	A

6

Venetian blind actuator, 4 x AC 120 V, 6 A, with sunlight tracking of slats, UL standard

N 523C04

- 4 channels
- For the separate control per actuator channel of a sun protection, damper, door or window drive with a motor for AC 120 V and electromechanical limit switches
- Rated contact voltage AC 120 V, 50 Hz
- Automatic mode for sunlight tracking control
- Manual mode
- Indication of direct operation with status object
- Status position of slats, 8-bit
- Suitable for integration in a sunlight tracking control system
- Sun protection control (up/down) using position data (8-bit value)
- Integrated power supply unit for the electronics, connected to AC 120 V
- Slat control (open/close) using position data (8-bit value) or travel to end position, stopping, stepwise adjustment



Stock No.	Product No.	DT
5WG1523-1CB04	N 523C04	A

Solar protection, anti-glare protection, utilization of daylight

Anti-glare/solar protection actuators

N 523/11



Venetian blind actuator, 8x AC 230 V, 6A, with sunlight tracking of slats

- 8 channels
- For the separate control per actuator channel of a sun protection, damper, door or window drive with a motor for AC 230 V and electromechanical limit switches
- Rated contact voltage AC 230 V, 50 Hz
- Configurable behavior in the event of a bus voltage failure
- Configurable behavior in the event of a system voltage recovery
- Automatic mode for sunlight tracking control
- Manual mode
- Indication of direct operation with status object
- Status position of slats, 8-bit
- Integrated 1-/8-bit-scene control, 8 Scenes to be integrated per channel
- Suitable for integration in a sunlight tracking control system
- Sun protection control (up/down) using position data (8-bit value)
- Integrated power supply unit for the electronics, connected to AC 230 V
- Slat control (open/close) using position data (8-bit value) or travel to end position, stopping, stepwise adjustment

Stock No.	Product No.	DT
5WG1523-1AB11	N 523/11	A

N 524/01



Shutter / blind actuator, 4 x DC 6 ... 24 V, 1 A

- LED for status indication per output
- Direct operation (local operation)
- 4 channels
- For the separate control per actuator channel of a sun protection, damper, door or window drive with a motor for DC 24 V and electromechanical limit switches
- Electrically interlocked relays (for reversing direction of rotation)
- Configurable behavior in the event of a system voltage recovery
- Configurable behavior in the event of a bus voltage failure
- Automatic mode for sunlight tracking control
- Manual or standard mode
- Transmitting status
 - Per channel
 - Position of sun protection, 8-bit
 - Status position of slats, 8-bit
- Integrated 1-bit/8-bit scene control, 8 scenes to be integrated per channel
- Alarm: Move to safety position, locking in this position for as long as alarm is active
- Adaptation of objects and functions to drive type
- Suitable for integration in a sunlight tracking control system
- Sun protection control (up/down)
 - Using position data (8-bit value)
 - Travel to end position, stopping, stepwise adjustment
- Slat control (open/close)
 - Using position data (8-bit value)
 - Travel to end position, stopping, stepwise adjustment
- Electronics powered via an integrated power supply unit. Supply voltage AC 230 V
- Integrated bus coupling units, Bus connection via bus terminal

Rated voltage	DC 24 V
Rated current	6
Number of channels	4
Sun position tracking	Yes
Wind alarm	Yes
Dimension width (1 MW = 18 mm)	6 MW

Stock No.	Product No.	DT
5WG1524-1AB01	N 524/01	A

Combination blind actuator, 4 x AC 230 V, 6 A, 8 x binary inputs

N 501/01



- 8 inputs for DC or AC in the range from 12 to 230 V
- 8 relay contact outputs locked in pairs against each other for controlling 4 x AC 230V sunblind drives
- Contact rated voltage AC 230 V
- Contact rated current 6 A, p.f. = 1
- Electronics powered by a 230 V AC integrated power supply
- Device functional even without bus connection or if the bus communication fails
- Preset on delivery for direct output control for each blind button function via momentary contact switches connected to the inputs
- Key for switching between bus and direct mode
- Button for each relay contact output, for switching the output in direct mode
- Selectable function for each input when using the ETS:
 - Switching status, send binary value
 - Switching on leading edge, switching Short/Long
 - 1-pushbutton dimming, sunblind control, group control
 - 1-bit/8-bit scene control
 - 8-bit/16-bit value leading edge, Short/Long
 - 16-bit floating point value leading edge, Short/Long
- Or for each pair of inputs:
 - Acting directly on the corresponding outputs as blind button
 - 2-button dimming with stop telegram or with cyclical sending
 - 2-pushbutton sunblind control
- Selectable blocking of each input via a corresponding blocking object
- Sending of input objects after change
- Selectable cyclical input object sending
- Individual or shared configuration of actuator channels
- Communication objects for each blind channel for driving the sun protection into the end positions or for stopping the procedure and adjusting the blind slats in steps
- Communication objects for setting position of slats and blinds in percentage information
- Automatic opening of the blind slats to a preconfigured nominal setting after uninterrupted driving down of the blind from the top to the bottom end position, with integrated 1-bit scene control for storing and calling up (reproduction) of 2 interim blind and slat settings
- Integrated 1-bit/8-bit scene control, 8 scenes can be integrated per channel
- Optional „Sun“ object for integration in a sunlight tracking control system
- Differentiation between automatic and manual mode and with automatic switchover from automatic to manual mode for the channel in question by pressing a bus button for manual control of the corresponding sun protection
- Manual mode taking precedence over automatic position commands
- Optional central command for each device or each channel for switching the relevant channels to automatic mode and driving the sun protection into the up or down end position
- Alarm: move to safety position, Locking in this position for as long as alarm is active
- Travel lock (e. g. for cleaning the outer shutter/blinds)
- Status objects for each channel for querying or for automatic sending of sun protection and slat settings as a percentage value
- Optional status objects for reporting that the up or down position has been reached
- Integrated bus coupling unit, Bus connection via bus terminal or contact system to data rail
- Modular installation devices for mounting on TH35 EN 60715 mounting rail

Rated voltage	AC 230 V
Rated current	6 A
Number of channels	4
Number of inputs potentialfree	8
Sun position tracking	Yes
Wind alarm	Yes
Dimension width (1 MW = 18 mm)	8 MW

Stock No.	Product No.	DT
5WG1501-1AB01	N 501/01	A

Solar protection, anti-glare protection, utilization of daylight

Anti-glare/solar protection actuators

UP 520/..3



Shutter Blind Actuator, 1 x AC 230 V, 6 A

- Electrically interlocked relays (drive protection)
- End position detection
- Screwless terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5...2.5mm²
- Bus-powered electronics
- Integrated bus coupling units, bus connection via bus terminal
- For insertion in flush-mounting switch and socket boxes 60 mm in diameter and 60 mm deep
- Configurable behavior in the event of a bus voltage failure and recovery
- Automatic mode for sunlight tracking control
- Manual or standard mode
- Status: transmitting status per channel, status position of sun protection 8-bit, status position of slats 8-bit
- Integrated 1-/8-bit scene control
- 8 scenes to be integrated per channel
- Travel lock (e. g. for cleaning the outer shutter/blinds)
- Separate raising/lowering protection
- Alarm (Wind, Rain, Frost): Move to safety position, locking in this position for as long as alarm is active
- Individual or shared configuration of actuator channels
- Adaptation of objects and functions to drive type
- Suitable for integration in a sunlight tracking control system
- Using position data (8-bit value) travel to end position, stopping, stepwise adjustment sun protection control (up/down) and Slat control (open/closed)

Range overview UP 520/..3

Product Title	Dimensions (W x H x D) [mm]	Stock No.	Product No.	DT
Shutter Blind Actuator, 1 x AC 230 V, 6 A, with mounting frame and BTI interface	71 x 71 x 42	5WG1520-2AB03	UP 520/03	A
Shutter Blind Actuator UP, 1 x AC 230 V, 6 A	50 x 50,9 x 41,3	5WG1520-2AB13	UP 520/13	A

RS 520/23, RL 521/23: The AP 641 room control box and AP 118 automation module box must be ordered separately. See Chapter Quick-Assembly System, Room Control Box.

Shutter Blind Actuator RS, 1 x AC 230 V, 6 A

RS 520/23

- 1 channel
- Electrically interlocked relays to reverse the direction of rotation
- Integrated electronics for detection of the actuation of an electromechanical limit switch and with auto-calibration of the travel time from one limit switch to the other
- Bus-powered electronics
- Integrated bus coupling unit, Bus connection via bus terminal block
- Type of protection: IP 20
- For the separate control per actuator channel of a sun protection, damper, door or window drive with a motor for AC 230 V and electromechanical limit switches
- Screw-less terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5 ... 2.5 mm²
- With bus connection module
- Modular installation device for mounting in AP 118 automation module box or AP 641 room control box
- Configurable behavior in the event of a bus voltage failure/recovery
- Automatic mode for sunlight tracking control
- Manual and standard mode
- Status: Transmitting status per channel, status position of sun protection, 8-bit, status position of slats, 8-bit
- Integrated 1-bit/8-bit scene control
- 8 scenes to be integrated per channel
- Travel lock (e. g. for cleaning the outer shutter/blinds)
- Separate raising/lowering protection
- Alarm (Wind, Rain, Frost): Move to safety position, locking in this position for as long as alarm is active
- Individual configuration of actuator channels
- Adaptation of objects and functions to drive type
- Suitable for integration in a sunlight tracking control system
- End position detection
- Using position data (8-bit value) for sun protection control (up/down) and slat control (open/closed)



6

The AP 641 room control box and AP 118 automation module box must be ordered separately.
See chapter Modular Installation System - Room control box - Module boxes.

Rated voltage	AC 230 V
Rated current	6 A
Number of channels	1
Sun position tracking	Yes
Automatic detection of end positions	Yes
Wind alarm	Yes
Dimensions (W x H x D)	50,2 x 48,8 x 35,5 mm

Stock No.	Product No.	DT
5WG1520-2AB23	RS 520/23	A

JB 520C23



Shutter Blind Actuator, 1 x AC 120 V, 6 A

- 1 channel
- Electrically interlocked relays to reverse the direction of rotation
- Integrated electronics for detection of the actuation of an electromechanical limit switch and with auto-calibration of the travel time from one limit switch to the other
- Bus-powered electronics
- Integrated bus coupling unit, Bus connection via bus terminal block
- Type of protection: IP 20
- For control of sun protection, door or window drive with a motor for AC 120 V and electromechanical or electronic limit switches per actuator channel
- Relay contacts rated for nominal voltage AC 120 V, 6 A (resistive load)
- As built-in device with 1/2 inch thread connection for mounting to or in a UL/NEMA Junction Box with feedthrough of the function wires through the 1/2 inch threaded connector
- Configurable behavior in the event of a bus voltage failure/recovery
- Automatic mode for sunlight tracking control
- Manual and standard mode
- Status: Transmitting status per channel, status position of sun protection, 8-bit, status position of slats, 8-bit
- Integrated 1-bit/8-bit scene control
- 8 scenes to be integrated per channel
- Travel lock (e. g. for cleaning the outer shutter/blinds)
- Separate raising/lowering protection
- Alarm (Wind, Rain, Frost): Move to safety position, locking in this position for as long as alarm is active
- Individual configuration of actuator channels
- Adaptation of objects and functions to drive type
- Suitable for integration in a sunlight tracking control system
- End position detection
- Using position data (8-bit value) for sun protection control (up/down) and slat control (open/closed)

Dimensions (W x H x D)

70 x 90 x 44,6 mm

Stock No.	Product No.	DT
5WG1520-4CB23	JB 520C23	A

Venetian blind actuator 1 x AC 230 V, 6 A, 2 x binary inputs

UP 520/31

- Electrically interlocked relay contacts as switching elements
- Contact rated operational voltage AC 230 V
- Contact rated current 6 A at $\cos \phi = 1$
- Selectable type of sunblind (Venetian blind / roller shutter)
- Configurable stop time at change of movement direction
- Object for activation / de-activation of the sun protection function
- Configurable sunblind position after activation / de-activation of the sun protection function
- Two safety objects
- Selectable cyclical monitoring of the safety objects
- Moving into a configurable end position on activation or deactivation of the safety function
- Configurable reaction at bus voltage failure and recovery
- 2 binary inputs for potential-free contacts
- Selectable function of the binary inputs: acting as secondary inputs directly on the switching outputs or acting as independant binary inputs with bus communication
- Free allocation of the functions switching, dimming, solar protection control, send value and scene control to the inputs
- Two independent switching objects per input
- Blocking object for each input
- Separately selectable behaviour per input at bus voltage recovery
- Telegram rate limitation for both inputs
- About 20 cm long wires for connecting phase conductor, outputs, inputs and bus
- Bus-powered electronics
- Integrated bus coupling unit
- Enclosed bus terminal for bus connection
- For installation in a flush-mounting wall or ceiling box with 60 mm diameter



6

Dimension (Ø x H)

53 x 28 mm

	Stock No.	Product No.	DT
	5WG1520-2AB31	UP 520/31	A

Solar protection, anti-glare protection, utilization of daylight

Anti-glare/solar protection actuators

RL 521/23



Shutter Blind Actuator, 2 x AC 230 V, 6 A

- 2 channels
- Electrically interlocked relays to reverse the direction of rotation
- Integrated electronics for detection of the actuation of an electromechanical limit switch and with auto-calibration of the travel time from one limit switch to the other
- Bus-powered electronics
- Integrated bus coupling units, bus connection via bus terminal
- Type of protection: IP 20
- For the separate control per actuator channel of a sun protection, damper, door or window drive with a motor for AC 230 V and electromechanical limit switches
- Screw-less terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5 ... 2.5 mm²
- For mounting in AP 118 automation module box or AP 641 room control box
- Communication objects per actuator channel for moving the sun protection to limit positions or to stop travel and for step-by-step adjustment of blind slats
- Communication objects for moving the sun protection and adjusting blind slats directly to a new position by positioning commands as percentage values
- Automatic opening of blind slats up to a set position after the blinds have been lowered without any stop from upper to lower limit position
- Integrated 1-bit scene control for programming/recalling of 2 favored positions of blind and slats
- Integrated 8-bit scene control and assignment of up to 8 scenes per channel
- An optional object "Sunshine" for activation/deactivation of sunlight tracking of the slats for shading with greatest possible daylight component
- Differentiation between automatic and manual mode and with automatic switch-over from automatic to manual mode of the respective actuator channel on activation of a bus pushbutton for manual control of the sun blind
- Priority of manual mode over automatic positioning commands
- Optional central command object for switching-over of all actuator channels to automatic mode and for moving the sun blinds to the upper or lower limit position
- Alarm object wind/rain/frost per channel for moving the sun protection to the configured safety position in the event of an alarm and with blocking of travel to another position as long as alarm pending
- Travel blocking object per device or per channel for blocking the sun protection in its current position (e.g. during cleaning of an outdoor Venetian blind)
- Status objects per actuator channel for query or automatic transmission of sun blind and slat position as percentage values
- Optional status objects for signalling that the lower or upper limit position has been reached

The AP 641 room control box and AP 118 automation module box must be ordered separately.
See chapter Modular Installation System - Room control box - Module boxes.

Rated voltage	AC 230 V
Rated current	6 A
Number of channels	2
Sun position tracking	Yes
Automatic detection of end positions	Yes
Wind alarm	Yes
Dimensions (W x H x D)	47,8 x 86,5 x 36,2 mm

Stock No.	Product No.	DT
5WG1521-4AB23	RL 521/23	C

Shutter Blind Actuator, 2 x AC 120 V, 6 A

JB 521C23

- 2 channels
- Electrically interlocked relays to reverse the direction of rotation
- Integrated electronics for detection of the actuation of an electromechanical limit switch and with auto-calibration of the travel time from one limit switch to the other
- Bus-powered electronics
- Integrated bus coupling units, bus connection via bus terminal
- Type of protection: IP 20
- For separate control of a sun protection, door or window drive with a motor for AC 120V and electro-mechanical or electronic limit switches per actuator channel
- Relay contacts rated for AC 120 V, 6 A (resistive load)
- As built-in device with 1/2 inch thread connection for mounting to or in a UL/NEMA Junction Box with feedthrough of the function wires through the 1/2 inch threaded connector



- Communication objects per actuator channel for moving the sun protection to limit positions or to stop travel and for step-by-step adjustment of blind slats
- Communication objects for moving the sun protection and adjusting blind slats directly to a new position by positioning commands as percentage values
- Automatic opening of blind slats up to a set position after the blinds have been lowered without any stop from upper to lower limit position
- Integrated 1-bit scene control for programming/recalling of 2 favored positions of blind and slats
- Integrated 8-bit scene control and assignment of up to 8 scenes per channel
- An optional object "Sunshine" for activation/deactivation of sunlight tracking of the slats for shading with greatest possible daylight component
- Differentiation between automatic and manual mode and with automatic switch-over from automatic to manual mode of the respective actuator channel on activation of a bus pushbutton for manual control of the sun blind
- Priority of manual mode over automatic positioning commands
- Optional central command object for switching-over of all actuator channels to automatic mode and for moving the sun blinds to the upper or lower limit position
- Alarm object wind/rain/frost per channel for moving the sun protection to the configured safety position in the event of an alarm and with blocking of travel to another position as long as alarm pending
- Travel blocking object per device or per channel for blocking the sun protection in its current position (e.g. during cleaning of an outdoor Venetian blind)
- Status objects per actuator channel for query or automatic transmission of sun blind and slat position as percentage values
- Optional status objects for signalling that the lower or upper limit position has been reached

Dimensions (W x H x D)

70 x 90 x 44,6 mm

Stock No.	Product No.	DT
5WG1521-4CB23	JB 521C23	A

Solar protection, anti-glare protection, utilization of daylight

Central weather/solar protection systems

AP 257/..2



Weather-/sun station

- Receiver for GPS time signal
- Input the assembly location by selecting country and city or by stating the GPS longitude/latitude coordinates
- Transmission and receipt of date and time over bus
- Transmission of all measured values via bus
- Functions:
 - Monitoring of all measured values up to 3 limit values each
 - Sensor monitoring
 - Sunlight tracking control
 - Shadow outline tracking
 - Central command for activation/deactivation of sun protection at the start and end of sunshine
 - 4 AND operations
 - 4 OR operations
 - 8 OR operations for alarm/fault indications
 - Blocking function for window cleaning tasks
 - Safety/alarm objects
- LED for the display of GPS reception
- Heated sensor for measuring wind speed without mechanically moved parts, measuring range at least 0...35 m/s
- Brightness sensor, measuring range min. 0...150 klx
- Dusk detection, measuring range min. 0...1000 lx
- Outdoor temperature sensor, measuring range min. -35...+80 °C
- Integrated bus coupling units
- Bus connection via bus terminal

Dimensions (W x H x D)

96 x 77 x 118 mm

Range overview AP 257/..02

Product Title	Stock No.	Product No.	DT
Weather center (GPS), 8 facade sectors, sun tracking	5WG1257-3AB22	AP 257/22	A

Accessories for AP 257/..2

Product Title	Stock No.	Product No.	DT
Electronic power supply unit, 350 mA	4AC2402	4AC2402	B

Weather station

AP 257/51

- Sensor for measuring wind speed, measuring range 2-30 m/s
- Three independent brightness sensors, measuring range 1-100 k Lux
- Consideration of up to two external brightness sensors
- Outdoor temperature sensor, measuring range -30 ... +60°C
- Transmission of all measurement readings via the bus
- Monitoring of all measurement readings
- Consideration of the alignment of up to 3 façades and automatic activation / deactivation of the solar protection of a façade during the time in which the sun shines on the respective façade
- Safety alarm for deactivating the solar protection, initiated by an external safety object or by logical AND/ OR operations of the measured weather data
- 4 threshold switches, independent of the weather data, each with 2 output objects
- 6 logical AND, OR or XOR operations, independent of the weather data, of respectively up to 4 input objects and each with 2 output objects
- Integrated bus coupling unit, bus connection via a bus terminal block
- As a compact unit for mast or wall mounting, including mast fixture for diameter 48-60 mm

Wind alarm	Yes
Dimensions (W x H x D)	121 x 108 x 227 mm



6

Stock No.	Product No.	DT
5WG1257-3AB51	AP 257/51	A

Weather station

AP 257/61

- Sensor for measuring wind speed, measuring range 2-30 m/s
- Three independent brightness sensors, measuring range 1-100000 Lux
- Consideration of up to two external brightness sensors
- Outdoor temperature sensor, measuring range -30 ... +60°C
- Heated precipitation sensor
- Transmission of date and time via the bus
- Transmission of GPS position via the bus
- Transmission of all measurement readings via the bus
- Monitoring of all measurement readings
- Input of the geographical location of the installation site via the entry of longitude and latitude or automatic detection via GPS
- Calculation and transmission of the angle data (azimuth and elevation) for current position of the sun
- Consideration of the alignment of up to 8 façades and automatic activation / deactivation of the solar protection of a façade during the time in which the sun shines on the respective façade
- Sun tracking control of the slats position for solar protection, so that no direct sunshine, but as much diffuse daylight as possible reaches the room
- Safety alarm for deactivating the solar protection, initiated by an external safety object or by logical AND/ OR operations of the measured weather data
- 4 threshold switches, independent of the weather data, each with 2 output objects
- 6 logical AND, OR or XOR operations, independent of the weather data, of respectively up to 4 input objects and each with 2 output objects
- External power supply of the heating for the precipitation sensor via 24 V DC, 210 mA
- Feed of the additional auxiliary power supply via the white / yellow twisted pair of the bus cable
- Integrated bus coupling unit, bus connection via a bus terminal block
- Compact unit for mast or wall mounting, including mast fixture for diameter 48-60 mm

Sun position tracking	Yes
Wind alarm	Yes
Dimensions (W x H x D)	121 x 108 x 227 mm



Stock No.	Product No.	DT
5WG1257-3AB61	AP 257/61	A

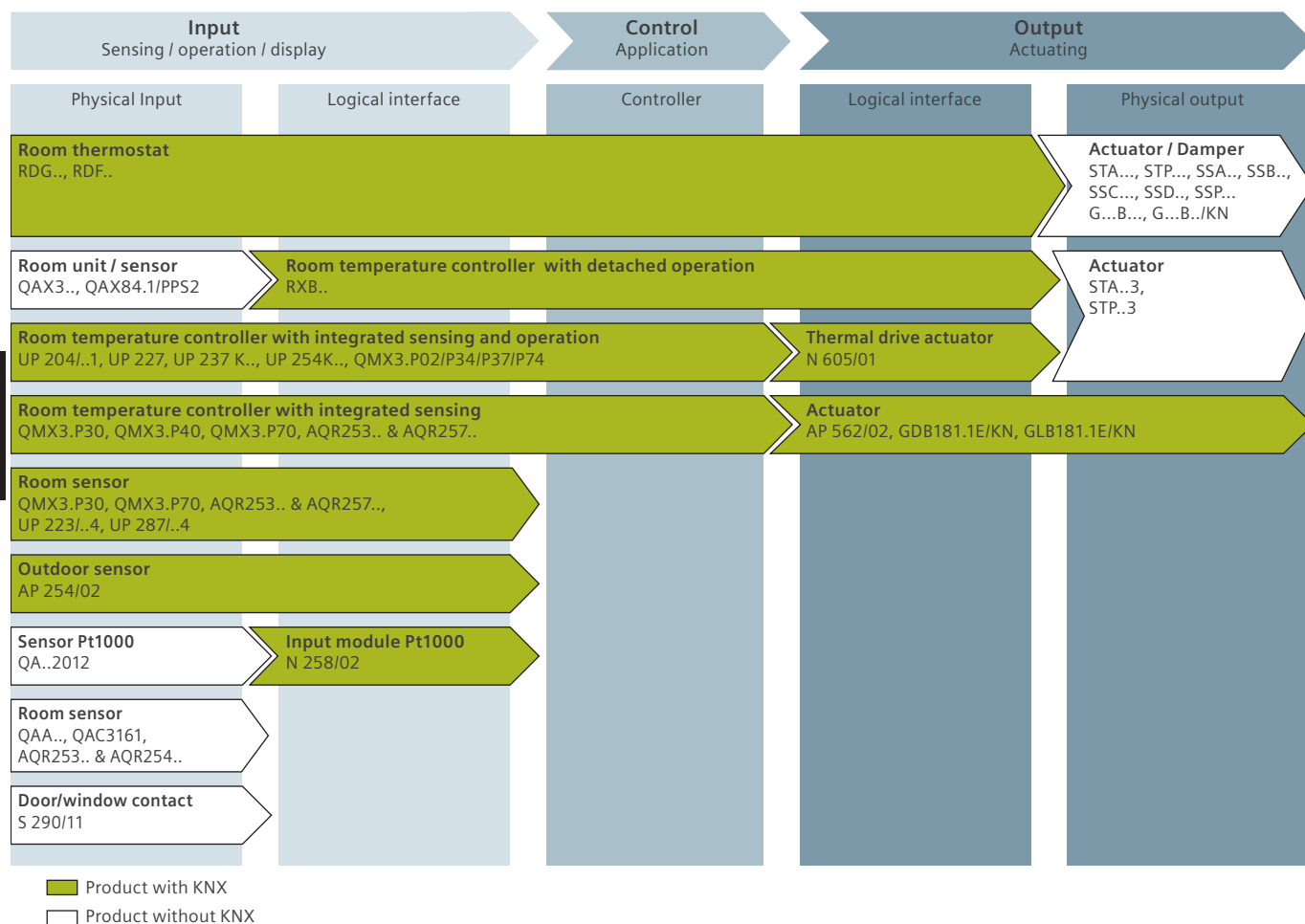
Heating, ventilation and air-conditioning – room temperature control



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KNX room temperature controllers, sensors and actuators

The following table describes the different device categories for room temperature control with the corresponding device families. For each category it shows the covered functions (sensing, operation, display, control, actuating) and the interfaces to other categories. It is shown which device combinations are necessary or possible to implement a full room temperature control solution and serves as first step of device selection. More detailed differences between and within the device categories are described in the technical overviews and product descriptions on the following pages.



Heating, ventilation and air-conditioning – room temperature control

Overview and selection guides

Room temperature control

Overview room temperature controllers

Room thermostats	RDG100KN, RDG160KN, RDG165KN, RDF600KN/S, RDG405KN, RDF800KN, RDF600KN
Room temperature controllers with integrated sensing and operation	UP 227, UP 204, UP 237K, UP 254K, QMX3.P34, QMX3.P74, QMX3.P02, QMX3.P37
Room temperature controllers with integrated sensing	QMX3.P30, QMX3.P40, QMX3.P70, AQR253.. & AQR257..
Room temperature controllers w/ detached operation	RXB21.., RXB22.., RXB24.., RXB39..

Room temperature controllers

	Room thermostats	Room temperature controllers with integrated sensing and operation	Room temperature controllers with integrated sensing	Room temperature controllers with detached operation
Application				
Fancoil	RDF.., RDG1..	UP 227, UP 204	-	RXB21.., RXB22.., RXB39..
Radiator	RDG1..	All	All	RXB24..
Chilled / heated ceiling	RDG1.., RDF800KN	-	-	RXB24..
Floor heating	RDG1..	All	All	RXB24..
Heat pump	RDF.., RDG1..	-	-	-
VAV	RDG405KN	-	-	-
Sensing				
Temperature	All	All	All	-
Air Quality (CO ₂ , VOC)	RDG405KN ¹⁾	QMX3.P74	QMX3.P70, AQR253.. & AQR257..	-
Relative humidity	RDG165KN	QMX3.P74	QMX3.P40, QMX3.P70, AQR253.. & AQR257..	-
Display & Operation				
Display	All	All	-	-
Touch operation	RDF800KN	UP 204	-	-
Rotary wheel for setpoint setting	RDG..	UP 237K, UP 254K		
Push buttons	RDF..	QMX3.P02, QMX3.P37, UP 227, UP 204	-	-
Installation				
Flush mounted	RDF..	UP 227, UP 204, UP 237K, UP 254K	AQR253.. & AQR257..	-
Fit to Delta line / miro	-	UP 227, UP 237K, UP 254K	AQR253.. & AQR257..	-
Wall mounted	RDG..	QMX3..	QMX3..	-
DIN-rail	-	-	-	All

¹⁾ IAQ control with RDG405KN needs an external CO₂/VOC sensor

Central collection of heating and cooling demands from rooms

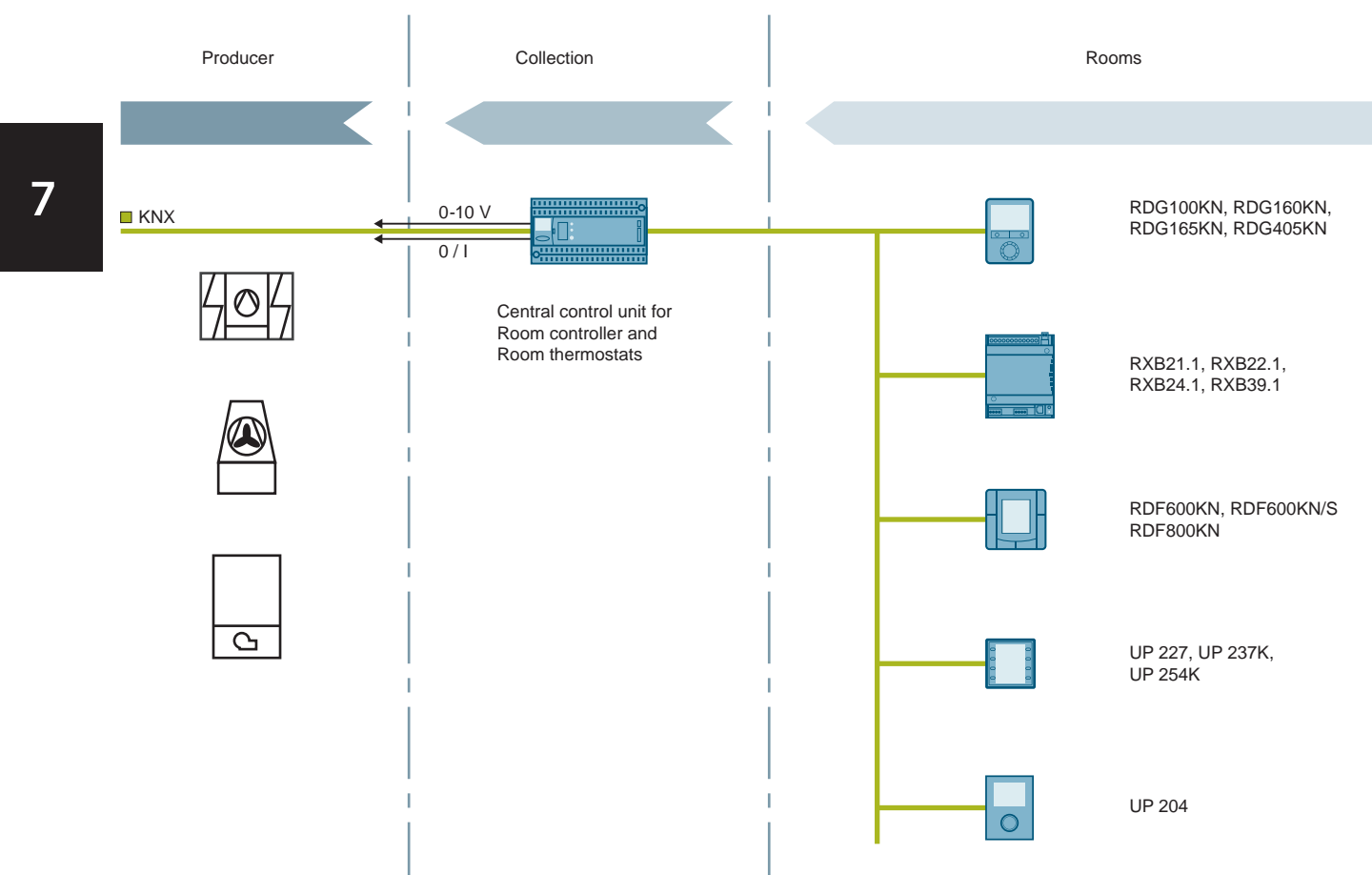
The central control unit RMB795B-1 collects the heating and cooling demands from different devices/room controllers and forwards the calculated demands to the primary controller (producer).

The RMB795B-1 further supplies the room controllers with the following information:

- Time controlled operating mode for room groups
- Room group set points
- Adjustment of the room groups set point
- Emergency and application operating modes
- Device monitoring

Note:

The KNX room controllers must be able to send every 15 minutes a 1-Byte control or request signal on the bus.



Smart Thermostat



The new room thermostat, Smart Thermostat RDS110, is characterized by its simple and intuitive user interface. The display is reduced to the essentials to enable fast and easy operation.

The thermostat for heating applications has a number of integrated sensors and offers many benefits, such as control of room temperature and humidity or monitoring of air quality. In addition, the Smart Thermostat can be combined with external sensors for window opening and outside temperature. Because of its adaptive control and Optimum Start control, the Smart Thermostat helps reduce energy consumption and/or improve comfort. The adaptive control is a self-learning algorithm for analyzing the dynamic behavior of the room temperature according to the heating system. It optimizes the parameters for each building type to achieve a better control loop.

Optimum Start Control is a self-learning algorithm that learns how long it takes to heat up the room so that the system can be turned on in a timely manner.

The Smart Thermostat comes with a navigation wizard so commissioning takes just a few minutes. Thanks to the unique two-step commissioning concept, installation can be completed during construction while the actual setup can be performed later.

Access to the Smart Thermostat from anywhere and at any time










With the Smart Thermostat app, end users can control and monitor the temperature anywhere and at any time. Various setpoints can be defined in the scheduler program for a perfect room climate around the clock. In addition, you can switch between operating modes (e.g. absent/away, at home) with a single click.

Maximum consumption and cost efficiency

The included energy matrix enhances energy efficiency awareness. Benefits of this feature include understanding past energy consumption trends and improving energy consumption patterns.

Technical specifications

Room thermostats

Room thermostats							
							
Type	RDF800KN	RDF600KN	RDF600KN/S	RDG100KN	RDG160KN	RDG165KN	RDG405KN
Design							
Wall mounted	■	■	■	■	■	■	■
Flush Mounted	■	■	■	■	■	■	■
For VDE box	★	★	★				
For British Standard box	■	■	■				
Housing							
Digital display	■	■	■	■	■	■	■
Touch Screen Display	★						
Setpoint knob				■	■	■	■
Operating mode button		■	■	■	■	■	■
Fan speed button		■	■	■	■	■	■
Buttons for light and blind control			■				
Bus connection							
Integrated bus coupling units	■	■	■	■	■	■	■
Power supply							
Terminal voltage AC 230 V	■	■	■	■			
Terminal voltage AC 24 V					■	■	■
Integrated sensor							
Room temperature sensor	■	■	■	■	■	■	■
Humidity sensor						■	
Inputs							
Multifunctional inputs digital/analog	2	2	2	3	3	3	2
Input DC 0...10 V							1
Outputs							
ON/OFF (PWM) Triac (H/K)				■			■
ON/OFF Relay (H/C)	■	★	★		■	■	
Analog outputs DC 0...10 V (H/K)					★	★	■
3-stage Relay (fan)	■	■	■	■	■	■	
Analog DC 0...10 V (fan)					★	★	
Applications							
Fancoil 2-/4-pipe	■	■	■	■	■	■	
Fancoil with electrical heater	■	■	■	■	■	■	
Fancoil with Radiator				■	■	■	
Heating / Cooling 2-/4-pipe	■			■	■	■	
Heating / Cooling with 6-port ball valve					★		
Humidity control						■	
Indoor Air Quality							■
Heat Pump System	■	■	■		■	■	
Variable Air Volume (VAV)							■
VAV with electrical heater							■
VAV with radiator / Heat-Cool coil							■
Functionalities							
Master / Slave					★		
2-position control	■	■	■	■	■	■	■
Modulating control	■ ²⁾	■ ²⁾	■ ²⁾	■	■	■	■
2-stage control sequence for heating or cooling	■ ¹⁾	■ ¹⁾	■ ¹⁾	■	■	■	
Operating mode							
Comfort, Economy, Protection	■	■	■	■	■	■	■
Manual / Auto operating mode	■	■	■	■	■	■	■

¹⁾ only for 2-stage heating

²⁾ modulating output only for 2-pipe applications

■ valid for all variants

★ main feature

7-6

Heating, ventilation and air-conditioning – room temperature control

Technical specifications

Room temperature controllers with integrated sensing and operation

Room temperature controllers with integrated sensing and operation




								
Type	UP 237K	UP 227	UP 254K	UP 204	QMX3.P34	QMX3.P74	QMX3.P02	QMX3.P37
Mounting								
Wall mounted					■	■	■	■
Flush mounted	■ ¹⁾	■ ¹⁾	■ ²⁾	■				
Display-/operating elements								
Display		■		■ ³⁾	■	■		■
Capacitive buttons		■					■	■
Rotary/push-button, Setpoint rotary wheel	■		■	■				
LED indicators per button							■	■
LED indicators central	■ ⁴⁾	■	■ ⁴⁾	■				
Sensors								
Temperature	■	■	■	■	■	■	■	■
Humidity						■		
Air quality CO ₂						■		
Bus interface								
- Integrated bus coupling unit		■			■	■	■	■
- Separate bus coupling unit	■		■	■				
Power supply								
- KNX bus voltage	■	■	■	■	■	■	■	■
- Additional power supply DC 24 V				■				
Functionalities								
Switching ON/OFF/OVER		■		■			■	■
Pushbutton function (bell function)		■		■				
Dimming		■		■			■	■
Send Values								
- 8 bit/percent		■		■			■	■
- 16 bit		■		■				
- Brightness value		■		■				
- Temperature value		■		■				
- Wind speed value		■		■				
- 4 Byte				■				
display value								
- 1 bit		■		■				
- 8 bit/percent/16 bit		■						
- Brightness value		■						
- Temperature value		■			■	■		■
- Wind speed value		■						
- Text messages		■		■				
Alarmhandling		■		■				
Forced control		■		■				
Shutter-blind control		■		■			■	■
Call and save scene, 1 bit		■		■				
Call and save scene, 8 bit		■		■			■	■
Button deactivation		■			■	■		■
Time switch schedules		■		■				
Room temperature controller functionality								
Setpoint value setting, absolute	■	■	■	■	■	■		■
Setpoint value shifting	■	■	■	■	■	■		■
Setting operating modes	■	■	■	■	■	■		■
Setting comfort prolongation	■	■	■	■	■	■		■
Heating/Cooling	■	■	■	■	■	■		■
Two-point control	■	■	■	■	■	■		■
Continuous control	■	■	■	■	■	■		■
Two-level heating and cooling (sequenz)	■	■	■	■	■	■		■
Applications								
Radiator	■	■	■	■	■	■	■	■
Underfloor heating	■	■	■	■	■	■	■	■
Fancoil		■		■				
Threshold control for humidity					■	■	■	■
Threshold control for air quality					■	■	■	■

¹⁾ Design line i-system

²⁾ Design line DELTA style

Technical specifications

Room temperature controllers with integrated sensing

Room temperature controllers with integrated sensing									
Basic module + Front module				AQR2570Nx + AQR2532NNW	AQR2570Nx + AQR2535NNW	AQR2576Nx + AQR2530NNW	AQR2576Nx + AQR2532NNW	AQR2576Nx + AQR2535NNW	AQR2576Nx + AQR2535NNWQ
Type	P30	P40	P70						
Design									
Wall mounted	■	■	■						
Flush mounted				■	■	■	■	■	■
Display / operating									
LCD display with 8 capacitive keys									
Air quality indication on LED			■						■
Sensor									
Temperature	■	■	■	■	■		■	■	■
Humidity		■	■		■			■	■
Air quality CO ₂			■			■	■	■	■
Bus interface									
Integrated bus coupling unit	■	■	■	■	■	■	■	■	■
Controlling									
Controller enable /disable	■	■	■	■	■	■	■	■	■
PID controller for heating and/or cooling	■	■	■	■	■		■	■	■
Threshold controller for humidity	■	■	■		■			■	■
Threshold controller for air quality	■	■	■			■	■	■	■
Input									
Passive Temperature NTC 10k				■	■	■	■	■	■
Two potential-free contacts				■	■	■	■	■	■






Fields of application

The scope of RXB is defined by the preprogrammed application software. The following pages provide an overview of the options and the corresponding devices, divided into different areas of application. The devices are supplied preprogrammed with the applications. The required application can be selected by means of the ETS, Synco™ tool or the Handy tool QAX34.3.





Due to the fact that the applications are predefined, engineering simply involves the definition of a small number of parameters, e. g.:

- PWM or 3-position control of the valves and actuators
- Temperature setpoints
- Manual or automatic fan control
- Room operating units QAX3.., QAX84.1 (PPS2 interface), or UP2... / QMX3.P34 via KNX

Room temperature controllers with detached operation

					
Type	RXB21.1/ FC-10	RXB21.1/ FC-11	RXB22.1/ FC-12	RXB24.1/ CC-02	RXB39.1/ FC-13
Applications					
FNC02: Two-pipe system with change-over	■				■
FNC03: Two-pipe system with change-over and electric heater			■		■
FNC04: Four-pipe system	■				■
FNC05: Four-pipe system with electric heater			■		
FNC08: Four-pipe system with room supply air cascade control	■				■
FNC10: Two-pipe system with change-over outside air damper		■			
FNC12: 4-pipe system with outside air damper		■			
FNC18: Two-pipe system with change-over and radiator		■			
FNC20: Four-pipe system with control of a single damper	■				
CLC01: Chilled ceiling				■	
CLC02: Chilled ceiling and radiator, dew point monitoring, Radiator with downdraft compensation				■	
RAD01: Radiator with downdraft compensation				■	
Functionality					
Temperature setpoints, 4 operating modes Comfort, Pre-Comfort, Economy, Protection	■	■	■	■	■
Digital inputs for window contact, presence detector, dew point sensor	2	2	2	2	
Analog Input for optional LG-Ni 1000 temperature sensor	1	1	1	1	1
3-speed fan control	■	■	■		
Continuous fan control 0-10 V (EC fan motor)					■
PWM valve actuator control	■	■	■	■	
3-Position valve actuator control	■	■	■	■	
KNX valve actuator control	■	■	■	■	■
Motoric 0-10 V valve actuator control					■
Electric reheater control		■			■
Room unit range QAX.. over PPS2 Interface with temperature sensor, set-point adjustment, Standby/Auto/Fan switch, display	■	■	■	■	■
Room units via KNX (UP2.../QMX3.P34)	■	■	■	■	■
parameterization of applications over handy tool QAX34.3	■	■	■	■	■
Power supply	230VAC	230VAC	230VAC	230VAC	230VAC

Damper and rotary actuators




Type				
	Actuators for air volume controllers 300 Pa application range		Rotary actuators for ball valves	
	GDB181.1E/KN	GLB181.1E/KN	GDB111.9E/KN	GLB111.9E/KN
	GDB 300 Pa VAV compact controller 5 Nm for approx. 0.8 m ² damper area 150 s running time	GLB 300 Pa VAV compact controller 10 Nm for approx. 1.5 m ² damper area 150 s running time	GDB Rotary actuator for 2-port, 3-port and 6-port control ball valves up to DN 25 5 Nm 150s running time	GDB Rotary actuator for 2-port, 3-port and 6-port control ball valves up to DN 50 10 Nm 150s running time
Control signal	KNX S-Mode KNX LTE-Mode KNX PL-Link	KNX S-Mode KNX LTE-Mode KNX PL-Link	KNX S-Mode KNX-PL-Link	KNX S-Mode KNX-PL-Link
Operating voltage	AC 24 V	AC 24 V	AC 24 V	AC 24 V
Standard model	GDB181.1E/KN	GLB181.1E/KN	GDB111.9E/KN	GDB111.9E/KN
Dimensions, round damper shaft (mm)	8...16	8...16		
Dimensions, square damper shaft (mm)	6...12,8	6...12,8		

Heating, ventilation and air-conditioning – room temperature control

Technical specifications

Electrothermal valve actuators without KNX

Electrothermal valve actuators without KNX

Type									
Type	STA23	STA63	STA73	STP23	STP63	STP73	SSA31	SSA61	SSA81
Enclosure data									
Dimensions									
• Width/Ø [mm]	44	44	44	44	44	44	48	48	48
• Max. height [mm]	74	74	74	74	74	74	77	77	77
• Min. height [mm]	69	69	69	69	9	69	77	77	77
Output									
• 230 V AC	■			■			■		
• 24 V AC		■	■		■	■		■	■
• 24 V DC			■			■		■	
Control signal	Two-step	0 ... 10 V DC	Two-step	Two-step	0 ... 10 V DC	Two-step	Three-step	0 ... 10 V	Three-step
Valve position in de-energized state ¹⁾	NC	NC	NC	NO	NO	NO	NC	NC	NC
Fail Safe Function	Y	Y	Y	Y	Y	Y	N	N	N
Max. lift [mm]	4.5	4.5	4.5	4.5	4.5	4.5	5.5	5.5	5.5
Max. positioning force [mm/N]	100	100	100	100	100	100	100	100	100
Max. open/close time [sec.]	210	270	270	210	270	270	330	75	330
Length of connecting lead [m]	1	2	1	1	2	1	1.5	1.5	1.5
Ambient temperature for operation [°C]	+5 ... +50	+5 ... +50	+5 ... +50	+5 ... +50	+5 ... +50	+5 ... +50	+1 ... +50	+1 ... +50	+1 ... +50
Power Consumption [W/VA]	2.5 W	2.5 W	2.5 W	2.5 W	2.5 W	2.5 W	6 VA	2.5 VA	0.8 VA
Mounting	360°, also upside down						180°, not upside down		
Degree of protection	IP54	IP54	IP54	IP54	IP54	IP54	IP40	IP40	IP40

¹⁾ Closed (NC), open (NO).

For further information regarding accessories (adapter, connector cable, ...) use the HIT-portal: www.siemens.com/hit

Smart Room Thermostat

RDS110

Room thermostat for the control of heating applications in apartments, single family homes, dormitories and other residential-type as well as light commercial spaces. With remote access via computer, tablet, or smartphone using the Siemens Comfort Cloud service.



Room thermostat features

- Backlit, auto-dimming 90 mm color LCD touch screen for intuitive local operation
- Mobile app for smartphones
- Air quality indication via built-in sensor
- Operate automatically following a scheduler
- Direct temperature and operating mode selection
- RoomOptiControl function with Green leaf button for energy-optimized operation
- Temperature setting limitation for use in public spaces
- Screen lock protection against unauthorized access
- Manual switchover between „Home“, „Away“ and „OFF“ on touch screen
- Room temperature control using the built-in temperature sensor or an optional remote sensor
- Optional temperature averaging using an additional remote temperature sensor
- Patented self-learning algorithm with PID response (patent pending) guaranteeing optimum temperature control performance in all room types
- Optimum start control function that advances the switch-on time to ensure the selected setpoint is reached as required
- Floor temperature limitation using a remote sensor in electric floor-heating applications
- Humidity control using the built-in humidity sensor or an optional remote sensor
- Presence detection using a built-in PIR sensor or approach sensor
- Two multifunctional inputs, optional and configurable for operating mode switchover contact (e.g. window contact), remote room temperature sensor, floor temperature sensor, outside air temperature sensor, remote humidity sensor
- Two relay outputs for heating equipment, extra output for domestic hot water (DHW) boiler, humidifier or dehumidifier
- Periodic pump/valve operation to protect against seizing
- Navigation wizard for guided, fast commissioning
- Remote firmware upgrade capability

Remote operation and monitoring

- Mobile App for smartphones and tablets based on iOS and Android
- Individual time program for each day of the week
- Energy consumption indication
- Manual switchover between „Home“, „Away“ and „OFF“ operating modes on mobile app
- Individual scheduler for domestic hot water boiler
- User account management

Data sheet	A6V10807602
Operating voltage	AC 230 V
Setpoint setting range	5...40 °C
Switching differential	0.5...6 K
Communication	Connectable with a WLAN (802.11b/g/n) compatible router
Analog inputs, number	2
Relay outputs	1. Heating: Boiler, valve, radiator, pump, fan 2. DHW, humidifier, dehumidifier
Relay outputs, number	2
Relay output, switching voltage	AC 24...230 V or potential free
Relay output, switching current	5 (2) A
Type of fixing	Wall mounting with screws
Degree of protection	IP30
Dimensions (W x H x D)	91 x 91 x 26 mm

Stock No.	Product No.	DT
S55772-T100	RDS110	A

Room thermostats
Flush-mounted

RDF800KN



Touch screen room thermostat with KNX communications, for 2-/4- pipe fan coil, universal applications or compressors in DX-type equipment

- KNX communications
- Operating modes: Comfort, Economy and Protection
- For heating and/or cooling applications
- 2 or 3-position control outputs
- Output for 1-speed or 3-speed fan
- 2 multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), heat / cool changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact, presence detector
- Automatic or manual heating/cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Color of housing: Ivory white
- Backlit display

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 4-pipe system

Data sheet	N3174
Operating voltage	AC 230 V
Power consumption	6 VA
Setpoint setting range	5...40 °C
Switching differential	0.5...6 K
Communication	Bus: KNX (S-mode and LTE mode with Synco 700)
Analog inputs, number	2
Relay outputs	Fan: N.O. contacts, non-floating Valve: N.O. contacts, non-floating
Relay outputs, number	5
Relay output, switching voltage	AC 230 V
Relay output, switching current	5 (2) A
Type of fixing	With screws on recessed round conduit box diameter min. 60 mm
Degree of protection	IP30
Dimensions (W x H x D)	86 x 86 x 47 mm

	Stock No.	Product No.	DT
	S55770-T350	RDF800KN	B

Flush-mount room thermostats with KNX communications, 2-/4-pipe fan coils or DX type equipment

RDF..KNX Flush Mount

- KNX communications
- Operating modes: Comfort, Economy and Protection
- For heating and/or cooling applications
- 2 or 3-position control outputs
- Output for 1-speed or 3-speed fan
- 2 multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), heat / cool changeover, operation mode changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact, presence detector
- Automatic or manual heating/cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Color of housing: signal white (RAL 9003)
- Backlit display

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 4-pipe system

Data sheet	N3171
Operating voltage	AC 230 V
Setpoint setting range	5...40 °C
Switching differential	0.5...6 K
Communication	Bus: KNX (S-mode and LTE mode with Synco 700)
Analogue inputs, number	2
Relay outputs	Fan: N.O. contacts, non-floating Valve: N.O. contacts, non-floating
Relay outputs, number	5
Relay output, switching voltage	AC 230 V
Relay output, switching current	5 (2) A
Degree of protection	IP30



Range overview RDF..KNX Flush Mount

Product Title	Type of fixing	Dimensions (W x H x D) [mm]	Stock No.	Product No.	DT
Flush-mount room thermostat with KNX communications, 2-/4-pipe fan coils or DX type equipment	With screws on recessed round conduit box diameter min. 60 mm	86x86x46	S55770-T293	RDF600KN	A
Flush-mount room thermostat with KNX communications, 2-/4-pipe fan coils or DX type equipment, with KNX switching group, four buttons for switching lights and blinds	With screws on recessed round conduit box diameter min. 60 mm	86x86x46	S55770-T400	RDF600KN/S	A

RDG100KN



Room thermostat with KNX communications, AC 230 V, for fan coil units and universal applications

- KNX communications
- 3 multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), heat / cool changeover, operation mode changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact
- Operating modes: Comfort, Economy and Protection
- 2-position, 3-position or PWM control outputs
- Automatic or manual fan speed for 1-speed, 3-speed fan
- Automatic or manual heating / cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Backlit display

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 2-pipe system and radiator / floor heating
- 4-pipe system
- 4-pipe system with electrical heater
- 2-stage heating or cooling system

Data sheet

Operating voltage

Setpoint setting range

Switching differential

Communication

Analog inputs, number

Digital inputs, number

Relay outputs

Relay outputs, number

Relay output, switching voltage

Relay output, switching current

Triac outputs

Triac outputs, number

Triac output, switching voltage

Triac output, switching current

Type of fixing

Degree of protection

Dimensions (W x H x D)

N3191

AC 230 V

5...40 °C

Heating: 0.5...6 K

Cooling: 0.5...6 K

Bus: KNX (S-Mode und LTE-Mode mit Synco 700)

2

1

Fan: 1- or 3-speed

3

AC 230 V

5 (4) A

Valve, el. heater

2-position, PWM, 3-position

3

AC 230 V

Max. 1 A

Wall mounting with screws

IP30

93 x 128 x 30.8 mm

Stock No.

Product No.

DT

S55770-T163

RDG100KN

A

Room thermostat with KNX communications, AC 24 V, for fan coil units and universal applications, heat pump, fan (1-/3-speed, DC), valves (2-point, DC)

RDG160KN



- KNX communications
- For applications with DC control outputs and DC or 3-speed fan output
- For applications with 2-position control output with DC fan output
- 3 multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), heat / cool changeover, operation mode changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact, presence detector
- Operating modes: Comfort, Economy and Protection
- Automatic or manual EC fan or 1-/3-speed
- Automatic or manual heating / cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Backlit display
- Master / Slave function in KNX S-mode

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 2-pipe system and radiator / floor heating
- 4-pipe system
- 2-stage heating or cooling system
- Heating / cooling with 6-port ball valves

Data sheet	N3191
Operating voltage	AC 24 V
Setpoint setting range	5...40 °C
Switching differential	Heating: 0.5...6 K Cooling: 0.5...6 K
Communication	Bus: KNX (S-Mode und LTE-Mode mit Synco 700)
Analog inputs, number	2
Analog outputs	Valve, el. heater: 2 Fan: 1 (ECM)
Analog outputs, number	3
Analog output, signal	DC 0...10 V
Digital inputs, number	1
Relay outputs	Valve, compressor or el. heater: 2 outputs, 2-position Fan: 1- or 3-speed
Relay outputs, number	3
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	5 (4) A
Type of fixing	Wall mounting with screws
Degree of protection	IP30
Dimensions (W x H x D)	93 x 128 x 30.8 mm

Stock No.	Product No.	DT
S55770-T297	RDG160KN	A

RDG165KN



Room thermostat with KNX communications and built-in humidity sensor and humidity control, AC 24 V, for fan coil units and universal applications, heat pump, fan (1-/ 3-speed, DC), valves (2-point, DC)

- KNX communications
- For applications with DC control outputs and DC or 3-speed fan output
- For applications with 2-position control output with DC fan output
- 3 multifunctional inputs for keycard contact, external room / return air temperature (QAH11.1, QAA32), heat / cool changeover, Presence detector, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact
- Operating modes: Comfort, Economy and Protection
- Automatic or manual EC fan or 1-/3-speed
- Automatic or manual heating / cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Backlit display
- Built-in humidity sensor and humidity control

Application selectable:

- 2-pipe system
- 2-pipe system with electrical heater
- 2-pipe system and radiator / floor heating
- 4-pipe system
- 2-stage heating or cooling system

Data sheet

Operating voltage

Setpoint setting range

Switching differential

Communication

Analog inputs, number

Analog outputs

Analog outputs, number

Analog output, signal

Digital inputs, number

Relay outputs

Relay outputs, number

Relay output, switching voltage

Relay output, switching current

Type of fixing

Degree of protection

Dimensions (W x H x D)

N3191

AC 24 V

5...40 °C

Heating: 0.5...6 K

Cooling: 0.5...6 K

Bus: KNX (S-Mode und LTE-Mode mit Synco 700)

2

Valve, el. heater: 2

Fan: 1 (ECM)

3

DC 0...10 V

1

Valve, compressor or el. heater: 2 outputs, 2-position

Fan: 1- or 3-speed

3

AC 24...230 V

5 (4) A

Wall mounting with screws

IP30

93 x 128 x 30.8 mm

Stock No.

Product No.

DT

S55770-T347

RDG165KN

A

Room thermostat for temperature and air quality control with KNX communications, AC 24 V, VAV heating and cooling systems

RDG405KN



- KNX communications
- Output DC 0...10 V for VAV actuator and auxiliary output ON/OFF, PWM or 3-position or 3-position for VAV actuator and auxiliary output DC 0...10 V
- 2 multifunctional inputs for keycard contact, external room / return air temperature (1x, QAH11.1, QAA32), heat / cool changeover, operation mode changeover, window contact on/off, dewpoint monitor, electrical heater enabled, fault contact, presence detector
- 1 input DC 0...10 V for damper position feedback, for CO2 sensor
- Operating modes: Comfort, Economy and Protection
- Modulating PI control
- Control depending on the room or the return air temperature and air quality
- Automatic or manual heating / cooling changeover
- Adjustable commissioning and control parameters
- Minimum and maximum setpoint limitation
- Minimum and maximum limitation of air flow signal
- Output signal inversion (DC 0...10 V) as an option
- Backlit display

Application selectable:

- Single-duct system
- Single-duct system with electrical heater
- Single-duct system and radiator / floor heating
- Single-duct system with heating / cooling coil

Data sheet	N3192
Operating voltage	AC 24 V
Power consumption	2 VA
Setpoint setting range	5...40 °C
Switching differential	Heating: 0.5...6 K Cooling: 0.5...6 K
Communication	Bus: KNX (S-mode and LTE mode with Synco 700)
Analog inputs, number	2
Analog outputs	VAV actuator, electric heater, valve
Analog outputs, number	1
Analog output, signal	DC 0...10 V
Analog output, current	Max. ±1 mA
Digital inputs, number	1
Triac outputs	VAV actuator, valve, el. heater 2-position, PWM, 3-position
Triac outputs, number	1
Triac output, switching voltage	AC 24 V
Triac output, switching current	Max. 1 A
Type of fixing	Wall mounting with screws
Degree of protection	IP30
Dimensions (W x H x D)	93 x 128 x 30.8 mm

Stock No.	Product No.	DT
S55770-T348	RDG405KN	A

Heating, ventilation and air conditioning - room temperature control

Room temperature controllers with integrated sensing and operation i-system

UP 237K..



Temperature controller, i-system

- Integrated room temperature sensors
- Control can be set as a two-point control and/or continuous-action control (P or PI algorithm), for heating only, for cooling only, or for heating and cooling mode
- Operating modes that can be switched via KNX: comfort mode, pre-comfort mode, energy-saving mode and frost or heat protection mode
- Presence pushbutton to locally switch between comfort and pre-comfort mode or comfort and energy-saving mode and to extend comfort mode after operating energy-saving or protection mode
- Pushbutton for switching over between manual and automatic mode
- The room temperature setpoint value for comfort mode can be set via an interchangeable rotary button (+/-) on the controller and via the KNX
- Basic setpoint of the room temperature for comfort mode which can be set via the KNX
- Setpoint value for comfort mode in °C which can be set via an interchangeable rotary button on the controller
- Adjustable dead zone between the heating setpoint and the cooling setpoint for comfort mode
- Two-level heating or cooling
- Output of the control variable(s) either as an on/off switch command or as a positioning command in the range of 0...100 %
- 5 LEDs to display manual mode and the current operating modes
- 4 LEDs to display heating/cooling valve open, dew point alarm and open window
- For plugging onto a bus transceiver module (BTM) or a flush-mounting actuator with bus transceiver module (BTM)

Dimensions (W x H x D)

55 x 55 x 16 mm

Range overview UP 237K..

Product Title	Stock No.	Product No.	DT
Temperature controller, titanium white	5WG1237-2KB11	UP 237K11	A
Temperature controller, aluminum metallic	5WG1237-2KB31	UP 237K31	B

The bus transceiver module (BTM) (see Chapter System Products and Accessories) or flush-mounting actuator with bus transceiver module (BTM) must be ordered separately. The matching design frame must be ordered separately. See Chapter Display and Operation Units - Push-button accessories.

Room Control Unit

UP 227

- Multifunctional display-/control panel for KNX with Dot-Matrix LCD display 96 x 128 pixels
- 8 capacitive touch buttons for horizontal operation
- For the display and control of at least 10 adjustable room control functions: Switching toggle/On/Off, Dimming, Door bell function On/Off, Solar protection control; send 1 Byte/2 Byte value; display 1 Bit/ 1 Byte/2 Byte value; Forced control; display text messages; warning and alarm messaging; recall and save scenes; warning and alarm messaging
- Room control functions lockable via KNX-bus
- Green/red LED as orientation light, as status indication, as a response to pressing a button respectively to the signalling of alarm reports
- A signaler for acoustical alarm reports respectively as a status of the touch operation
- Integrated room temperature sensor
- Evaluation and weighting of an external inside temperature sensor
- Room temperature control configurable as two-step control and/or continuous control, for exclusive heating operation, exclusive cooling operation or heating and cooling operation
- Selectable operating modes over the KNX: Comfort, Pre-comfort, Energy-savings and protection
- Local indication
 - Of the active operating modes or automatic- respectively manual mode
 - Inside temperature or outside temperature
 - Heating or cooling mode
 - Dew point alarm
 - Open window
- Local switching between
 - Manual- and automatic mode
 - Comfort, pre-comfort, energy-saving- and protection mode
- Adjustable time-limited extension of the comfort mode
- Adjustable room temperature setpoint shifting for comfort mode
- Via KNX set basic setpoint value of the room temperature for comfort mode
- An outside temperature based temperature setpoint value tracing in the cooling operation
- Adjustable dead zone between the heating setpoint value and the cooling setpoint value for comfort mode
- Transmission of controller output(s) either as On/Off switching commands or as control commands in the range 0...100 %
- Local display of the manually selected fan rotational speed respectively of the automatic adjustment of the fan rotational speed
- Adjustable fan rotational speed respectively automatic adjustment of the fan rotational speed on the controller
- Weekly schedule programme for controller- operating modes, automatic mode and at the least 8 room control functions
- At the least 40 schedule tasks and Display and set of the date and time
- User control of LCD background lighting and Background color
- Display system settings and room temperature controller in the languages: German, English, French, Italian od Spanish
- User setting of at least 3 operating languages also Integrated bus coupling unit, bus connection via bus terminal possible
- Flush mounted device for the mounting in an flush wall box Ø 60 mm, for fixing on the mounting plate AQR2500NF via lateral springs (separately specified)



The matching design frame must be ordered separately. See chapter Display and Operation Units - Push-buttons accessories.

The mounting plate AQR2500.. must be ordered separately.

Number of button pairs	10
Design line	DELTA i-system
Color	Titanium white
Dimensions (W x H x D)	55 x 55 x 37,2 mm

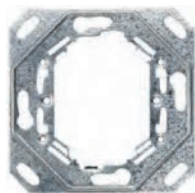
Stock No.	Product No.	DT
5WG1227-2AB11	UP 227	A

Heating, ventilation and air conditioning - room temperature control

Room temperature controllers with integrated sensing and operation i-system

Accessories for UP 227

AQR2500NF



Mounting plate EU (CEE/VDE)

- Mounting plates to plug onto the front module

Data sheet
Mechanical design
Dimensions (W x H)

N1408
EU (CEE/VDE)
70.8 x 70.8 mm

Stock No.	Product No.	DT
S55720-S161	AQR2500NF	A

AQR2500NG



Mounting plate IT (3 modular)

- Mounting plates to plug onto the front module

Data sheet
Mechanical design
Dimensions (W x H)

N1408
IT (3 modular)
110 x 64 mm

Stock No.	Product No.	DT
S55720-S163	AQR2500NG	A

AQR2500NH



Mounting plate UK (British Standard)

- Mounting plates to plug onto the front module

Data sheet
Mechanical design
Dimensions (W x H)

N1408
UK (British Standard)
83 x 83 mm

Stock No.	Product No.	DT
S55720-S162	AQR2500NH	A

AQR2500NJ



Mounting plate US (UL)

- Mounting plates to plug onto the front module

Data sheet
Mechanical design
Dimensions (W x H)

N1408
US (UL)
64 x 110 mm

Stock No.	Product No.	DT
S55720-S164	AQR2500NJ	A

Heating, ventilation and air conditioning - room temperature control

Room temperature controllers with integrated sensing and operation

DELTA style

Temperature controller, DELTA style

UP 254K..



- Integrated room temperature sensors
- Control can be set as a two-point control and/or continuous-action control (P or PI algorithm), for heating only, for cooling only, or for heating and cooling mode
- Operating modes that can be switched via KNX: comfort mode, pre-comfort mode, energy-saving mode and frost or heat protection mode
- Presence pushbutton to locally switch between comfort and pre-comfort mode or comfort and energy-saving mode and to extend comfort mode after operating energy-saving or protection mode
- Pushbutton for switching over between manual and automatic mode
- The room temperature setpoint value for comfort mode can be set via an interchangeable rotary button (+/-) on the controller and via the KNX
- Basic setpoint of the room temperature for comfort mode which can be set via the KNX
- Setpoint value for comfort mode in °C which can be set via an interchangeable rotary button on the controller
- Adjustable dead zone between the heating setpoint and the cooling setpoint for comfort mode
- Two-level heating or cooling
- Output of the control variable(s) either as an on/off switch command or as a positioning command in the range of 0...100 %
- 5 LEDs to display manual mode and the current operating modes
- 4 LEDs to display heating/cooling valve open, dew point alarm and open window
- For plugging onto a bus transceiver module (BTM) or a flush-mounting actuator with bus transceiver module (BTM)

Dimensions (W x H x D)

68 x 68 x 16 mm

Range overview UP 254K..

Product Title	Stock No.	Product No.	DT
Temperature controller, titanium white/metallic silver	5WG1254-2KB13	UP 254K13	A
Temperature controller, platinmetallic	5WG1254-2KB43	UP 254K43	A

The bus transceiver module (BTM) (see Chapter System Products and Accessories) or flush-mounting actuator with bus transceiver module (BTM) must be ordered separately. The matching design frame must be ordered separately. See Chapter Display and Operation Units - Push-button accessories.

Heating, ventilation and air conditioning - room temperature control

Room temperature controllers with integrated sensing and operation

Flush-mounted

UP 204/..1



Room Controller Contouch, incl. bus coupling unit

- Multifunctional display/operating device for KNX, with 320 x 240 pixel, 2.8" LCD color display
- For the display and operation of at least 18 configurable room operator functions:
 - Switching On/Off/Over and Pushbutton function (bell function)
 - Shutter/blind/roller control
 - Value transmission: 1 byte in %, 1 byte integer without prefix, 1 byte integer with prefix, 2 byte integer without prefix, 2 byte integer with prefix
 - Positively driven operation
 - Scene control: Store and call up scene 8 bit, store and call up scene 1 bit
 - Text display and warning and alarm indications
- Operation using touch screen and/or by turning/pushing rotary/push button
- RGB LED as orientation light or for signaling alarm indications
- Buzzer for acoustic alarm indication or as feedback when operating touch screen
- Integrated room temperature sensors
- Analysis and weighting of an external inside temperature sensor
- Room temperature control can be set as a two-point control and/or continuous-action control for heating only, for cooling only, or for heating and cooling mode
- Operating modes that can be switched via KNX: comfort mode, pre-comfort mode, energy-saving mode and frost or heat protection mode
- Local displaying of active operating modes or automatic or manual modes
- Local displaying of heating/cooling valve open, dew point alarm and open window
- Local switchover between automatic or manual mode, and between comfort, pre-comfort, energy-saving and protection modes
- Local, time-adjustable extension of comfort mode
- The room temperature setpoint value for comfort mode can be set via a rotary button on the room controller
- Basic room temperature setpoint value for comfort mode which can be set via the KNX
- Outdoor temperature-based tracking of temperature setpoint value in cooling mode
- Adjustable dead zone between the heating setpoint and the cooling setpoint for comfort mode
- Two-level heating or cooling
- Output of the control variable(s) either as an on/off switch command or as a positioning command in the range of 0...100%
- Local displaying of manually set fan speed step or automatic speed input
- Fan speed step can be set via the rotary button or entered automatically by the controller
- Weekly scheduling program for controller operating modes and for 18 room operator functions
- At least 16 time switching points per function per weekday
- Display of date and time
- Selection of at least 4 different design templates as operator and display interface
- Local activation of a cleaning function to lock the touch screen and the rotary/push button
- Slot for a micro SD card for transferring firmware and configuration data
- incl. bus coupling unit (included in delivery)
- Bus connection via bus terminal
- Connection of the separate 24 V DC boost voltage, power consumption approx. 50 mA
- Flush-mounting device for mounting in a Ø 60 mm installation box, with screw fixing

Dimensions (W x H x D)

86 x 116 x 30 mm

Range overview UP 204/..1

Product Title	Stock No.	Product No.	DT
Room Controller Contouch, incl. bus coupling unit, titanium white	5WG1204-2AB11	UP 204/11	A

Accessories for UP 204/..1

Product Title	Stock No.	Product No.	DT
Electronic power supply unit, 350 mA	4AC2402	4AC2402	B
LOGO! Power 24 V/1.3 A	6EP3331-6SB00-0AY0	LOGO!POWER 24 V/1,3 A	A

Heating, ventilation and air conditioning - room temperature control

Room temperature controllers with integrated sensing and operation

Wall-mounted

Room operator unit KNX with temperature sensor, configurable touchkeys, LED display, white

QMX3.P02

Functions:

- Temperature sensor
- Configurable touchkeys with LED display
- Switching and control of lighting, blinds, scenes
- Window for labels
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX



Data sheet N1602
Dimensions (W x H x D) 88.4 x 133.4 x 18 mm

Stock No.	Product No.	DT
S55624-H107	QMX3.P02	A

Room operator unit KNX with temperature sensor, configurable touchkeys, LED display, black

QMX3.P02-1BSC

Functions:

- Temperature sensor
- Configurable touchkeys with LED display
- Switching and control of lighting, blinds, scenes
- Window for labels
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX



Data sheet N1602
Dimensions (W x H x D) 88.4 x 133.4 x 18 mm

Stock No.	Product No.	DT
S55624-H128	QMX3.P02-1BSC	A

New Product

Heating, ventilation and air conditioning - room temperature control

Room temperature controllers with integrated sensing and operation

Wall-mounted

QMX3.P34



Room operator unit KNX with temperature sensor, segmented backlit display, touchkeys, white

Functions:

- Temperature sensor
- Segmented backlit display and touchkeys
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm

Stock No.

Product No.

DT

S55624-H105

QMX3.P34

A

QMX3.P34-1BSC



Room operator unit KNX with temperature sensor, segmented backlit display, touchkeys, black

Functions:

- Temperature sensor
- Segmented backlit display and touchkeys
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm

Stock No.

Product No.

DT

S55624-H126

QMX3.P34-1BSC

A

Heating, ventilation and air conditioning - room temperature control

Room temperature controllers with integrated sensing and operation

Wall-mounted

Room operator unit KNX with temperature sensor, segmented backlit display, configurable touchkeys, LED display, white

QMX3.P37

Functions:

- Temperature sensor
- Segmented backlit display and touchkeys
- Configurable touchkeys with LED display
- Switching and control of lighting, blinds, scenes
- Window for labels
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX



Data sheet N1602
Dimensions (W x H x D) 88.4 x 133.4 x 18 mm

Stock No.	Product No.	DT
S55624-H108	QMX3.P37	A

Room operator unit KNX with temperature sensor, segmented backlit display, configurable touchkeys, LED display, black

QMX3.P37-1BSC

Functions:

- Temperature sensor
- Segmented backlit display and touchkeys
- Configurable touchkeys with LED display
- Switching and control of lighting, blinds, scenes
- Window for labels
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX



Data sheet N1602
Dimensions (W x H x D) 88.4 x 133.4 x 18 mm

Stock No.	Product No.	DT
S55624-H129	QMX3.P37-1BSC	A

New Product

Heating, ventilation and air conditioning - room temperature control

Room temperature controllers with integrated sensing and operation

Wall-mounted

QMX3.P74



Room operator unit KNX with sensors for temperature, humidity, CO2, segmented backlit display, touchkeys, white

Functions:

- multisensor for temperature, humidity and CO2
- Segmented backlit display and touchkeys
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm

Stock No.

Product No.

DT

S55624-H106

QMX3.P74

A

QMX3.P74-1BSC



Room operator unit KNX with sensors for temperature, humidity, CO2, segmented backlit display, touchkeys, black

Functions:

- Multisensor for temperature, humidity and CO2
- Segmented backlit display and touchkeys
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm

Stock No.

Product No.

DT

S55624-H127

QMX3.P74-1BSC

A

Heating, ventilation and air conditioning - room temperature control
Room temperature controllers with integrated sensing and operation
Wall-mounted

Accessories for QMX3..

Basic plate for conduit and cavity wall box

QMX3.MP1

Basic plate for conduit box / cavity wall box with 68 mm diameter hole

20 pcs. per package

Data sheet	N1602
Dimensions (W x H)	80.5 x 115 mm

	Stock No.	Product No.	DT
	S55624-H110	QMX3.MP1	B

Heating, ventilation and air conditioning - room temperature control

Room temperature controllers with integrated sensing

i-system

AQR2530NNW



Front module for base module, without sensor

- Front module without sensor for plugging onto the Base module
- Matching the DELTA line and DELTA miro frame program

Data sheet N1411

Stock No.	Product No.	DT
S55720-S137	AQR2530NNW	A

Matching the DELTA line and DELTA miro frame program. See chapter Display and Operation Units.
The relevant base modules must be ordered separately. See chapter Physical sensors - Without KNX connection.

AQR2532NNW



Front module for base module, temperature (active)

- Front module with sensor for plugging onto the Base module
- Matching the DELTA line and DELTA miro frame program

Data sheet N1411
Measuring range, temperature 0...50 °C
Signal output temperature Active

Stock No.	Product No.	DT
S55720-S136	AQR2532NNW	A

Matching the DELTA line and DELTA miro frame program. See chapter Display and Operation Units.
The relevant base modules must be ordered separately. See chapter Physical sensors - Without KNX connection.

Heating, ventilation and air conditioning - room temperature control

Room temperature controllers with integrated sensing i-system

Front module for base module, humidity and temperature (active)

AQR2535NNW

- Front module with humidity and temperature sensor for plugging onto the Base module
- Matching the DELTA line and DELTA miro frame program

Data sheet	N1411
Measuring range, temperature	0...50 °C
Signal output temperature	Active
Measurement range humidity	0...100 %



Stock No.	Product No.	DT
S55720-S141	AQR2535NNW	A

Matching the DELTA line and DELTA miro frame program. See chapter Display and Operation Units.
The relevant base modules must be ordered separately. See chapter Physical sensors - Without KNX connection.

Front module for base module, humidity and temperature, with LED

AQR2535NNWQ

- Front module with humidity and temperature sensor and CO2 indicator for plugging onto the Base module
- Matching the DELTA line and DELTA miro frame program

Data sheet	N1411
Measuring range, temperature	0...50 °C
Signal output temperature	Active
Measurement range humidity	0...100 %
Display	CO2 indicator by LED



Stock No.	Product No.	DT
S55720-S219	AQR2535NNWQ	A

The matching design frame must be ordered separately. See Chapter Display and Operation Units – Pushbutton accessories.

7

Heating, ventilation and air conditioning - room temperature control

Room temperature controllers with integrated sensing

i-system

AQR2570..



Base module with KNX for temperature and humidity measurement

- Base module without sensor for plugging onto a front module
- 1 analog input to connect temperature sensors with NTC 10k sensing element to measure room, floor, or ceiling temperature
- 2 multifunctional binary inputs to connect window contacts or buttons
- Power supply via KNX bus, bus load < 5 mA
- Temperature control as continuous control (PID algorithm) for pure heating operation, heating and cooling operation, and adjustable positioning variable as continuous positioning signal 0...100%, or as pulse-width modulated (PWM) switching signal On/Off,
- Ventilation control across 3 settable switching steps for relative humidity, and 3 switching signal objects On/Off, or one positioning signal object 0...100% to control a ventilation actor
- Via setpoints for room temperature and relative humidity adjustable via KNX bus
- Adjustable commissioning and control parameters
- Integrated bus coupler with programming button and LED

Data sheet	N1411
Voltage supply	KNX bus
Analog inputs, number	1
Analog inputs	Passive temperature sensor NTC 10k
Digital inputs, number	2
Digital inputs	Potential-free contacts

Range overview AQR2570..

Mechanical design	Dimensions (W x H)	Stock No.	Product No.	DT
EU (CEE/VDE)	70.8 x 70.8 mm	S55720-S203	AQR2570NF	A
IT (3 Modular)	110 x 64 mm	S55720-S205	AQR2570NG	A
UK (British Standard)	83 x 83 mm	S55720-S204	AQR2570NH	C
US (UL)	64 x 110 mm	S55720-S206	AQR2570NJ	A

Heating, ventilation and air conditioning - room temperature control

Room temperature controllers with integrated sensing i-system

Base modules with KNX for CO₂ measurement

AQR2576..

- Base module with maintenance and recalibration-free CO₂ sensor to plug onto a front module
- 1 analog input to connect temperature sensors with NTC 10k sensing element to measure room, floor, or ceiling temperature
- 2 multifunctional binary inputs to connect window contacts or buttons
- Power supply via KNX bus, bus load < 5 mA
- Ventilation control across 3 settable switching steps for relative humidity & CO₂ concentration, and 3 switching signal objects On/Off, or one positioning signal object 0...100% to control a ventilation actor
- Temperature control as continuous control (PID algorithm) for pure heating operation, heating and cooling operation, and adjustable positioning variable as continuous positioning signal 0...100%, or as pulse-width modulated (PWM) switching signal On/Off
- Via setpoints for room temperature and relative humidity, and CO₂ concentration, adjustable via KNX bus
- Adjustable commissioning and control parameters
- Integrated bus coupler with programming button and LED



Data sheet	N1411
Voltage supply	KNX bus
Measuring range	CO ₂ : 0...5000 ppm
Analog inputs, number	1
Analog inputs	Passive temperature sensor NTC 10k
Digital inputs, number	2
Digital inputs	Potential-free contacts

Range overview AQR2576..

Mechanical design	Dimensions (W x H)	Stock No.	Product No.	DT
EU (CEE/VDE)	70.8 x 70.8 mm	S55720-S207	AQR2576NF	A
IT (3 Modular)	110 x 64 mm	S55720-S209	AQR2576NG	C
UK (British Standard)	83 x 83 mm	S55720-S208	AQR2576NH	C
US (UL)	64 x 110 mm	S55720-S210	AQR2576NJ	A

Remote sensor for AQR257..

Product Title	Data sheet	Stock No.	Product No.	DT
Front module with passiv temperature measurement, LG-Ni1000	N1408	S55720-S133	AQR2531ANW	A
Mounting plate EU (CEE/VDE)	N1408	S55720-S161	AQR2500NF	A
Cable temperature sensor PVC 2 m, NTC 10k	N1831	BPZ:QAP1030.200	QAP1030.200	A

Heating, ventilation and air conditioning - room temperature control

Room temperature controllers with integrated sensing

Wall-mounted

QMX3.P30

Room sensor KNX for temperature, white



Functions:

- Temperature sensor
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm

Stock No.

Product No.

DT

S55624-H103

QMX3.P30

A

QMX3.P30-1BSC

Room sensor KNX for temperature, black



Functions:

- Temperature sensor
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm

Stock No.

Product No.

DT

S55624-H123

QMX3.P30-1BSC

A

Heating, ventilation and air conditioning - room temperature control

Room temperature controllers with integrated sensing

Wall-mounted

Room sensor KNX for temperature and humidity, white

QMX3.P40

Functions:

- Multisensor for temperature and humidity
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm



Stock No.

Product No.

DT

S55624-H116

QMX3.P40

A

Room sensor KNX for temperature and humidity, black

QMX3.P40-1BSC

Functions:

- Multisensor for temperature and humidity
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm



Stock No.

Product No.

DT

S55624-H124

QMX3.P40-1BSC

A

Heating, ventilation and air conditioning - room temperature control

Room temperature controllers with integrated sensing

Wall-mounted

QMX3.P70

Room sensor KNX for temperature, humidity, CO2, white



Functions:

- Multisensor for temperature, humidity and CO2
- Air quality indicator with LED
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm

Stock No.	Product No.	DT
S55624-H104	QMX3.P70	A

QMX3.P70-1BSC

Room sensor KNX for temperature, humidity, CO2, black



Functions:

- multisensor for temperature, humidity and CO2
- Air quality indicator with LED
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm

Stock No.	Product No.	DT
S55624-H125	QMX3.P70-1BSC	A

Accessories for QMX3..

Product Title	Packaging unit	Dimensions (W x H)	Stock No.	Product No.	DT
Basic plate for conduit and cavity wall box		80.5 x 115 mm	S55624-H110	QMX3.MP1	B

Room controller with KNX communication

RXB2..

The controllers are used for temperature control in individual rooms.

- For 2-pipe with changeover or 4-pipe fan coil systems
- For radiator and chilled ceiling (RXB24.1 only)
- Control of thermal valve actuators AC 24 V, PWM, valve actuators AC 24 V (3-position) as well as KNX bus actuators
- Potential-free relay contacts for fan speed control
- Connecting relay for electric heating (RXB22.1 und RXB39.1)
- KNX bus communication
- Connection to Desigo building automation and control system via PX KNX
- Commissioning with „Handy Tool“ QAX34.3 or Synco ACS

Application description fan coil: CM110672

Application description RAD/CLC: CM110671



Operating voltage	AC 230 V
Frequency	50/60 Hz
Power consumption	Max. 12 VA
Control algorithm	PI
Communication	Bus: KNX (S-mode and LTE mode) Room unit: PPS2
Service plug	RXT20.1
Digital inputs, number	2
Relay output, switching voltage	AC 250 V
Relay output, switching current	5 (4) A
Triac outputs	PWM 3-position
Triac output, switching voltage	AC 24 V
Triac output, switching current	0.5 A
Interface type	KNX-bus
Mounting	On DIN rail With screws
Mounting location	Ceiling voids with cover Fan coil Panel
Degree of protection	IP30
Dimensions (W x H x D)	113 x 167 x 62 mm

Range overview RXB2..

Product Title	Triac outputs, number	Relay outputs, number	Data sheet	Stock No.	Product No.	DT
Room controller for 3-speed fan	4	3	N3873	BPZ:RXB21.1/FC-10	RXB21.1/FC-10	A
Room controller for 3-speed fan	4	3	N3873	BPZ:RXB21.1/FC-11	RXB21.1/FC-11	A
Room controller with 3-speed fan and electric heating coil	2	4	N3873	BPZ:RXB22.1/FC-12	RXB22.1/FC-12	A
Room controller for chilled ceilings and radiators	4	0	N3874	BPZ:RXB24.1/CC-02	RXB24.1/CC-02	A

The application determines the usable actuator (PWM /3-position) with the triac output

Heating, ventilation and air conditioning - room temperature control

Room temperature controllers with detached operation

RXB

RXB39.1/FC-13



Room controller for fan-coil applications with KNX communication

The RXB39.1 room controller is used for temperature control in individual rooms.

- For 2-pipe and 4-pipe fan coil systems with or without changeover
- PI control
- KNX bus communication
- Connection to Desigo building automation and control system via PX KNX
- DC 0...10 V control of valve and actuators, fan (ECM), and electric heater
- 2 Potential-free relay contacts to release fan and electric heating
- Commissioning with ETS Professional, „Handy Tool“ QAX34.3 or Synco ACS
- Operating voltage AC 230 V
- Plug-in screw terminals

Data sheet	N3875
Operating voltage	AC 230 V
Frequency	50/60 Hz
Power consumption	12 VA
Control algorithm	PI
Communication	Bus: KNX
	Room unit: PPS2
Service plug	ETS Professional, ACS, HandyTool
Analog inputs, number	2
Analog outputs, number	3
Analog output, signal	DC 0...10 V
Digital inputs, number	4
Relay outputs, number	1
Electric reheater relay	1
Relay output, switching voltage	AC 250 V
Relay output, switching current	5 (4) A
Mounting	On DIN rail
Mounting location	Ceiling voids with cover
	Fan coil
	Panel
Degree of protection	IP20
Dimensions (W x H x D)	152 x 120 x 62 mm

Stock No.	Product No.	DT
S55373-C121	RXB39.1/FC-13	A

Heating, ventilation and air conditioning - room temperature control

Room temperature controllers with detached operation

Accessories for RXB..

Terminal cover for RXB2../ RXC2../ RXM2..

RXZ20.1

Data sheet N3834

Stock No.	Product No.	DT
BPZ:RXZ20.1	RXZ20.1	A

Terminal cover for RXB3../ RXC3../ RXM3..

RXZ30.1

Data sheet N3840

Stock No.	Product No.	DT
BPZ:RXZ30.1	RXZ30.1	A

Room unit with PPS2 interface

QAX3..

Room units for acquiring the room temperature and operation of individual room control.

Voltage supply	PPS2
Power consumption	0.10 VA
Time constant	≤8 min
Measuring range, temperature	0...40 °C
Sensing element, temperature	NTC
Measurement accuracy	±0.25 K at 25 °C ±0.5 K at 5...30 °C
Setpoint readjustment range	±12 K
Mounting location	Indoors
Mounting	Directly on wall In recessed or top-mounted conduit box
Degree of protection	IP30

Room unit with sensor and PPS2 interface

QAX30.1

- Acquisition of room temperature

Data sheet N1741
Dimensions (W x H x D) 90 x 100 x 32 mm



Stock No.	Product No.	DT
BPZ:QAX30.1	QAX30.1	A

Heating, ventilation and air conditioning - room temperature control

Room temperature controllers with detached operation

Accessories for RXB..

QAX31.1



Room unit with sensor, setpoint adjuster and PPS2 interface

- Acquisition of room temperature
- Setpoint adjuster for room temperature

Data sheet

N1741

Dimensions (W x H x D)

90 x 100 x 36 mm

Stock No.

Product No.

DT

BPZ:QAX31.1

QAX31.1

A

QAX32.1



Room unit with sensor, setpoint and operating mode selector and PPS2 interface

- Acquisition of room temperature
- Setpoint adjuster for room temperature
- Rocker switch for mode selection (Off / Auto)

Data sheet

N1641

Dimensions (W x H x D)

90 x 100 x 36 mm

Stock No.

Product No.

DT

BPZ:QAX32.1

QAX32.1

A

QAX33.1



Room unit with sensor, setpoint and operating mode selector, fan speed selection, and PPS2 interface

- Acquisition of room temperature
- Setpoint adjuster for room temperature
- Rocker switch for mode selection (Off/Auto) and for manual fan control with fan coil systems (up to 3 speeds)

Data sheet

N1642

Dimensions (W x H x D)

90 x 100 x 36 mm

Stock No.

Product No.

DT

BPZ:QAX33.1

QAX33.1

A

QAX34.3



Room unit with sensor, setpoint and operating mode selector, display and PPS2 interface

- Acquisition of room temperature
- Rocker switch for adjustment of room temperature setpoint
- Rocker switch for mode selection (Off/Auto) and for manual fan control with fan coil systems (up to 3 speeds)
- LCD with display of room temperature and control mode
- Together with the RXB controllers for parameter setting

Data sheet

N1640

Dimensions (W x H x D)

96 x 119 x 24 mm

Stock No.

Product No.

DT

BPZ:QAX34.3

QAX34.3

A

Heating, ventilation and air conditioning - room temperature control

Room temperature controllers with detached operation

Accessories for RXB..

Universal setpoint adjuster with PPS2 interface

QAX39.1

- Setpoint adjuster for room temperature

Data sheet N1646
Dimensions (W x H x D) 48 x 48 x 15 mm



Stock No.	Product No.	DT
BPZ:QAX39.1	QAX39.1	A

Flush-mounted room unit complete with PPS2 interface and design frame

QAX84.1/PPS2

The set consists of:

- Operator unit,
- PPS2 bus coupling unit and
- Design frame DELTA line in titanium white.

Functionality:

- Acquisition of room temperature
- Switch for adjustment of room temperature setpoint
- Switch for mode selection (Off/Auto) and for manual fan control with fan coil systems (up to 3 speeds)
- LCD with display of room temperature and control mode

The room unit is complete with Siemens bezel DELTA-i line (titanium white).

Data sheet N1649
Voltage supply PPS2
Measuring range, temperature 0...40 °C
Sensing element, temperature NTC
Mounting Flush or wall-mounted conduit box
Degree of protection IP30
Dimensions (W x H x D) 80 x 80 x 30.5 mm



Stock No.	Product No.	DT
BPZ:QAX84.1/PPS2	QAX84.1/PPS2	A

Heating, ventilation and air conditioning - room temperature control

Room sensors with KNX

i-system

UP 223/..4



Pushbutton with scene controller and room temperature sensor, i-system

- Pushbutton in 3 pairs
- Horizontal operation
- Per pushbutton selectable function, scene controller
- LED for orientation light
- Labeling field
- Temperature sensor
- Connectable bus coupling unit (BTM) or flush-mounted actuators via BTI

Dimensions (W x H x D)

55 x 55 x 11 mm

Range overview UP 223/..4

Product Title	Stock No.	Product No.	DT
Wall switch, triple, with status LED, neutral, with scene controller, with room temperature sensor, DELTA i-system, titanium white	5WG1223-2AB14	UP 223/14	A
Wall switch, triple, with status LED, neutral, with scene controller, with room temperature sensor, DELTA i-system, aluminum metallic	5WG1223-2AB34	UP 223/34	A

The bus transceiver module (BTM) (see Chapter System Products and Accessories) or flush-mounting actuator with bus transceiver module (BTM) must be ordered separately. The matching design frame must be ordered separately. See Chapter Display and Operation Units - Push-button accessories.

Pushbutton with scene controller and room temperature sensor, DELTA style

UP 287/..4

- Pushbutton in 4 pairs
- Vertical operation
- Per pushbutton selectable function, scene controller
- LED for orientation light
- Labeling field
- Temperature sensor
- Connectable bus coupling unit (BTM) or flush-mounted actuators via BTI



Dimensions (W x H x D)

68 x 68 x 14 mm



Range overview UP 287/..4

Product Title	Stock No.	Product No.	DT
Wall switch, quadruple, with status LED, neutral, DELTA style, titanium white	5WG1287-2AB14	UP 287/14	A
Wall switch, quadruple, with status LED, neutral, DELTA style, platinum metallic	5WG1287-2AB44	UP 287/44	A

The bus transceiver module (BTM) (see Chapter System Products and Accessories) or flush-mounting actuator with bus transceiver module (BTM) must be ordered separately. The matching design frame must be ordered separately. See Chapter Display and Operation Units - Push-button accessories.

Heating, ventilation and air conditioning - room temperature control

Room sensors with KNX

GAMMA arina

UP 203/14



Touch sensor with status LED, scene controller and room temperature sensor, GAMMA arina

- Pair of touch areas for vertical operation
- Per touch area selectable function
- LED for orientation light
- Labeling field
- Room temperature sensor
- Integrated bus coupling unit

The mounting frame must be ordered separately. See **Accessories for Touch sensors** Chapter 1.

Dimensions (W x H x D) 86 x 86 x 14.6 mm

Stock No.	Product No.	DT
5WG1203-2DB14	UP 203/14	A

Front modules for base modules

AQR253..

- Front module with sensors
- Matching the DELTA line and DELTA miro frame program

Data sheet	N1411
Color	Titanium white
Degree of protection	IP30
Dimensions (W x H)	55 x 55 mm



Range overview AQR253..

Measuring range, temperature [°C]	Signal output temperature	Measurement range humidity [%]	Display	Stock No.	Product No.	DT
0...50	Active			S55720-S137	AQR2530NNW	A
0...50	Active			S55720-S136	AQR2532NNW	A
0...50	Active	0...100		S55720-S141	AQR2535NNW	A
0...50	Active	0...100	CO2 indicator by LED	S55720-S219	AQR2535NNWQ	A

Matching the DELTA line and DELTA miro frame program. See chapter Display and Operation Units.

The relevant base modules must be ordered separately. See chapter Physical sensors - Without KNX connection.

Room sensors without KNX

Wall-mounted

QAA2061

Room temperature sensor DC 0...10 V



Data sheet
Analog output, signal
Operating voltage

N1749
DC 0...10 V
AC 24 V
DC 13.5...35 V

Stock No.	Product No.	DT
BPZ:QAA2061	QAA2061	A

QAA2061D

Room temperature sensor DC 0...10 V, with display



* Digital display

Data sheet
Analog output, signal
Operating voltage

N1749
DC 0...10 V
AC 24 V
DC 13.5...35 V

Stock No.	Product No.	DT
BPZ:QAA2061D	QAA2061D	A

QAD2012

Strap-on temperature sensor Pt1000



- Supplied complete with strap for pipe diameters from 15...140 mm.

Data sheet
Sensing element, temperature
Measuring range, temperature
Time constant

N1801
Pt1000
-30...130 °C
3 s

Stock No.	Product No.	DT
BPZ:QAD2012	QAD2012	A

QAA2012

Room temperature sensor Pt1000



- Passive sensors for acquiring the temperature in rooms.

Data sheet
Sensing element, temperature
Time constant
Measurement accuracy
Data sheet

N1745
Pt1000
7 min
At 0...50 °C: ±0.6 K
N1745

Stock No.	Product No.	DT
BPZ:QAA2012	QAA2012	A

Variants QAA..N = no logo

Heating, ventilation and air conditioning - room temperature control

Room sensors without KNX

Wall-mounted

Outside/room temperature sensor DC 0...10 V

QAC3161

Active sensor for acquiring the outside temperature. For use in heating, ventilation and air conditioning plants.

The QAC31.. may be used as an high-quality room sensor.

Data sheet	N1814
Analog output, signal	DC 0...10 V
Operating voltage	AC 24 V
	DC 13.5...35 V
Measurement accuracy	At -50...50 °C: ± 0.9 K



	Stock No.	Product No.	DT
	BPZ:QAC3161	QAC3161	A

Heating, ventilation and air conditioning - room temperature control

Actuators with KNX

Electromotive valve actuators

AP 562/02



Electromotive valve actuator with LED valve position indication

Electromotive, proportional (constant) valve actuator with LED valve position indication and with integrated bus coupling unit for direct connection to KNX:

- For latching to valve adapter
- Delivery with valve adapter rings suitable for Siemens (VDN../VEN.., VPD../VPE.., VD...CLC, V..I46.., V..P47..) Danfoss RA, Heimeier, MNG, Schlösser ab 3/93, Honeywell, Braukmann, Dumser (distribution board), Reich (distribution board), Oventrop, Herb, Onda
- Max. positioning force: 120 N
- Cable permanently connected to the enclosure for bus connection and two additional signaling contacts (e. g. window contacts), which can be connected as binary inputs
- For operation solely with the bus voltage, i. e. without external auxiliary power
- Maintenance-free, silent drive
- Automatic valve stroke detection, through which the actuator travel is adjusted to the valve used

Number of channels	1
Relay outputs, number	2
Triac outputs, number	0
Dimensions (W x H x D)	50 x 82 x 65 mm

Stock No.	Product No.	DT
5WG1562-7AB02	AP 562/02	A

VAV compact controller KNX

G..B181.1E/KN

- Networked compact controller with KNX communication for plants with variable or constant air volume flow
- Integrated, highly precise differential pressure sensor, damper actuator and digitally configurable air volume controller
- Nominal torque 5 or 10 Nm
- Air damper rotation angle mechanically adjustable between 0 and 90°
- Configurable as single device per room or for cascade control with pressure ratio 1:1, positive pressure, or negative pressure
- Prewired with a 0.9 m connecting cable and a 0.9 m KNX bus cable



Can be configured as damper actuator (without air volume control) with ETS.

Data sheet	N3547
Angular rotation	90 °
Positioning time	150 s
Communication	KNX S-Mode KNX LTE-Mode KNX PL-Link
Cable length	0.9 m
Degree of protection	IP54
Dimensions (W x H x D)	71 x 158 x 61 mm



Range overview G..B181.1E/KN

Torque [Nm]	Operating voltage [V]	Air damper area [m²]	Power consumption	Stock No.	Product No.	DT
5	AC 24	0.8	3 VA 2.5 W	S55499-D134	GDB181.1E/KN	C
10	AC 24	1.5	3 VA 2.5 W	S55499-D135	GLB181.1E/KN	A

Basic Documentation No.: P3547

Electromotoric rotary actuator KNX for control ball valves up to DN25

GDB111.9E/KN

- Electromotoric rotary actuator
- for KNX S-Mode or KNX PL-Link communication
 - for 2-/3-port control ball valves up to DN25
 - for 6-port control ball valves up to DN25
 - without spring-return
 - pre-wired with two 0.9 m connection cables

Operating Mode 1:

- Use of two separate setpoints 0..100% for heating and cooling

Operating Mode 2:

- Use of one setpoint 0..100% for actuator position

Data sheet	A6V10725318
Rated output	3 VA
Operating voltage	AC 24 V
Positioning signal	KNX S-Mode or KNX PL-Link
Power consumption	3 VA 2.5 W
Auxiliary switch	0
Spring return function	No
Cable length	0.9 m



Stock No.	Product No.	DT
S55499-D203	GDB111.9E/KN	A

Actuators with KNX
Damper and rotary actuators

GLB111.9E/KN



Electromotoric rotary actuator KNX for control ball valves up to DN50

- Electromotoric rotary actuator
- for KNX S-Mode or KNX PL-Link communication
 - for 2-/3-port control ball valves up to DN50
 - without spring-return
 - pre-wired with two 0.9 m connection cables

Data sheet	A6V10725318
Rated output	3 VA
Operating voltage	AC 24 V
Positioning signal	KNX S-Mode or KNX PL-Link
Power consumption	3 VA
	2.5 W
Auxiliary switch	0
Spring return function	No
Cable length	0.9 m

Stock No.	Product No.	DT
S55499-D207	GLB111.9E/KN	A

Electrothermal actuators with/ without connecting cable for radiator, small, and zone valves

STA..3



Electrothermal actuators, stem opened in a deenergized state, with or without connection cable for:

- Radiator valves VDN.., VEN.., VUN..
- MCV MiniCombiValves VPD.., VPE..
- Small valves VD1..CLC..
- Zone valves V..I46..
- Combi valves VPP46.., VPI46..
- Valves of other manufacturers

Actuators without connecting cable can be equipped with:

- Connecting cable up to 15 m, halogen-free up to 10 m
- Connecting cable with LED operation indicator
- Connecting cable with auxiliary switch or DC 0...10 V module

The given positioning time refers to the maximum stroke of 4.5 mm.

Data sheet	N4884
Stroke	4.5 mm
Degree of protection	IP54
Mounting position	Any, 360°
Power consumption	2.5 W

Range overview STA..3

Operating voltage [V]	Positioning time [s]	Positioning signal	Cable length [m]	Stock No.	Product No.	DT
AC 230	210	2-position	1	S55174-A101	STA23	B
AC 24	270	DC 0...10 V	2	S55174-A104	STA63	A
AC 24 DC 24	270	2-position PDM	1	S55174-A100	STA73	A

The given positioning time is related to the maximum stroke of 4.5 mm.

Actuators without KNX

Electrothermal valve actuators

STP..3



Electrothermal actuators with and without connecting cable for small valves

Electrothermal actuators, stem closed in a deenergized state, with or without connection cable for:

- Small valves V..P47..
- Valves of other manufacturers

Actuators without connecting cable can be equipped with:

- Connecting cable up to 15 m, halogen-free up to 10 m
- Connecting cable with LED operation indicator
- Connecting cable with auxiliary switch or DC 0...10 V module

The given positioning time refers to the maximum stroke of 4.5 mm.

Data sheet	N4884
Stroke	4.5 mm
Degree of protection	IP54
Mounting position	Any, 360°
Power consumption	2.5 W

Range overview STP..3

Operating voltage [V]	Positioning time [s]	Positioning signal	Cable length [m]	Stock No.	Product No.	DT
AC 230	210	2-position	1	S55174-A103	STP23	A
AC 24	270	DC 0...10 V	2	S55174-A105	STP63	A
AC 24 DC 24	270	2-position PDM	1	S55174-A102	STP73	A

The given positioning time is related to the maximum stroke of 4.5 mm.

Electromotoric actuators 100 N for valves with 2.5/5 mm stroke

SSA..

For radiator valves, small valves and Combi valves

Electromotoric actuators for modulating or 3-position control of heating systems, chilled ceilings and terminal units. With automatic stroke adaption, force-dependent switching off in the end position, position indication, manual control and plug-in type connecting cable. Suited for use with Siemens radiator valves VDN../VEN../VUN../VPD../VPE., Siemens small valves VD1..CLC and on radiator valves with M30 x 1.5 connection (Heimeier, Cazzaniga, Oventrop M30x1,5, Honeywell-Braukmann, MNG, Junkers, Beulco new). Further valves of other manufacture on request.
Suited for Siemens Combi valves VPP46../VPI46.. with 2.5 and 5 mm stroke.



For fitting to the valve: Cap nut M30 x 1.5

SSA61..: 1.5 mm minimal stroke required for self calibration

Data sheet	N4893
Stroke	2.5 mm 5 mm
Positioning force	100 N
Degree of protection	IP40
Medium temperature	1...110 °C
Mounting position	Upright to 90° inclined

Range overview SSA..

Operating voltage [V]	Positioning signal	Power consumption [VA]	Auxiliary switch	Cable length [m]	Stock No.	Product No.	DT
AC 230	3-position	6	0	1.5	BPZ:SSA31	SSA31	A
AC 24 DC 24	DC 0...10 V	2.5	0	1.5	BPZ:SSA61	SSA61	A
AC 24	3-position	0.8	0	1.5	BPZ:SSA81	SSA81	B

Positioning time for 2.5 mm stroke.

Auxiliary switch: Changeover contact AC 250, 1 A res., 0.5 A ind., adjustable switching point 0...100 %

RMB795B-1



Central control unit for room controllers and room thermostats

- Central control unit with integrated control and supervisory functions for individual room control with RXB room controllers and room thermostats RDG/RDF/RDU
- Central collection of heating and cooling demands from any KNX room controllers
- Control of any HVAC primary controllers in dependence on the received and calculated heating/cooling demands
- Individual time programs for room groups
- Preselected operating modes and setpoints, minimum / maximum temperature supervision and supervision of RXB room controllers and room thermostats RDG/RDF/RDU
- Trend and fault reporting functions for the input variables temperature, relative / absolute humidity, pressure / differential pressure, volumetric air flow, indoor air quality, etc.
- Heating / cooling changeover function for operation with 2-pipe systems
- Flexible configuration
- Clear-text operation with separate operator unit (plug-in type or detached)
- Integrated KNX bus communication
- No commissioning tool required

The RMB795B-1 supports the languages: English, German, French, Italian, Spanish, Portuguese, Dutch, Danish, Finnish, Norwegian, Swedish, Polish, Czech, Hungarian, Russian, Slovak, Bulgarian, Greek, Romanian, Slovenian, Serbian, Croatian, Turkish, Chinese.

Extension modules complement the central control unit and offer extra functions. They are attached to the controller via plug-in connectors. The extension modules do not operate autonomously.

The operation of the device from commissioning to enduser operation can be done via the operator unit.

Available extension modules:

- 1 universal module RMZ785
- 2 universal modules RMZ787

A total of 3 extension modules can simultaneously be used with the central control unit.

Available operator units:

- Plug-in type operator unit RMZ790
- Detached operator unit RMZ791
- Bus operator unit RMZ792

Data sheet	N3122
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	12 VA
Communication	KNX (KNX TP1)
Analog outputs, number	2
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Universal inputs, number	6
Universal input, signal	2 x LG-Ni1000 DC 0...10 V Potential-free digital status contact LG-Ni1000 Pt1000 T1 (PTC)
Relay outputs, number	4
Relay output, switching voltage	AC 19...250 V
Relay output, switching current	4 (3) A
Degree of protection	IP20
Dimensions (W x H x D)	173 x 90 x 80 mm

Stock No.	Product No.	DT
S55370-C162	RMB795B-1	A

Temperature sensor 4 x Pt1000**N 258/02**

- For four Pt1000 sensors
- For the measurement and transmission of 4 temperatures in the range -40...+150 °C
- For connection of four Pt1000 temperature sensors2), each via a 2-wire cable up to 50 m in length
- Configurable smoothing of a measured value through mean value generation
- Monitoring of a lower and upper limit value for each measured value, with configurable hysteresis for limit value signals
- Electronics powered via an integrated power supply unit for 230 V AC
- Green LED for displaying ready-to-run status
- Integrated bus coupling units
- Bus connection via bus terminal or contact system to data rail
- Modular installation devices for mounting on TH35 EN 60715 mounting rail



The accompanying physical sensors must be ordered separately. See chapter Physical sensors - sensors without KNX connection.

Dimension width (1 MW = 18 mm)

4 MW

Stock No.	Product No.	DT
5WG1258-1AB02	N 258/02	A

Accessories for N 258/02

Product Title	Data sheet	Stock No.	Product No.	DT
Strap-on temperature sensor Pt1000	N1801	BPZ:QAD2012	QAD2012	A
Room temperature sensor Pt1000	N1745	BPZ:QAA2012	QAA2012	A
Outside sensor Pt1000	N1811	BPZ:QAC2012	QAC2012	A
Cable temperature sensor silicone 1.5 m, Pt1000	N1831	BPZ:QAP2012.150	QAP2012.150	A

N 605/..



Thermal drive actuator

- Can be operated with *instabus* Room temperature controllers
- Direct operation (local operation), LED for operation/status display
- Rated voltage 230 V AC, 6 silent semiconductor switch
- Electronic protection of outputs against overload and short circuit
- 6 signal inputs (floating contacts), Determination of switching state by means of the voltage generated in the device, max. 50 m cable length, unshielded, twisted
- Funktionen Ausgänge: Switching (on/off per channel), Configurable transmission of input status objects
- Configurable behavior in the event of a bus voltage failure/recovery
- Electronics powered via an integrated power supply unit for supply voltage 230 V AC
- Integrated bus coupling units, Bus connection via bus terminal
- Modular installation device for mounting on TH35 EN 60715 mounting rail

Dimension width (1 MW = 18 mm)

6 MW

Range overview N 605..

Product Title	Stock No.	Product No.	DT
Thermal drive actuator, 6 inputs, 6 outputs	5WG1605-1AB01	N 605/01	C

Door/window contact, white**S 290/11**

- Opening alarm for the monitoring of windows and doors, comprising:
 - 1 magnet (Ø 8 x 30 mm)
 - 1 magnetically operated contact in a fully cast plastic enclosure (Ø 8 x 30 mm)
 - Switching voltage: max. 110 V DC
 - Switching current: 10...100 mA
 - Contact current carrying capacity: max. 5 W
 - Contact resistance: max. 150 mW
 - VdS-class B
 - 5 m long connection cable LiYY 4 x 0,14 mm²
- Suitable for flush and surface mounting
- 2 surface-mounting enclosure tops (43 x 12 x 12 mm)
- 2 surface-mounting enclosure bottoms
- 4 spacer plates (thickness: 2 x 4 mm or 2 x 2 mm)
- 2 flush-mounting flanges
- 4 antimagnetic countersunk self-tapping screws DIN 7982-ST2, 9 x 16-A2



Stock No.	Product No.	DT
5WG1290-7AB11	S 290/11	A

AP 254/02



Dual sensor for brightness measurement, temperature measurement, sun protection control, lighting control

- Brightness measurement, temperature measurement, sun protection control, lighting control
- For the detection and transmission of brightness and temperature
 - Temperature measuring range -25 °C...+55 °C
 - Brightness measuring range 1 Lux...100 kLux
 - Horizontal sensing angle -60°...+60°, vertical -35°...+66.5°
- For the control of switch, dimming and shutter/blind actuators, depending on the ambient luminosity and/or ambient temperature
- One sun protection channel for the automatic control of sun protection equipment, with
 - Starting and stopping of automation by means of an object or a dusk threshold
 - Up to three brightness thresholds for determining the height and position of the shutters/blinds or roller shutters
 - Optional teach-in of dusk thresholds and brightness thresholds by means of a teach-in facility
 - Blocking object for the temporary deactivation of the sun protection channel function
- Up to four universal channels for the control of switch, dimming and shutter/blind actuators, depending on ambient luminosity and/or temperature. Optionally available with:
 - Threshold switches for brightness
 - Threshold switches for temperature
 - Threshold switches with logical combination of brightness and temperature
 - Optional teach-in of brightness threshold for each universal channel by means of an associated teach-in facility
 - Deactivation option for each universal channel by means of an associated blocking object (1 bit)
 - Optional second object for transmission of a second telegram on fulfillment of threshold conditions
- Bus-powered electronics
- Integrated bus coupling units
- Bus connection via bus terminal
- Surface mounting
- Degree of protection: IP54

Brightness-dependent switching

Yes

Dimensions (W x H x D)

72 x 110 x 54 mm

Stock No.	Product No.	DT
5WG1254-3EY02	AP 254/02	A

QAC2012



Outside sensor Pt1000

- For acquiring the outside temperature and – to a lesser degree – solar radiation, the effect of wind and the temperature of the wall.

Data sheet

N1811

Measuring range, temperature

-50...70 °C

Sensing element, temperature

Pt1000

Measurement accuracy

At 0 °C: ±0.3 K

Time constant

14 min

Stock No.	Product No.	DT
BPZ:QAC2012	QAC2012	A

Connectable with temperature sensor N 258/02 (5WG1258-1AB02), see chapter Physical Sensors - with KNX connection.

Outside/room temperature sensor DC 0...10 V**QAC3161**

Active sensor for acquiring the outside temperature. For use in heating, ventilation and air conditioning plants.

The QAC31.. may be used as an high-quality room sensor.

Data sheet	N1814
Analog output, signal	DC 0...10 V
Operating voltage	AC 24 V
	DC 13.5...35 V
Measurement accuracy	At -50...50 °C: ± 0.9 K



	Stock No.	Product No.	DT
	BPZ:QAC3161	QAC3161	A

Heating, ventilation and air conditioning - room temperature control

Other products

Condensation monitors

QXA21..



Condensation monitor

For preventing condensation in buildings with chilled ceilings or in cooling plants.

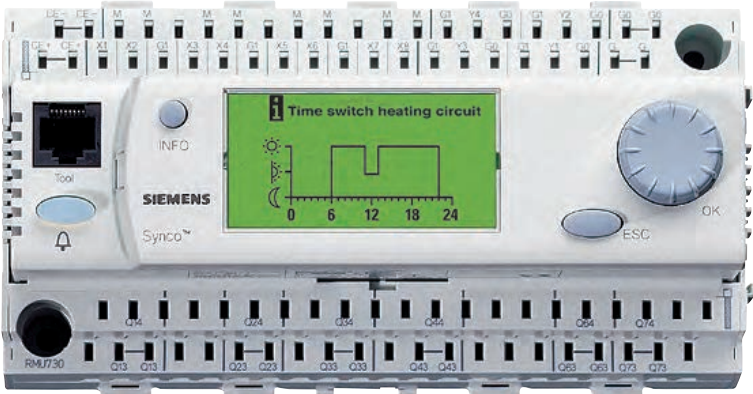
Data sheet	A6V10741072
Operating voltage	AC 24 V
	DC 24 V
Power consumption	1 VA
Digital outputs	1-pin
	Potential-free
	Changeover contact
Switching point	95 ± 4 % r.h.
Connection, electrical	Screw terminals
Digital output, switching voltage	AC/DC 1...30 V
Digital output, switching current	0.02...1 (1) A
Degree of protection	IP40
Dimensions (W x H x D)	60 x 83 x 37 mm

Range overview QXA21..

Product Title	Stock No.	Product No.	DT
Condensation monitor	S55770-T375	QXA2100	A
Condensation monitor with remote sensor head (cable length 1 m)	S55770-T376	QXA2101	A

Heating, ventilation and air-conditioning

– primary control



Overview	Product range overview Synco™	8-2
Technical specifications	Product details communicating controllers Synco™	8-3
Communicating controllers - Synco™700	Central control unit RMB795B..	8-5
	Heating controller RMH760B..	8-6
	Boiler sequence controller RMK770..	8-7
	Universal controllers RMU7..0B..	8-8
	Switching and monitoring device RMS705B..	8-9
	Extension modules and operator units for RMB, RMH, RMK, RMU and RMS	8-10
	Software, web and remote access	8-14

KNX - One system for all types of applications

Synco tool – support functions for quick commissioning

To facilitate commissioning, the Synco tool offers you a host of help functions and choices: Diagnostics including trending, for example, straightforward fault tracing thanks to access to all data points of all controllers, saving all settings on the PC, or printing commissioning reports.

Synco operating – efficient operation of plant with straightforward remote control

Thanks to the Synco web server, plant operation and monitoring can be effected from a PC or smartphone at any time and from any location. An alarm system delivers fault status or maintenance messages in due time, also via SMS or e-mail, if required. The app allows your customers operation from underway or from the sofa.

Simple concept for opening communication

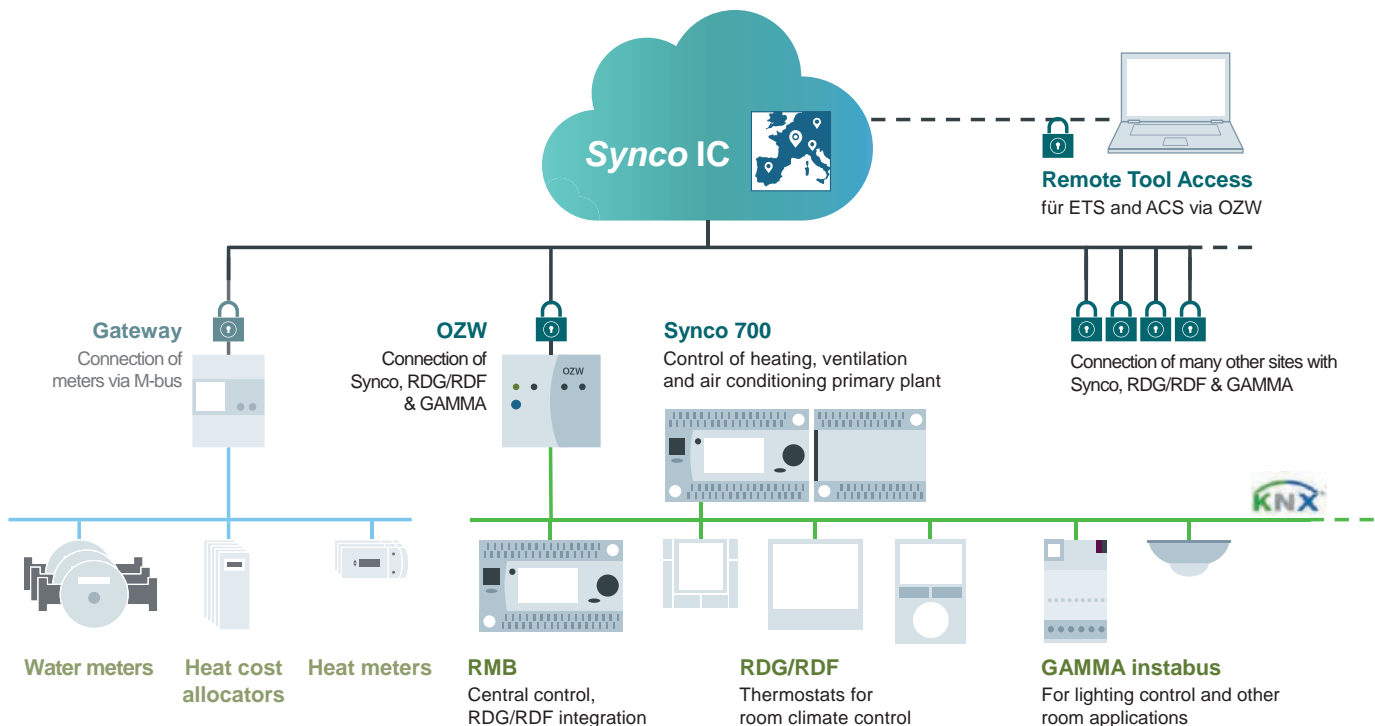
With Synco, defining and commissioning of communication is child's play: Simply inter-connect the units, activate the bus power supply on the controller and set the device address. All relevant settings can be made directly via local operation.

GAMMA Building Control - simply add more functionality with KNX

With KNX, the functionalities of the system can be significantly enlarged, for example with lighting or shading control. The GAMMA portfolio offers corresponding actuators, sensors and interfaces, for example DALI and BACnet. Commissioning of those extensions is done with ETS (Engineering Tool Software). For example, simultaneous control of the ventilation system and of lighting via the same presence detectors, is possible.

Synco IC - easy and secure remote access

Synco IC is a web-based remote access system. Just connect your web server with the internet, create your account on the www.siemens-syncoic.com and enter the key for your web server. Setting up a secure internet access to your plant is therefore child's play.





Heating, ventilation and air-conditioning – primary control

Technical specifications

Product details communicating controllers Synco™

Product details communicating controllers Synco™

Type													
	RMB795B-1	RMH760B-1	RMK770-1	RMU..			RMS705B-1	782B	783B	785	787	788	789
	Central control unit RMB795B for room controllers and room thermostats	Modular heating controller max. 3 heating circuit	Boiler sequence controller	Modular universal controller, 1 control loop	Modular universal controller, 2 control loops	Modular universal controller, 3 control loops	Switching and Monitoring Device	Heating circuit module 3UI, 3DO, 1AO	DHW module 4UI, 5DO, 1AO	Universal module, 8UI	Universal module, 4UI, 4DO	Universal module, 4UI, 2DO, 2AO	Universal module, 6UI, 2AO, 4DO
Operation	■ ¹⁾	■ ¹⁾	■ ¹⁾	■ ¹⁾	■ ¹⁾	■ ¹⁾	■ ¹⁾						
KNX communication	■	■	■	■	■	■	■						
7-day time switch and holiday/special day programm	■	■	■	■	■	■	■						
Supervision	■	■	■	■	■	■	■						
Logic functions	■	■	■	■	■	■	■						
Outputs													
Step switch		■	■	■	■	■	■						
Relay	4	5	7	2	4	6	6	3	5		4	2	4
3-position		1	3					1	1				2
DC 0...10V	2	2	2	2	3	4	4	1	1			2	2
Universal inputs													
T1	■	■	■	■	■	■	■	■	■	■	■	■	■
Pt1000	■	■	■	■	■	■	■	■	■	■	■	■	■
DC 0...10V	■	■	■	■	■	■	■	■	■	■	■	■	■
Digital	■	■	■	■	■	■	■	■	■	■	■	■	■
LG-Ni 1000	■	■	■	■	■	■	■	■	■	■	■	■	■
Number of universal inputs	6	6	8	6	8	8	8	3	4	8	4	4	6
Controlled variable													
Universal	■	■	■	■	■	■	■						
Temperatur °C	■	■	■	■	■	■	■						
Control mode													
PID		■	■	■	■	■	■						
P/PI		■	■	■	■	■	■						
Control loops													
Cascade		■	■	■	■	■							
Number		6	7	1	2	3	3						

■¹⁾ Optional operation:
 RMZ790: Plug-in operator unit
 RMZ791: Detached operator unit
 RMZ792: Bus operator unit

AO Analog output
 DO Digital output
 UI Universal inputs

Heating, ventilation and air conditioning - primary control

Communicating controllers - Synco™ 700

Central control unit RMB795B..

Central control unit for room controllers and room thermostats

RMB795B-1



- Central control unit with integrated control and supervisory functions for individual room control with RXB room controllers and room thermostats RDG/RDF/RDU
- Central collection of heating and cooling demands from any KNX room controllers
- Control of any HVAC primary controllers in dependence on the received and calculated heating/cooling demands
- Individual time programs for room groups
- Preselected operating modes and setpoints, minimum / maximum temperature supervision and supervision of RXB room controllers and room thermostats RDG/RDF/RDU
- Trend and fault reporting functions for the input variables temperature, relative / absolute humidity, pressure / differential pressure, volumetric air flow, indoor air quality, etc.
- Heating / cooling changeover function for operation with 2-pipe systems
- Flexible configuration
- Clear-text operation with separate operator unit (plug-in type or detached)
- Integrated KNX bus communication
- No commissioning tool required

The RMB795B-1 supports the languages: English, German, French, Italian, Spanish, Portuguese, Dutch, Danish, Finnish, Norwegian, Swedish, Polish, Czech, Hungarian, Russian, Slovak, Bulgarian, Greek, Romanian, Slovenian, Serbian, Croatian, Turkish, Chinese.

Extension modules complement the central control unit and offer extra functions. They are attached to the controller via plug-in connectors. The extension modules do not operate autonomously.

The operation of the device from commissioning to enduser operation can be done via the operator unit.

Available extension modules:

- 1 universal module RMZ785
- 2 universal modules RMZ787

A total of 3 extension modules can simultaneously be used with the central control unit.

Available operator units:

- Plug-in type operator unit RMZ790
- Detached operator unit RMZ791
- Bus operator unit RMZ792

Data sheet	N3122
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	12 VA
Communication	KNX (KNX TP1)
Analog outputs, number	2
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Universal inputs, number	6
Universal input, signal	2 x LG-Ni1000 DC 0...10 V Potential-free digital status contact LG-Ni1000 Pt1000 T1 (PTC)
Relay outputs, number	4
Relay output, switching voltage	AC 19...250 V
Relay output, switching current	4 (3) A
Degree of protection	IP20
Dimensions (W x H x D)	173 x 90 x 80 mm

	Stock No.	Product No.	DT
	S55370-C162	RMB795B-1	A

RMH760B-1

Heating controller



- Heating controller as primary controller or main controller (district heat) or heating circuit controller
- Boiler temperature control
- Control of max. 3 heating circuits and DHW heating (7 variants available) with optional extension modules
- Tested, predefined applications (refer to Application Catalog)
- Flexible configuration
- Clear-text operation with separate operator unit (plug-in type or detached)
- Integrated KNX bus communication
- No commissioning tool required

The RMH760B-1 supports the languages: English, German, French, Italian, Spanish, Portuguese, Dutch, Danish, Finnish, Norwegian, Swedish, Polish, Czech, Hungarian, Russian, Slovak, Bulgarian, Greek, Romanian, Slovenian, Serbian, Croatian, Turkish.

Extension modules complement the heating controller and offer extra functions. They are attached to the controller via plug-in connectors. The extension modules do not operate autonomously.

The operation of the device from commissioning to enduser operation can be done via the operator unit.

Available extension modules:

- 2 heating circuit modules RMZ782B
- 1 DHW module RMZ783B
- 1 universal module RMZ787
- 2 universal modules RMZ789

A total of 4 extension modules can simultaneously be used with the heating controller.

Available operator units:

- Plug-in type operator unit RMZ790
- Detached operator unit RMZ791
- Bus operator unit RMZ792

Data sheet	N3133
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	12 VA
Communication	KNX (KNX TP1)
Analog outputs, number	2
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Universal inputs, number	6
Universal input, signal	T1 (PTC) Pt1000 Potential-free digital status contact NTC 575 LG-Ni1000 Digital pulse contact DC 0...10 V 2 x LG-Ni1000 1000...1175 Ohm 0...1000 Ohm
Relay outputs, number	5
Relay output, switching voltage	AC 19...250 V
Relay output, switching current	4 (3) A
Degree of protection	IP20
Dimensions (W x H x D)	173 x 90 x 80 mm

Stock No.	Product No.	DT
BPZ:RMH760B-1	RMH760B-1	A

Heating, ventilation and air conditioning - primary control

Communicating controllers - Synco™ 700

Boiler sequence controller RMK770..

Boiler sequence controller

RMK770-1

Modular heating controller with integrated control and supervisory functions for:

- Up to 6 boilers, multistage or modulating burners
- Precontrol, heating circuit
- Tested, predefined applications (refer to Application Catalog)
- Flexible configuration
- Clear-text operation with separate operator unit (plug-in type or detached)
- Integrated KNX bus communication
- No commissioning tool required



The RMK770-1 supports the languages: English, German, French, Italian, Spanish, Portuguese, Dutch, Danish, Finnish, Norwegian, Swedish, Polish, Czech, Hungarian, Russian, Slovak, Bulgarian, Greek, Romanian, Slovenian, Serbian, Croatian, Turkish.

Extension modules complement the boiler sequence controller and offer extra functions. They are attached to the controller via plug-in connectors. The extension modules do not operate autonomously. The operation of the device from commissioning to enduser operation can be done via the operator unit.

Available extension modules:

- 3 universal modules RMZ785
- 3 universal modules RMZ787
- 3 universal modules RMZ788
- 3 universal modules RMZ789

A total of 3 extension modules can simultaneously be used with the boiler sequence controller.

Available operator units:

- Plug-in type operator unit RMZ790
- Detached operator unit RMZ791
- Bus operator unit RMZ792

Data sheet	N3132
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	12 VA
Communication	KNX (KNX TP1)
Analog outputs, number	2
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Digital inputs, number	2
Digital inputs	Potential-free input signal
Digital input, contact query	5 mA
	DC 15 V
Universal inputs, number	8
Universal input, signal	T1 (PTC)
	Pt1000
	Potential-free digital status contact
	LG-Ni1000
	DC 0...10 V
	2 x LG-Ni1000
	1000...1175 Ohm
	0...1000 Ohm
Relay outputs, number	7
Relay output, switching voltage	AC 19...250 V
Relay output, switching current	4 (3) A
Degree of protection	IP20
Dimensions (W x H x D)	173 x 90 x 80 mm

Stock No.	Product No.	DT
BPZ:RMK770-1	RMK770-1	A

RMU7..0B-1

Universal controller



- Universal controllers with integrated control and supervisory functions
- Suited for the controlled variables temperature, relative / absolute humidity, pressure / differential, air flow rate, indoor air quality, etc.
- Autonomous sequence controllers with P, PI or PID mode
- Tested, predefined applications (refer to Application Catalog)
- Flexible configuration
- Clear-text operation with separate operator unit (plug-in type or detached)
- Integrated KNX bus communication
- No commissioning tool required

The RMU7..0B-1 supports the languages: English, German, French, Italian, Spanish, Portuguese, Dutch, Danish, Finnish, Norwegian, Swedish, Polish, Czech, Hungarian, Russian, Slovak, Bulgarian, Greek, Romanian, Slovenian, Serbian, Croatian, Turkish, Chinese.

Extension modules complement the universal controller and offer extra functions. They are attached to the controller via plug-in connectors. The extension modules do not operate autonomously.

The operation of the device from commissioning to enduser operation can be done via the operator unit.

Available extension modules:

- 1 universal module RMZ785
- 2 universal modules RMZ787
- 2 universal modules RMZ788

A total of 4 extension modules can simultaneously be used with the universal controller.

Available operator units:

- Plug-in type operator unit RMZ790
- Detached operator unit RMZ791
- Bus operating unit RMZ792

Data sheet	N3150
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	12 VA
Communication	KNX (KNX TP1)
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Universal input, signal	LG-Ni1000
	2 x LG-Ni1000
	T1 (PTC)
	Pt1000
	0...1000 Ohm
	1000...1175 Ohm
	DC 0...10 V
	Digital pulse contact
	Potential-free digital status contact
Relay output, switching voltage	AC 19...250 V
Relay output, switching current	4 (3) A
Degree of protection	IP20
Dimensions (W x H x D)	173 x 90 x 80 mm

Range overview RMU7..0B..

Analog outputs, number	Universal inputs, number	Relay outputs, number	Control loops, number	Stock No.	Product No.	DT
2	6	2	1	BPZ:RMU710B-1	RMU710B-1	A
3	8	4	2	BPZ:RMU720B-1	RMU720B-1	A
4	8	6	3	BPZ:RMU730B-1	RMU730B-1	A

Switching and monitoring device

RMS705B-1

The RMS705B-1 complements the range of Synco700 products as a freely configurable unit for

- control and supervisory functions in heating, ventilation and refrigeration plant
- non-standard applications

and, for this reason, offers no predefined standard applications.

The RMS705B-1 is especially suited for the following functions:

- Connection of additional universal alarm inputs
- Adding free inputs for display and supervision
- Event logging (e.g. legionella function)
- Additional time programs (ON / OFF) for basic functions
- Calculation of enthalpy, enthalpy differential, absolute humidity, dewpoint and wet bulb temperature
- Logic function blocks for switching on / off depending on different conditions
- Lead / lag control of pumps, fans, motors, etc., with automatic changeover
- Step switch with linear, binary or flexible functionality

The RMS705B-1 supports the languages: English, German, French, Italian, Spanish, Portuguese, Dutch, Danish, Finnish, Norwegian, Swedish, Polish, Czech, Hungarian, Russian, Slovak, Bulgarian, Greek, Romanian, Slovenian, Serbian, Croatian, Turkish, Chinese.

Extension modules complement the switching and monitoring device and offer extra functions. They are attached to the controller via plug-in connectors. The extension modules do not operate autonomously. The operation of the device from commissioning to enduser operation can be done via the operator unit.

Available extension modules:

- 1 universal module RMZ785
- 2 universal modules RMZ787
- 2 universal modules RMZ788

A total of 4 extension modules can simultaneously be used with the switching and monitoring device.

Available operator units:

- Plug-in operator unit RMZ790
- Detached operator unit RMZ791
- Bus operating unit RMZ792

Data sheet	N3124
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	12 VA
Communication	KNX (KNX TP1)
Analog outputs, number	4
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Universal inputs, number	8
Universal input, signal	T1 (PTC) Pt1000 Potential-free digital status contact LG-Ni1000 Digital pulse contact DC 0...10 V 2 x LG-Ni1000 0...1000 Ohm
Relay outputs, number	6
Relay output, switching voltage	AC 19...250 V
Relay output, switching current	4 (3) A
Degree of protection	IP20
Dimensions (W x H x D)	173 x 90 x 80 mm



Stock No.	Product No.	DT
S55370-C100	RMS705B-1	A

RMZ790

Plug-in type operator unit



- Operator unit plugs into the Synco™ 700 controllers
- For displaying and changing plant data for service staff and enduser
- Clear-text operation
- Can be plugged in and removed during operation
- Power supply via the controller

Data sheet	N3111
Degree of protection	IP20(IP40)
Dimensions (W x H x D)	145 x 44 x 23 mm

Stock No.	Product No.	DT
BPZ:RMZ790	RMZ790	A

RMZ791

Detached operator unit with 3 m cable



- Like plug-in type operator unit, but:
- Other mounting choices (typically for control panel door or wall mounting)
 - Larger display
 - Connection via a prefabricated 3 m cable, supplied as standard

Data sheet	N3112
Degree of protection	IP20
Dimensions (W x H x D)	145 x 96 x 34 mm

Stock No.	Product No.	DT
BPZ:RMZ791	RMZ791	A

RMZ792

Bus operator unit



Communicating operator unit for operating up to 150 controllers, room units and central units from the Synco™ 700 range via KNX bus.
Favorite pages can be freely defined. Designed for fixed installation or mobile use.

Data sheet	N3113
Operating voltage	AC 24 V
Voltage supply	KNX bus
Power consumption	2.5 VA
Degree of protection	IP20
Dimensions (W x H x D)	145 x 96 x 34 mm

Stock No.	Product No.	DT
BPZ:RMZ792	RMZ792	A

Heating, ventilation and air conditioning - primary control

Communicating controllers - Synco™ 700

Extension modules and operator units for RMB, RMH, RMK, RMU and RMS

Room unit with KNX bus

QAW740

Configurable unit with display of operating mode, timer, temperatures and fault.

With 3 operating elements:

- Knob for setpoint readjustments
- Operating mode button
- Timer button

Data sheet	N1633
Voltage supply	KNX bus
Measuring range, temperature	0...45 °C
Setpoint readjustment range	±3 K
Communication	KNX (KNX TP1)
Connection cable	2-wire
Degree of protection	IP20
Dimensions (W x H x D)	96 x 96 x 47 mm



Stock No.	Product No.	DT
BPZ:QAW740	QAW740	A

Universal modules

RMZ78..

Additional inputs and outputs required by the Synco™ 700 controllers can be provided by these modules.
A description of the functions is given with the relevant controller module.

Data sheet	N3146
Voltage supply	Supply from controller module
Power consumption	3 VA
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Universal input, signal	0...1000 Ohm
	1000...1175 Ohm
	2 x LG-Ni1000
	DC 0...10 V
	Potential-free digital status contact
	LG-Ni1000
	Pt1000
	T1 (PTC)
Relay outputs	switching contact, potential-free
Relay output, switching voltage	AC 19...265 V
Relay output, switching current	4 (3) A
Degree of protection	IP20
Dimensions (W x H x D)	117 x 90 x 75 mm



8

Range overview RMZ78..

Universal inputs, number	Analog outputs, number	Relay outputs, number	Stock No.	Product No.	DT
4	2	2	BPZ:RMZ788	RMZ788	A
6	2	4	BPZ:RMZ789	RMZ789	A
8	0	0	BPZ:RMZ785	RMZ785	A
4	0	4	BPZ:RMZ787	RMZ787	A

Heating, ventilation and air conditioning - primary control
Communicating controllers - Synco™ 700
Extension modules and operator units for RMB, RMH, RMK, RMU and RMS

RMZ782B



Heating circuit module

- Weather-compensated flow temperature control via heating circuit's mixing valve
 - Control of heating circuit pump
- The available heating circuit control and supervisory functions are the same as those of the RMH760B-1

Data sheet	N3136
Voltage supply	Supply from controller module
Power consumption	3 VA
Analog outputs, number	1
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Universal inputs, number	3
Universal input, signal	LG-Ni1000 0...1000 Ohm 1000...1175 Ohm DC 0...10 V Pt1000 NTC 575 T1 (PTC)
Relay outputs, number	3
Relay outputs	Switching contact, potential-free
Relay output, switching voltage	AC 19...265 V
Relay output, switching current	4 (3) A
Degree of protection	IP20
Dimensions (W x H x D)	117 × 90 × 75 mm

Stock No.	Product No.	DT
BPZ:RMZ782B	RMZ782B	A

Heating, ventilation and air conditioning - primary control

Communicating controllers - Synco™ 700

Extension modules and operator units for RMB, RMH, RMK, RMU and RMS

DHW module

RMZ783B



- Control of the storage tank temperature
- Storage tank charging with integrated coil, with pump or mixing valve
- Storage tank charging with detached heat exchanger, with pump and mixing valve
- Storage tank charging according to a time program
- Control of the circulating pump according to a time program

Data sheet	N3136
Voltage supply	Supply from controller module
Power consumption	3 VA
Analog outputs, number	1
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 A
Universal inputs, number	4
Universal input, signal	LG-Ni1000 0...1000 Ohm 1000...1175 Ohm DC 0...10 V Pt1000 NTC 575 T1 (PTC)
Relay outputs, number	5
Relay outputs	Switching contact, potential-free
Relay output, switching voltage	AC 19...265 V
Relay output, switching current	4 (3) A
Degree of protection	IP20
Dimensions (W x H x D)	117 x 90 x 75 mm

Stock No.	Product No.	DT
BPZ:RMZ783B	RMZ783B	A

Module connector

RMZ780

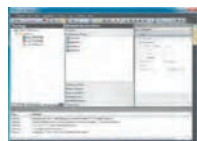


Module connector for detached mounting of extension modules within the control panel.

Data sheet	N3138
Max. cable length	10 m
Dimensions (W x H x D)	18.5 x 87.5 x 22.5 mm

Stock No.	Product No.	DT
BPZ:RMZ780	RMZ780	A

ACS790



Commissioning and plant operating software

PC software for commissioning, operating and supervision of HVAC plants.
Consists of 3 programs: ACS Tool, ACS Alarm and Remote Tool Access.

ACS Tool:

for plant commissioning, operating and service

- Popcard (standard and customized)
- Plant diagram (standard and customized)
- Plant view (standard and customized)
- Trend functions (online and offline)
- File transfer
- Parameter settings
- Commissioning protocol

ACS Alarm:

- For receiving and managing alarms

Remote Tool Access:

On web servers as of V7.0, you can establish a secure connection to the web server OZW672 or OZW772 with the ACS790 and the „Remote Tool Access“ software via Synco IC portal.

Commissioning and service via OCI7.. service interface

Compatible devices see OCI700.1 and OCI702.

Plant operation and supervision for

KNX systems

- Web server: OZW772
- Synco™ living: QAX9...
- Controllers: Synco™700, Synco RXB
- Thermostats: RDF..., RDG..., RDU341
- Sensors: QMX3.P30, QMX3.P70, AQR253.. and AQR257..

The software can be downloaded for free via <http://www.siemens.com/acs790>.

Data sheet

N5649

Stock No.	Product No.	DT
S55800-Y100	ACS790	A

USB - KNX Service interface

OCI702

The service interface consists of:

- OCI702 service interface
- USB 2.0 cable (Type A / B)
- KNX service cable for Synco™ controllers (RJ45 / RJ45)
- KNX service cable for Desigo™ TRA (RJ45 / jack plug 2.5 mm)
- KNX service cable (RJ45 / KNX bus terminal)



With the respective PC software, the interfaces allows to commission and service devices with KNX communication, e.g. from the following ranges:

- Synco™ 700 controllers and room devices
- KNX room thermostats RDF..., RDG..., RDU341
- Individual room controllers RXB..
- Synco™ living central apartment units QAX9...
- Desigo TRA
- GAMMA devices

Data sheet

A6V10438951

Stock No.	Product No.	DT
S55800-Y101	OCI702	A

Heating, ventilation and air conditioning - primary control

Communicating controllers - Synco™ 700

Software, web and remote access

OZW772..



Web server for Synco devices

Web server OZW772 allows for remote plant control and monitoring via the web.

- Operate web browser via PC/laptop and Smartphone
- Operate ACS (PC/laptop with ACS plant operating software)
- Connections: USB and Ethernet
- Display fault messages in the web browser
- Send fault messages to a maximum of 4 e-mail recipients
- Periodically send system reports to e-mail recipients
- Visualize the plants in the web browser based on standard plant diagrams and customized plant web pages
- Acquire and display consumption data
- Send consumption data file to 2 email recipients
- Function „Energy indicator“ to monitor data points for energy-related limit values, or „Green limits“
- Web services for external applications via Web API (Web Application Programming Interface)
- Encrypted with https and TLS for e-mails
- Record of trends, display and dispatch to 2 e-mail recipients
- Integration up to 237 S-Mode data points of KNX devices (not OZW772.01)
- Direct commissioning with web browser or ACS service tool
- Easy and secure remote access and plant overview with Synco IC Remote Access - a web-based service for secure remote access (www.siemens-syncoic.com)

Internet portal Synco IC offers simple and secure access to your plants

- Simple and fast set up of access via the Internet (fixed net- or mobile router)
- The portal provides additional functions:
 - Manage one or multiple plants
 - Central user management
 - Display of plant overview, state of Energy indicators and alarms
 - Send alarm notifications per e-mail
 - Secured communications through encryption (https)

Package insert:

Mounting Instructions M5701
Power pack AC 230 V / DC 24 V
Ethernet-cable
USB-cable
2 cable ties

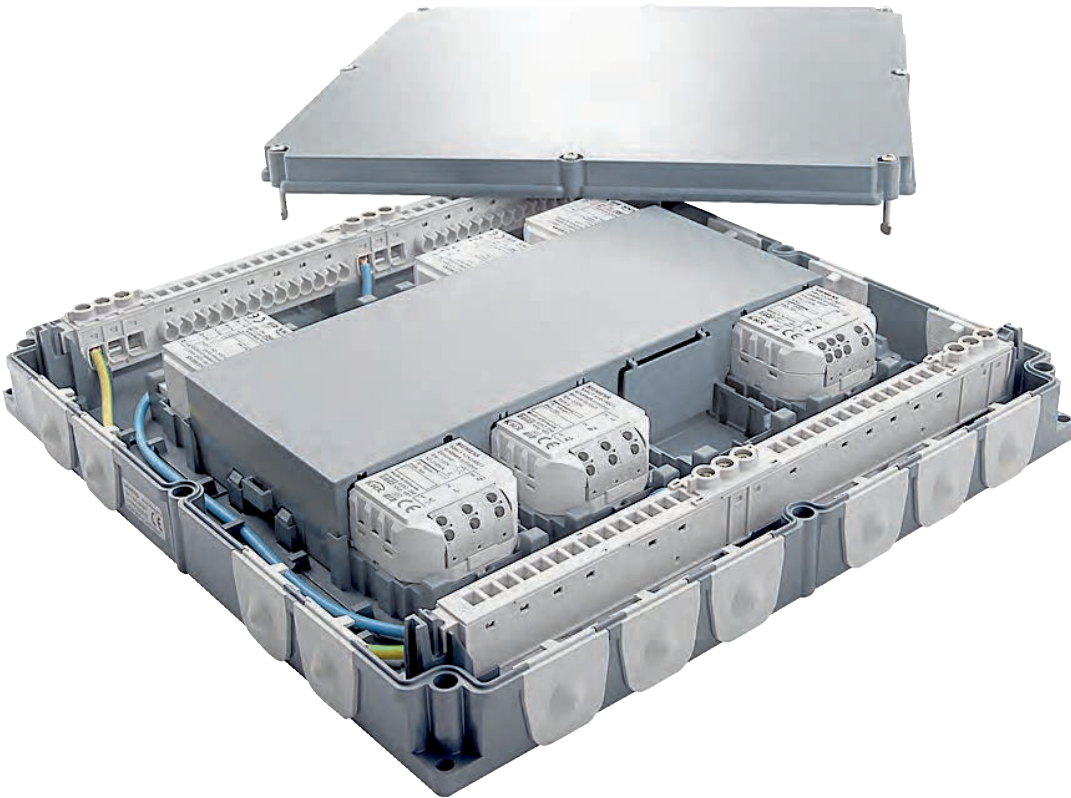
Web servers OZW772.01, OZW772.04, OZW772.16, OZW772.250 can connect 1, 4, 16, or 250 KNX devices from the product ranges Synco 700, Synco RXB, and RDG/RDF/RDU room thermostats, and the QAX Synco living central apartment units.

Data sheet	N5701
Operating voltage	Power pack: AC 230 V Web server: DC 24 V
Communication	KNX TP (twisted pair) Ethernet, RJ45 plug socket (shielded) USB V2.0
Mounting	On DIN rails With Screws
Degree of protection	IP30
Dimensions (W x H x D)	87.5 x 90 x 40 mm

Range overview OZW772..

Product Title	Stock No.	Product No.	DT
Web server for 1 Synco device	BPZ:OZW772.01	OZW772.01	A
Web server for 4 Synco devices	BPZ:OZW772.04	OZW772.04	A
Web server for 16 Synco devices	BPZ:OZW772.16	OZW772.16	A
Web server for 250 Synco devices	BPZ:OZW772.250	OZW772.250	A

Modular installation system, Room Control Box



Overview and selection guides	Modular room control	9-2
Room Control Box	Module boxes	9-7
	Modules	9-8
Junction Box (UL/NEMA) devices		9-16

Modular installation system, Room Control Box

Overview and selection guides

Modular room control

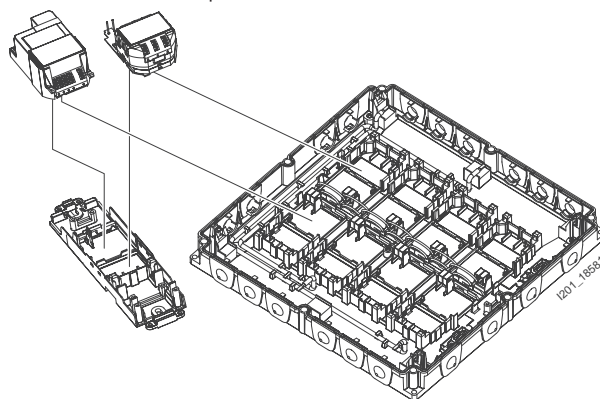
A new chapter for GAMMA instabus – decentralized and yet modular room automation with its own KNX components for flexible use in the room, based on one platform – regardless of installation location and type.

The different mounting forms allow a flexible installation in different locations in the room: in installation ducts, under a raised floor, above a suspended ceiling, and in wall boxes. The system presented here offers a great functional variety for installation in-wall, on-wall, in parapet ducts, in suspended ceilings, and under raised floors.

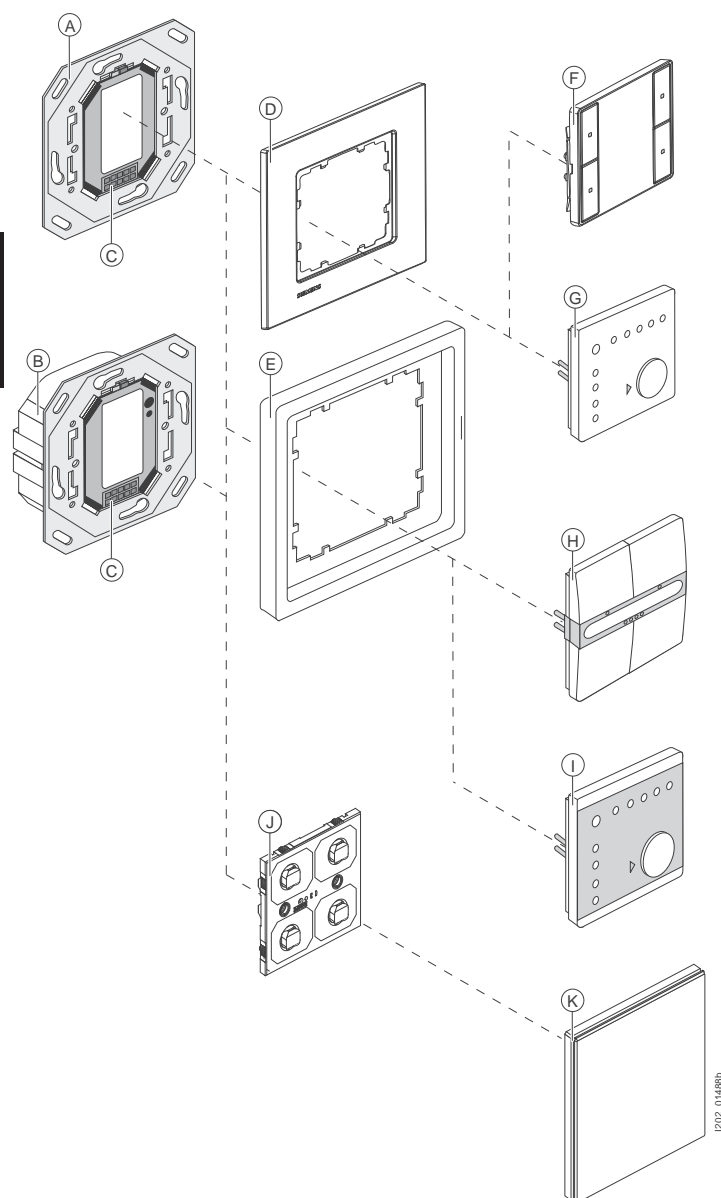
The Room Control Box AP 641, the Control Module Box AP 118, and the in-wall mounted UP devices enable distributed room control with a few devices, high flexibility, great adaptability and modularity. Both control boxes are assembled with RS or RL sensor/actuator modules in a special quick-mount design. The available modules are full KNX bus participants functioning as binary inputs and outputs, as well as blind actuators, universal dimmer, and switch actuators. The RS and RL modules have the same functionality as the flush-mounting UP actuators. Therefore identical functionality is available for different installation types or locations featuring the same configuration possibilities. As a result, the devices use a common application program regardless of mounting variant – i.e. devices for installation in the Room Control Box and automation control box as well as flush-mount with or without mounting frame.

Advantages of the modular installation systems:

- with maintenance-free terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors,
- the actuator can be placed close to where the function is executed, i.e. the user operation interface and the actuator can be installed in the same location,
- Reduced wiring and less wall boxes must be installed. The actuator is accessible under the user operation interface for maintenance.



9



- (A) Bus transceiver module (BTM)
- (B) Flush-mounting actuator with bus transceiver module (BTM)
- (C) BTI interface
- (D) DELTA frames i-system
- (E) DELTA frames style
- (F) Pushbutton i-system
- (G) Temperature controller i-system
- (H) Pushbutton style
- (I) Touch Sensor Unit
- (J) Touch Sensor Cover

Modular bus transceiver module and flush-mounting actuator

A key feature of the GAMMA instabus is its uniform bus transceiver module. The bus transceiver module (BTM) can be used as a stand-alone unit, as well as a combined version in various devices of the flush-mounting actuator range.

Implementation of the BTI interface (Bus Transceiver Interface) with the bus transceiver module (BTM) ensures maximum flexibility and an impressive range of functions. Bus coupling units (BTM) and flush-mounting actuators with integrated bus transceiver modules (BTM) enable the use of GAMMA display/operator interfaces, such as push-buttons, text displays, room temperature controllers and operation units in a wide range of designs. Thus, all GAMMA instabus operator

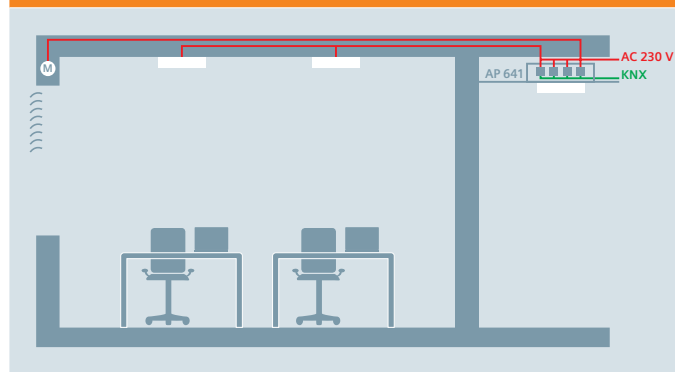
interfaces with BTI interface in the design lines i-system and DELTA style can be combined with either a bus transceiver module (BTM) or a flushmounting actuator with bus transceiver module (BTM).

This reduces planning work and facilitates installation and commissioning. The application programs of the flush-mounting actuators are identical to those of the functionally equivalent devices from the modular room control range. This means that all devices have the same application program - regardless of mounting type - whether flush-mounting, with or without mounting frame - or whether designed for installation in the Room Control Box and Control Module Box.

Modular system for function-oriented installation of room automation

Siemens is the only company marketing a complete range of products for room automation and offering the highest flexibility when it comes to selecting the type and place of installation.

Solution 1: Room Control Box (AP 641) – compact and easy to install



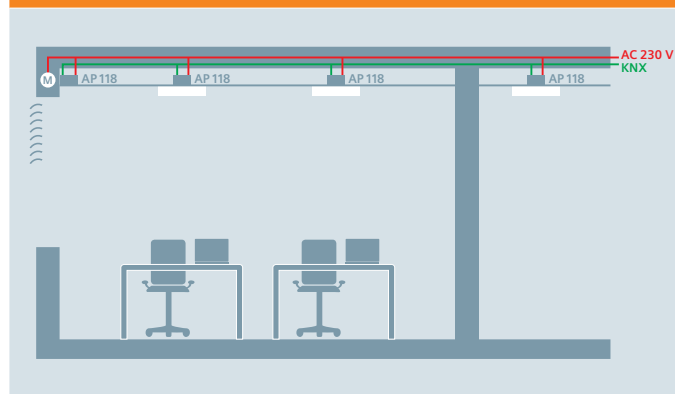
Place of installation:

- In corridors above the false ceiling
- Power and bus lines are run to the Room Control Box AP 641.
- Load lines are run to the lights and the blind motors from the Room Control Box AP 641.

Benefits:

- Space-saving installation in a false ceiling and a raised floor
- Multifunctional, can be combined in a room-oriented way
- Can be flexibly equipped with actuator and sensor modules
- Low wiring costs
- Low fire load

Solution 2: Control Module Box (AP 118) – flexible and function-oriented



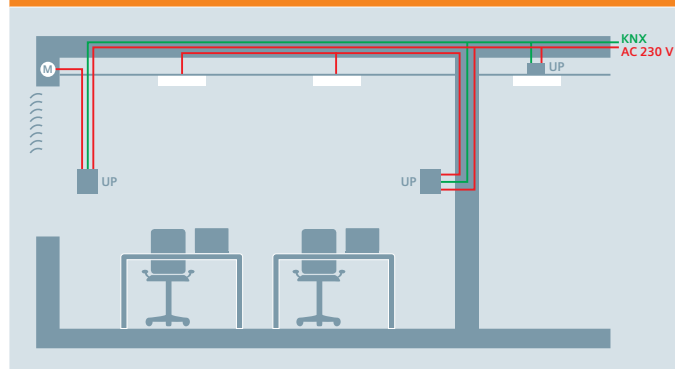
Place of installation:

- In a parapet duct and above the false ceiling (alternatively: in the lamps)
- Power and bus lines are run directly to the Control Module Boxes AP 118.
- The load lines are run to the lamps or the blind motors from the respective Control Module Box AP 118.

Benefits:

- Decentralized installation in false ceiling, cable duct and lamp housing
- Function-oriented installation
- Free choice of room-related functions
- Low fire load

Solution 3: Flush mounting (UP) – conventional and smart



Place of installation:

- In flush-mounting boxes or parapet ducts
- Power and bus lines are run to the flush-mounting boxes.
- The load lines are run to the lamps or the blind motors from the respective flush-mounting actuator.

Benefits:

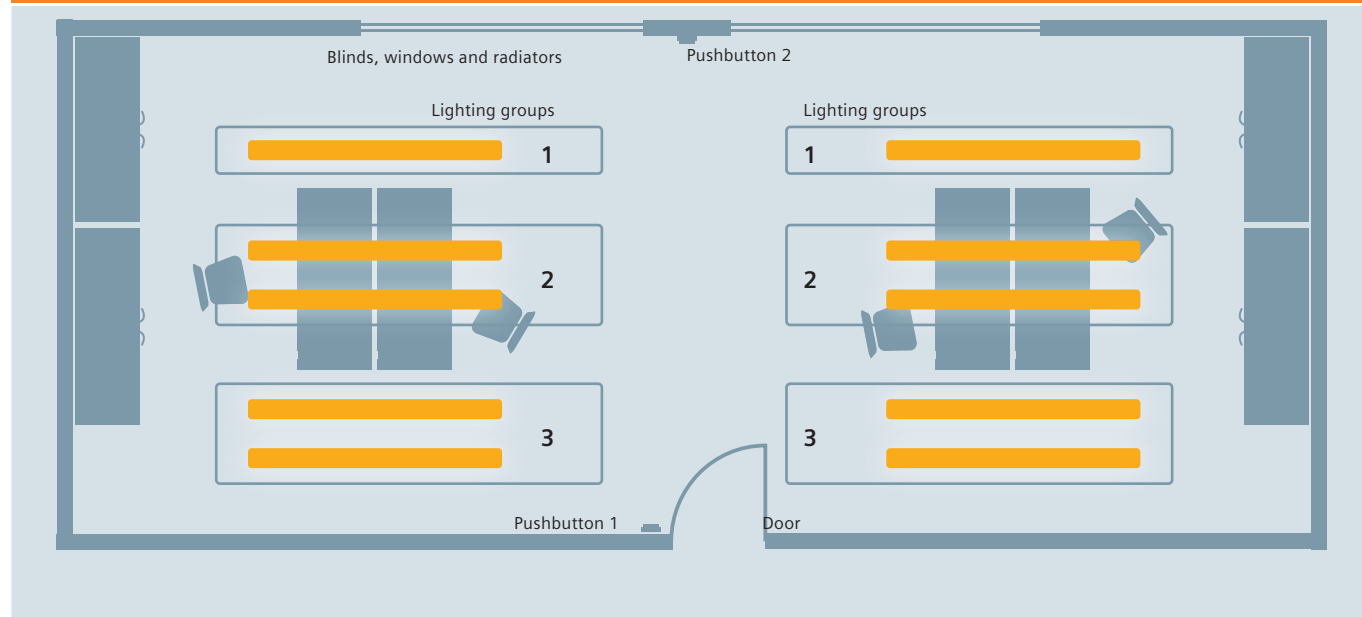
- Flexible combination of user interfaces and actuators
- Function-oriented installation
- Straightforward upgrading from conventional to KNX installations (e.g. for modernization)

Modular installation system, Room Control Box

Overview and selection guides

Modular room control

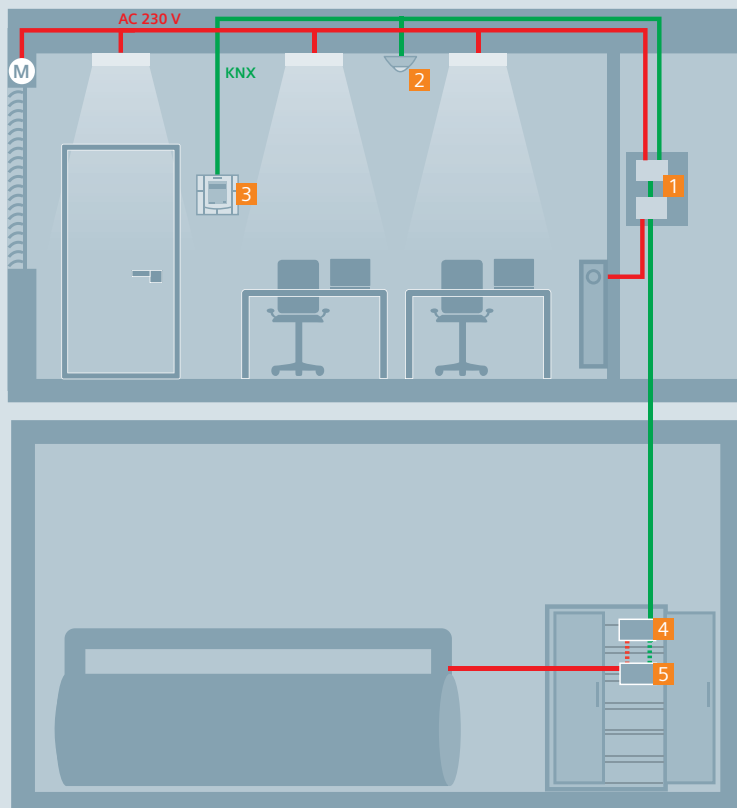
Decentrally installed Room Control Box in office



A decentrally installed Room Control Box for room functions

In an office with four workplaces, a window facade with two windows, three lighting groups, two blinds, two switched outlets, two radiators and two pushbuttons, the room function controls are to be installed simply, flexibly and decentralized. This is done by equipping a Room Control Box with two switching actuators RL 513/23 for the two groups of three lights, a shutter blind actuator RL 521/23 for the two blinds, two switching actuators RL 512 for two outlets, a thermo drive actuator RL 510K23 for the two radiators and a decentralized power supply RL 125 for additional island solutions. Seven of the eight slots in the Room Control Box are thus occupied, controlling the room with all of the required functions.

Decentralized solution for a presence- and time-dependent temperature control



Legend:

- 1** Room Control Box AP 641 with actuators and sensors for room automation
- 2** Presence detector
- 3** Room temperature controller
- 4** Central control unit RMB795B
- 5** Heating controller with 0...10 V heating demand input or KNX interface

Optimal use of the thermo drive actuator

A room temperature controller installed in a room controls the thermo drive actuator installed in a Room Control Box to minimize the energy demand in the room. The energy demand is simultaneously transmitted via KNX to the central control unit RMB795, which determines the exact quantity of energy required for heating or cooling in all rooms, compares this demand with the time-controlled demands and transmits it to the heating or cooling controllers. This ensures the highest possible energy efficiency.

Modular installation system, Room Control Box

Overview and selection guides

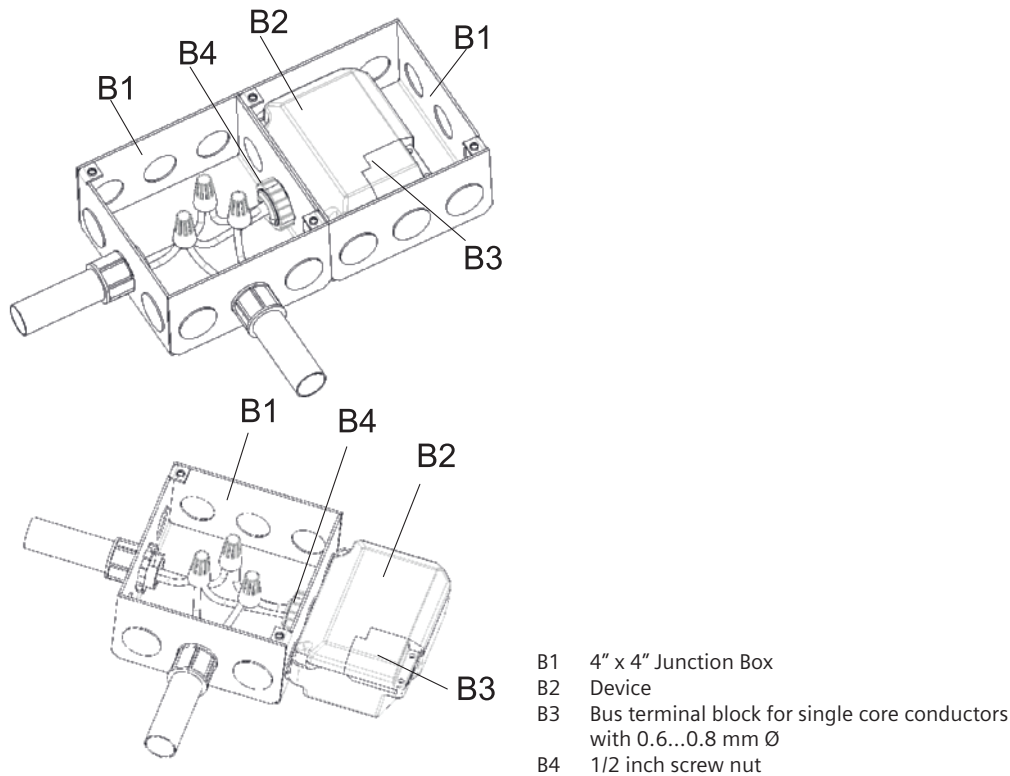
Modular room control

Modular room control for UL/NEMA markets

The modular installation system is also available for installation in standard 4" x 4" UL/NEMA junction boxes.

The full range of control devices comprises of a decentralized power supply, binary input, binary outputs (single, dual, triple), switching/dimming actuators, solar protection actuators, and universal dimmer.

These devices can either be mounted inside a standard 4" x 4" junction box or attached to a standard 4" x 4" junction box.



The decentralized power supply unit JB 125/23 provides the system power necessary for the instabus KNX.

For each bus line, at least one decentralized power supply unit JB 125/23 is needed. The decentralized power supply provides 80 mA bus current. Up to eight decentralized power supply units JB 125/23 may be attached in parallel to a single bus line providing a total bus current of 640 mA.

With the decentralized power supply independently operating control zones can be designed.

Placing the control devices close to the point of control allows for minimized wiring and thus significant installation cost reduction.

Control Module Box

AP 118/01

- 1 slot for a sensor/actuator module, type RS or RL
- Separate connection compartment and strain relief for bus cable and functional lines
- Modular installation device with screw fixing for installation in linking ducts, under raised floors or for surface mounting on the ceiling
- Enclosure: Plastic
- Degree of protection: IP20

Dimensions (W x H x D)

180 x 50 x 41,1 mm



Stock No.	Product No.	DT
5WG1118-4AB01	AP 118/01	A

Room Control Box

AP 641/01

- 8 slots for a sensor/actuator module, type RS or RL
- Internal bus cable for connection of the sensor/actuator module to the bus
- Separate connection compartment and strain relief for functional lines
- Two PE/N bars for accommodation of the PE and neutral conductor of the functional lines
- Bus connection via bus terminal
- Modular installation device with screw fixing for installation under raised floors, on the wall or ceiling or in wet rooms
- Enclosure: Plastic
- Degree of protection: IP54

Dimensions (W x H x D)

300 x 300 x 50 mm



Stock No.	Product No.	DT
5WG1641-3AB01	AP 641/01	A

RL 125/23



Decentralized power supply, 80 mA, AC 230 V

- Integrated choke
- Output voltage 29 V DC
- Output current 80 mA
- Connection of choke-protected output voltage via a plug-in extra-low voltage terminal or bus terminal
- Type of protection: IP 20 (installed)
- Rated operational voltage AC 120...230 V, 50...60 Hz, DC 220 V
- For mounting in AP 118 automation module box or AP 641 room control box

The AP 641 room control box and AP 118 automation module box must be ordered separately.
See Chapter Modular Installation System - Room control box - Module boxes.

Dimensions (W x H x D)

86,5 x 47,8 x 36,2 mm

Stock No.	Product No.	DT
5WG1125-4AB23	RL 125/23	A

RL 260/23



Binary Input, 4 x AC/DC 12...230 V

- 4 Inputs for AC/DC 12...230 V
- Max. cable length, unshielded, twisted 100 m
- Bus-powered electronics
- Integrated bus coupling unit, with bus connection via bus terminal block
- Type of protection: IP 20
- Screw-less terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5...2.5 mm²
- For mounting in AP 118 automation module box or AP 641 room control box
- The following functions can be selected per input:
 - Switching state/send binary value/Transmission of the input objects after change
 - Switch edge, short/long switch, 8-bit value edge, 8-bit value short/long
 - Dimming, shading control, single button group control
 - 1/8-bit scene control
 - 16-bit floating-point value edge and 16-bit floating-point short/long
 - Pulse counting with/without limit value monitoring (8/16/32 Bit)
- The following functions can be selected per input pair:
 - 2-pushbutton dimming with stop telegram and 2-pushbutton shading control
- Optional blocking of each input by means of the respective blocking object
- Optional cyclic transmission of input objects

The AP 641 room control box and AP 118 automation module box must be ordered separately.
See Chapter Modular Installation System - Room control box - Module boxes.

Dimensions (W x H x D)

86,5 x 47,8 x 36,2 mm

Stock No.	Product No.	DT
5WG1260-4AB23	RL 260/23	A

Binary Output, 2 x AC 230 V, 10 A (resistive load)

RS 510/23

- 2 floating relay contacts
 - Rated contact frequency: 50/60 Hz
 - Contact rated current according to DIN EN 60669-1: 10 A (resistive load)
 - Bus-powered electronics
 - Integrated bus coupling unit, bus connection via bus terminal
 - Type of protection: IP 20
 - Rated contact voltage AC 230 V
 - Screw-less terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5 ... 2.5 mm²
 - With bus connection module
 - Modular installation device for mounting in AP 118 automation module box or AP 641 room control box
- For each output:
 - Selectable operating mode (normal mode/time switch mode)
 - Selectable relay mode (NO contact/NC contact)
 - Status object as optional addition
 - Variable On and Off delay times
 - Selectable logic operation (AND/OR) of two communication objects
 - Selectable switching state at bus voltage failure and recovery
 - Optional addition of night mode object for time-limited switching On of the output (and hence the illumination) at night
 - Variable On period at night or time switch mode
 - Selectable post-triggering of the On period (On period extension) in time switch mode
 - Selectable warning signal prior to imminent switching-off by means of three-times short off and on switching (flashing) at night or in time switch mode
 - Selectable function:
 - Including additional communication object for manual override of an output
 - Forced control, including additional communication object for switching an output on or off in forced mode
 - Counting of operating hours and with threshold monitoring of the operating hours
 - Counting of load cycles and with threshold monitoring of the load cycles
 - Integrated 8-bit scene control and linking of each output into up to 8 scenes



The AP 641 room control box and AP 118 automation module box must be ordered separately.
See chapter Modular Installation System - Room control box - Module boxes.

Base function	Only Switching
Rated voltage	AC 230 V
Rated current	10 A
Number of channels	2
Switch-off warning	Yes
Dimensions (W x H x D)	50,2 x 48,8 x 35,5 mm

Stock No.	Product No.	DT
5WG1510-2AB23	RS 510/23	A

Modular installation system, Room Control Box

Room Control Box

Modules

RL 512/23



Switching Actuator, 1 x AC 230 V, 16 AX, C load

- One relay contact as switching element
 - Bus-powered electronics
 - Integrated bus coupling unit, Bus connection via bus terminal block
 - Type of protection: IP 20
 - Rated contact voltage 230 V AC
 - Rated contact frequency: 50/60 Hz
 - Rated contact current 16 AX / 20 A
 - Screw-less terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5...2.5 mm²
 - For mounting in AP 118 automation module box or AP 641 room control box
-
- Selectable operating mode (normal mode, time switch mode)
 - Selectable relay mode (NO contact / NC contact)
 - Status object as an optional addition
 - Variable On and Off delay times
 - Selectable logic operation (AND/OR) of two communication objects
 - Selectable switching state at bus voltage failure and recovery
 - Optional addition of a night mode object for time-limited switching On of the output (and hence the illumination) at night
 - Variable On period at night or time switch mode
 - Selectable post-triggering of the On period (On period extension) in time switch mode
 - Selectable warning signal prior to imminent switching-off by means of three-times short off and on switching (flashing) at night or in time switch mode
 - Selectable function:
 - Including additional communication object for manual override of an output
 - Selectable forced control, including additional communication object for switching an output on or off in forced mode
 - Selectable counting of operating hours with threshold monitoring of the operating hours
 - Selectable counting of load cycles with threshold monitoring of the load cycles
 - Integrated 8-bit scene control and linking of each output into up to 8 scenes

The AP 641 room control box and AP 118 automation module box must be ordered separately.
See chapter Modular Installation System - Room control box - Module boxes.

Base function	Only Switching
Rated voltage	AC 230 V
Rated current	16 A
Number of channels	1
Switch-off warning	Yes
Dimensions (W x H x D)	86,5 x 47,8 x 36,2 mm

	Stock No.	Product No.	DT
	5WG1512-4AB23	RL 512/23	A

Binary Output, 3 x 6 A, AC 230 V

RL 513D23



- 3 floating relay contact
 - One relay contact per output as switching element
 - Contact rated current according to DIN EN 60669-1: 6 A (resistive load)
 - Bus-powered electronics
 - Integrated bus coupling unit, bus connection via bus terminal block
 - Type of protection: IP 20
 - Rated contact operating voltage AC 230 V
 - Rated contact frequency: 50/60 Hz
 - Screw-less terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5...2.5 mm²
 - For mounting in AP 118 automation module box or AP 641 room control box
- For each output:
 - Selectable operating mode (normal mode, time switch mode)
 - Selectable relay mode (NO contact / NC contact)
 - Status object as an optional addition
 - Variable On and Off delay times
 - Selectable logic operation (AND/OR) of two communication objects
 - Selectable switching state at bus voltage failure and recovery
 - Optional addition of a night mode object for time-limited switching On of the output (and hence the illumination) at night
 - Variable On period at night or time switch mode
 - Selectable post-triggering of the On period (On period extension) in time switch mode
 - Selectable warning signal prior to imminent switching-off by means of three-times short off and on switching (flashing) at night or in time switch mode
 - Selectable function:
 - Including additional communication object for manual override of an output
 - Selectable forced control, including additional communication object for switching an output on or off in forced mode
 - Selectable counting of operating hours and with threshold monitoring of the operating hours
 - Selectable counting of load cycles and with threshold monitoring of the load cycles
 - Integrated 8-bit scene control and linking of each output into up to 8 scenes

The AP 641 room control box and AP 118 automation module box must be ordered separately.
See chapter Modular Installation System - Room control box - Module boxes.

Base function	Only Switching
Rated voltage	AC 230 V
Rated current	6 A
Number of channels	3
Switch-off warning	Yes
Dimensions (W x H x D)	86,5 x 47,8 x 36,2 mm

Stock No.	Product No.	DT
5WG1513-4DB23	RL 513D23	A

RS 520/23



Shutter Blind Actuator RS, 1 x AC 230 V, 6 A

- 1 channel
- Electrically interlocked relays to reverse the direction of rotation
- Integrated electronics for detection of the actuation of an electromechanical limit switch and with auto-calibration of the travel time from one limit switch to the other
- Bus-powered electronics
- Integrated bus coupling unit, Bus connection via bus terminal block
- Type of protection: IP 20
- For the separate control per actuator channel of a sun protection, damper, door or window drive with a motor for AC 230 V and electromechanical limit switches
- Screw-less terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5 ... 2.5 mm²
- With bus connection module
- Modular installation device for mounting in AP 118 automation module box or AP 641 room control box
- Configurable behavior in the event of a bus voltage failure/recovery
- Automatic mode for sunlight tracking control
- Manual and standard mode
- Status: Transmitting status per channel, status position of sun protection, 8-bit, status position of slats, 8-bit
- Integrated 1-bit/8-bit scene control
- 8 scenes to be integrated per channel
- Travel lock (e. g. for cleaning the outer shutter/blinds)
- Separate raising/lowering protection
- Alarm (Wind, Rain, Frost): Move to safety position, locking in this position for as long as alarm is active
- Individual configuration of actuator channels
- Adaptation of objects and functions to drive type
- Suitable for integration in a sunlight tracking control system
- End position detection
- Using position data (8-bit value) for sun protection control (up/down) and slat control (open/closed)

The AP 641 room control box and AP 118 automation module box must be ordered separately.
See chapter Modular Installation System - Room control box - Module boxes.

Rated voltage	AC 230 V
Rated current	6 A
Number of channels	1
Sun position tracking	Yes
Automatic detection of end positions	Yes
Wind alarm	Yes
Dimensions (W x H x D)	50,2 x 48,8 x 35,5 mm

Stock No.	Product No.	DT
5WG1520-2AB23	RS 520/23	A

Shutter Blind Actuator, 2 x AC 230 V, 6 A

RL 521/23



- 2 channels
 - Electrically interlocked relays to reverse the direction of rotation
 - Integrated electronics for detection of the actuation of an electromechanical limit switch and with auto-calibration of the travel time from one limit switch to the other
 - Bus-powered electronics
 - Integrated bus coupling units, bus connection via bus terminal
 - Type of protection: IP 20
 - For the separate control per actuator channel of a sun protection, damper, door or window drive with a motor for AC 230 V and electromechanical limit switches
 - Screw-less terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5 ... 2.5 mm²
 - For mounting in AP 118 automation module box or AP 641 room control box
-
- Communication objects per actuator channel for moving the sun protection to limit positions or to stop travel and for step-by-step adjustment of blind slats
 - Communication objects for moving the sun protection and adjusting blind slats directly to a new position by positioning commands as percentage values
 - Automatic opening of blind slats up to a set position after the blinds have been lowered without any stop from upper to lower limit position
 - Integrated 1-bit scene control for programming/recalling of 2 favored positions of blind and slats
 - Integrated 8-bit scene control and assignment of up to 8 scenes per channel
 - An optional object "Sunshine" for activation/deactivation of sunlight tracking of the slats for shading with greatest possible daylight component
 - Differentiation between automatic and manual mode and with automatic switch-over from automatic to manual mode of the respective actuator channel on activation of a bus pushbutton for manual control of the sun blind
 - Priority of manual mode over automatic positioning commands
 - Optional central command object for switching-over of all actuator channels to automatic mode and for moving the sun blinds to the upper or lower limit position
 - Alarm object wind/rain/frost per channel for moving the sun protection to the configured safety position in the event of an alarm and with blocking of travel to another position as long as alarm pending
 - Travel blocking object per device or per channel for blocking the sun protection in its current position (e.g. during cleaning of an outdoor Venetian blind)
 - Status objects per actuator channel for query or automatic transmission of sun blind and slat position as percentage values
 - Optional status objects for signalling that the lower or upper limit position has been reached

The AP 641 room control box and AP 118 automation module box must be ordered separately.
See chapter Modular Installation System - Room control box - Module boxes.

Rated voltage	AC 230 V
Rated current	6 A
Number of channels	2
Sun position tracking	Yes
Automatic detection of end positions	Yes
Wind alarm	Yes
Dimensions (W x H x D)	47,8 x 86,5 x 36,2 mm

Stock No.	Product No.	DT
5WG1521-4AB23	RL 521/23	C

RS 525/23



Universal Dimmer, 1 x AC 230 V, 10...250 VA, (R,L,C load)

- Output for switching and dimming resistive, inductive or capacitive loads
- Automatic adjustment to leading edge or trailing edge control, depending on the type of load
- Rated frequency 50...60 Hz
- Electronic protection of the output against overload, short circuit and temperature rise
- Bus-powered electronics
- Integrated bus coupling unit, Bus connection via bus terminal block
- Type of protection: IP 20
- Rated operational voltage AC 230 V
- Rated power at +35°C ambient temperature: 10...250 VA
- Screw-less terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5 ... 2.5 mm²
- With bus connection module
- Modular installation device for mounting in AP 118 automation module box or AP 641 room control box
- Selectable mode for each output (normal mode, one- or two-level timer mode, blinking)
- Adjustable on- and off-delay
- Separately adjustable dimming time from 0...100 % for switching on / off and dimming brighter / darker
- Two dimming value objects, each with individually adjustable dimming time from 0...100 %
- The ability to switch an output on or off by dimming brighter/darker
- Adjustable dimming value when switching on
- Immediate activation (jumping) or dimming to a new dimming value
- Selectable additional status object switching and / or status object dimming value for each output
- Additional object for each output for blocking / releasing the output
- Sending of status objects on request and / or automatically after a change
- Adjustable blocking time for sending status objects after restart and bus voltage recovery
- Adjustable dimming value for each output in the event of bus voltage failure and recovery, as well as for mains voltage recovery
- Additional night mode object for time-limited switching on the output (and hence illumination) at night
- Adjustable on period at night or with timer mode
- Selectable warning of imminent switching off the illumination by dimming to 50 % of the previous dimming value during night mode or timer mode
- Integrated 8-bit scene control and integration of each output in up to 8 scenes
- Separately adjustable dimming time for scene control
- Selectable counting of operating hours and with threshold monitoring of the operating hours
- Selectable counting of load cycles and with threshold monitoring of the load cycles

The AP 641 room control box and AP 118 automation module box must be ordered separately.
See chapter Modular Installation System - Room control box - Module boxes.

Base function	Universal Dimmer
Rated voltage	AC 230 V
Rated current	1 A
Number of channels	1
Switch-off warning	Yes
Constant light level control	Yes
Dimensions (W x H x D)	50,2 x 48,8 x 35,5 mm

Stock No.	Product No.	DT
5WG1525-2AB23	RS 525/23	A

Thermo Drive Actuator, 2 x 1.5 A, AC 24...230 V / DC 24 V

RS 510K23

- 2 switching outputs for control of electro-thermal drives for heating radiator and cooling ceiling valves
- Per output up to 4 connected electro-thermal drives with in total up to 1.5 A in the on-state and up to 58 W power consumption when switched on
- One relay contact per output as switching element
- Rated contact operating voltage AC 24...230 V or DC 24 V
- Rated contact frequency: 50/60 Hz
- Contact rated current according to DIN EN 60669-1: 1.5 A (resistive load)
- Screw-less terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5...2.5 mm²
- With bus connection module
- Bus-powered electronics
- Integrated bus coupling unit, bus connection via bus terminal
- Modular installation device for mounting in AP 118 automation module box or AP 641 room control box
- Selectable control via switching commands (on-off control) or via control commands in percent (continuous control)
- Conversion of control commands in percent into pulse width modulated (PWM) switching commands
- Additional functions for avoiding calcification of a valve and forced position as well as a status object per output
- Status object as an optional addition for each output
- Selectable switching state for each output on bus voltage failure and recovery



The AP 641 room control box and AP 118 automation module box must be ordered separately.
See chapter Modular Installation System - Room control box - Module boxes.

Rated voltage	AC 24 V
Rated current	1.5 A
Number of channels	2
Relay outputs, number	2
Triac outputs, number	0
Dimensions (W x H x D)	50,2 x 48,8 x 35,5 mm

	Stock No.	Product No.	DT
	5WG1510-2KB23	RS 510K23	A

Modular installation system, Room Control Box Junction Box (UL/NEMA) devices

JB 125C23



Decentralized Power Supply, 80 mA, AC 120 V

- Integrated choke
- Output voltage 29 V DC
- Output current 80 mA
- Connection of choke-protected output voltage via a plug-in extra-low voltage terminal or bus terminal
- Type of protection: IP 20 (installed)
- Rated operational voltage AC 120 V, 50...60 Hz
- Built-in device with 1/2 inch thread connection for mounting to or in a UL/NEMA Junction Box with feedthrough of the function wires through the 1/2 inch threaded connector

Dimensions (W x H x D)

70 x 90 x 44,6 mm

Stock No.	Product No.	DT
5WG1125-4CB23	JB 125C23	A

JB 260C23



Binary Input 4 x AC/DC 12...230 V

- 4 Inputs for AC/DC 12...230 V
- Max. cable length, unshielded, twisted 100 m
- Bus-powered electronics
- Integrated bus coupling unit, with bus connection via bus terminal block
- Type of protection: IP 20
- As built-in device with 1/2 inch thread connection for mounting to or in a UL/NEMA Junction Box with feedthrough of the function wires through the 1/2 inch threaded connector

Dimensions (W x H x D)

70 x 90 x 44,6 mm

Stock No.	Product No.	DT
5WG1260-4CB23	JB 260C23	A

Binary Output, 2 x AC 120...277 V, 10 A (resistive load)

JB 510C23

- 2 floating relay contacts
- Rated contact frequency: 50/60 Hz
- Contact rated current according to DIN EN 60669-1: 10 A (resistive load)
- Bus-powered electronics
- Integrated bus coupling unit, bus connection via bus terminal
- Type of protection: IP 20
- Rated contact operating voltage AC 120...277 V
- As built-in device with 1/2 inch thread connection for mounting to or in a UL/NEMA Junction Box with feedthrough of the function wires through the 1/2 inch threaded connector
- For each output:
 - Selectable operating mode (normal mode/time switch mode)
 - Selectable relay mode (NO contact/NC contact)
 - Status object as optional addition
 - Variable On and Off delay times
 - Selectable logic operation (AND/OR) of two communication objects
 - Selectable switching state at bus voltage failure and recovery
 - Optional addition of night mode object for time-limited switching On of the output (and hence the illumination) at night
 - Variable On period at night or time switch mode
 - Selectable post-triggering of the On period (On period extension) in time switch mode
 - Selectable warning signal prior to imminent switching-off by means of three-times short off and on switching (flashing) at night or in time switch mode
 - Selectable function:
 - Including additional communication object for manual override of an output
 - Forced control, including additional communication object for switching an output on or off in forced mode
 - Counting of operating hours and with threshold monitoring of the operating hours
 - Counting of load cycles and with threshold monitoring of the load cycles
- Integrated 8-bit scene control and linking of each output into up to 8 scenes



Dimensions (W x H x D)

70 x 90 x 44,6 mm

9

	Stock No.	Product No.	DT
	5WG1510-4CB23	JB 510C23	A

Modular installation system, Room Control Box Junction Box (UL/NEMA) devices

JB 512C23



Switching Actuator, 1 x AC 120...277 V, 20 A or 1 x AC 347 V, 15 AX, C load

- One relay contact as switching element
- Bus-powered electronics
- Integrated bus coupling unit, Bus connection via bus terminal block
- Type of protection: IP 20
- Rated contact operating voltage AC 120...277 V, AC 347 V
- Rated contact frequency: 50/60 Hz
- Fluorescent lamp load acc. to DIN EN 60669-1: 20 AX (200 µF) at AC 120/277 V, 15 AX (200 µF) at AC 347 V
- As built-in device with 1/2 inch thread connection for mounting to or in a UL/NEMA Junction Box with feedthrough of the function wires through the 1/2 inch threaded connector
- Selectable operating mode (normal mode, time switch mode)
- Selectable relay mode (NO contact / NC contact)
- Status object as an optional addition
- Variable On and Off delay times
- Selectable logic operation (AND/OR) of two communication objects
- Selectable switching state at bus voltage failure and recovery
- Optional addition of a night mode object for time-limited switching On of the output (and hence the illumination) at night
- Variable On period at night or time switch mode
- Selectable post-triggering of the On period (On period extension) in time switch mode
- Selectable warning signal prior to imminent switching-off by means of three-times short off and on switching (flashing) at night or in time switch mode
- Selectable function:
 - Including additional communication object for manual override of an output
 - Selectable forced control, including additional communication object for switching an output on or off in forced mode
 - Selectable counting of operating hours with threshold monitoring of the operating hours
 - Selectable counting of load cycles with threshold monitoring of the load cycles
- Integrated 8-bit scene control and linking of each output into up to 8 scenes

Dimensions (W x H x D)

70 x 90 x 44,6 mm

Stock No.	Product No.	DT
5WG1512-4CB23	JB 512C23	A

Binary Output, 3 x 10 A, AC 120...277 V

JB 513C23

- 3 floating relay contact
- One relay contact per output as switching element
- Contact rated current according to DIN EN 60669-1: 6 A (resistive load)
- Bus-powered electronics
- Integrated bus coupling unit, bus connection via bus terminal block
- Type of protection: IP 20
- One relay contact per output as switching element
- Rated contact operating voltage AC 120...277 V
- Rated contact frequency: 50/60 Hz
- As built-in device with 1/2 inch thread connection for mounting to or in a UL/NEMA Junction Box with feedthrough of the function wires through the 1/2 inch threaded connector



- For each output:
 - Selectable operating mode (normal mode, time switch mode)
 - Selectable relay mode (NO contact / NC contact)
 - Status object as an optional addition
 - Variable On and Off delay times
 - Selectable logic operation (AND/OR) of two communication objects
 - Selectable switching state at bus voltage failure and recovery
 - Optional addition of a night mode object for time-limited switching On of the output (and hence the illumination) at night
 - Variable On period at night or time switch mode
 - Selectable post-triggering of the On period (On period extension) in time switch mode
 - Selectable warning signal prior to imminent switching-off by means of three-times short off and on switching (flashing) at night or in time switch mode
- Selectable function:
 - Including additional communication object for manual override of an output
 - Selectable forced control, including additional communication object for switching an output on or off in forced mode
 - Selectable counting of operating hours and with threshold monitoring of the operating hours
 - Selectable counting of load cycles and with threshold monitoring of the load cycles
- Integrated 8-bit scene control and linking of each output into up to 8 scenes

Dimensions (W x H x D)

70 x 90 x 44,6 mm

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Stock No.	Product No.	DT
5WG1513-4CB23	JB 513C23	A

Modular installation system, Room Control Box

Junction Box (UL/NEMA) devices

JB 526C23



Switch-/Dimm actuator, 2 x AC 277 V, 20 A, 1...10 V

- Protruding wires stranded AWG 12
 - A phase connection for an output that is equipped with a relay contact per output as a switching element
 - Contact rated operational voltage 120 V AC, 230 V AC, 277 V AC, 347 V AC
 - Contact rated operational voltage 24 V AC / DC
 - Contact rated current according to DIN EN 60669-1: 16 A / 20 A (resistive load)
 - Fluorescent lamp load according to DIN EN 60669-1: 16 AX / 20 AX (200 µF) at 230 V AC
 - Bus-powered electronics
 - Integrated bus coupling unit
 - Bus connection via bus terminal
 - Red LED for display of the activation of the addressing mode as well as the operational readiness
 - Housing: plastics
 - For installation in 4" x 4" Junction box (UL/NEMA)
 - Degree of protection IP 20
 - For switching and dimming of fluorescent lamps with dimmable electronic ballasts
 - Independent control voltage DC 0/1- 10 V per output
- Per output
- command objects for switching on/off, dimming brighter/darker and setting dimming value
 - adjustable ON- and OFF-delay
 - switching status object and/or dimming value status object as an optional addition
 - adjustable sending of status objects on demand, cyclically and/or automatically after modification
 - adjustable ON period during night and/or time switch operation
 - selectable counting of operating hours and threshold monitoring of the operating hours
 - aelectable counting of load cycles and threshold monitoring of the load cycles
 - selectable function blocking of the output
 - aelectable mode (normal mode, night mode, one- or two-level timer mode, flashing)
 - separately adjustable dimming time from minimum to 100% for switching on/off, brighter/darker dimming and dimming value setting
 - selectable sending of status objects on request, cyclically and / or automatically after a change or bus voltage recovery
 - selectable warning of impending OFF by dimming to 50% of the previous dimming value during night mode or timer mode
 - separately adjustable dimming time for scene control
 - adjustable dimming curve correction
 - construction site function for switching the construction site lighting on and off even if the bus devices have not yet been commissioned with ETS
 - Integrated 8-bit scene control and integration of each output in up to 8 scenes
 - Optional disabling of the ripple control compensation in an electrical grid with frequency fluctuations

Dimensions (W x H x D)

70 x 90 x 44,6 mm

Stock No.	Product No.	DT
5WG1526-4CB23	JB 526C23	C

Switch-/Dimming actuator, 1 x AC 277 V, 20 A, 1...10 V

JB 527C23

- Protruding wires stranded AWG 12
 - A phase connection for an output that is equipped with a relay contact per output as a switching element
 - Contact rated operational voltage 120 V AC, 230 V AC, 277 V AC, 347 V AC
 - Contact rated operational voltage 24 V AC / DC
 - Contact rated current according to DIN EN 60669-1: 16 A / 20 A (resistive load)
 - Fluorescent lamp load according to DIN EN 60669-1: 16 AX / 20 AX (200 µF) at 230 V AC
 - Bus-powered electronics
 - Integrated bus coupling unit
 - Bus connection via bus terminal
 - Red LED for display of the activation of the addressing mode as well as the operational readiness
 - Housing: plastics
 - For installation in 4" x 4" Junction box (UL/NEMA)
 - Degree of protection IP 20
- For switching and dimming of fluorescent lamps with dimmable electronic ballasts
 - Independent control voltage DC 0/1- 10 V per output
- Per output
- command objects for switching on/off, dimming brighter/darker and setting dimming value
 - adjustable ON- and OFF-delay
 - switching status object and/or dimming value status object as an optional addition
 - adjustable sending of status objects on demand, cyclically and/or automatically after modification
 - adjustable ON period during night and/or time switch operation
 - selectable counting of operating hours and threshold monitoring of the operating hours
 - selectable counting of load cycles and threshold monitoring of the load cycles
 - selectable function blocking of the output
 - selectable mode (normal mode, night mode, one- or two-level timer mode, flashing)
 - separately adjustable dimming time from minimum to 100% for switching on/off, brighter/darker dimming and dimming value setting
 - selectable sending of status objects on request, cyclically and / or automatically after a change or bus voltage recovery
 - selectable warning of impending OFF by dimming to 50% of the previous dimming value during night mode or timer mode
 - separately adjustable dimming time for scene control
 - adjustable dimming curve correction
 - construction site function for switching the construction site lighting on and off even if the bus devices have not yet been commissioned with ETS
 - integrated 8-bit scene control and integration of each output in up to 8 scenes
 - optional disabling of the ripple control compensation in an electrical grid with frequency fluctuations



Dimensions (W x H x D)

70 x 90 x 44,6 mm

Stock No.	Product No.	DT
5WG1527-4CB23	JB 527C23	C

Modular installation system, Room Control Box Junction Box (UL/NEMA) devices

JB 520C23



Shutter Blind Actuator, 1 x AC 120 V, 6 A

- 1 channel
- Electrically interlocked relays to reverse the direction of rotation
- Integrated electronics for detection of the actuation of an electromechanical limit switch and with auto-calibration of the travel time from one limit switch to the other
- Bus-powered electronics
- Integrated bus coupling unit, Bus connection via bus terminal block
- Type of protection: IP 20
- For control of sun protection, door or window drive with a motor for AC 120 V and electromechanical or electronic limit switches per actuator channel
- Relay contacts rated for nominal voltage AC 120 V, 6 A (resistive load)
- As built-in device with 1/2 inch thread connection for mounting to or in a UL/NEMA Junction Box with feedthrough of the function wires through the 1/2 inch threaded connector
- Configurable behavior in the event of a bus voltage failure/recovery
- Automatic mode for sunlight tracking control
- Manual and standard mode
- Status: Transmitting status per channel, status position of sun protection, 8-bit, status position of slats, 8-bit
- Integrated 1-bit/8-bit scene control
- 8 scenes to be integrated per channel
- Travel lock (e. g. for cleaning the outer shutter/blinds)
- Separate raising/lowering protection
- Alarm (Wind, Rain, Frost): Move to safety position, locking in this position for as long as alarm is active
- Individual configuration of actuator channels
- Adaptation of objects and functions to drive type
- Suitable for integration in a sunlight tracking control system
- End position detection
- Using position data (8-bit value) for sun protection control (up/down) and slat control (open/closed)

Dimensions (W x H x D)

70 x 90 x 44,6 mm

9

Stock No.	Product No.	DT
5WG1520-4CB23	JB 520C23	A

Shutter Blind Actuator, 2 x AC 120 V, 6 A

JB 521C23

- 2 channels
- Electrically interlocked relays to reverse the direction of rotation
- Integrated electronics for detection of the actuation of an electromechanical limit switch and with auto-calibration of the travel time from one limit switch to the other
- Bus-powered electronics
- Integrated bus coupling units, bus connection via bus terminal
- Type of protection: IP 20
- For separate control of a sun protection, door or window drive with a motor for AC 120V and electro-mechanical or electronic limit switches per actuator channel
- Relay contacts rated for AC 120 V, 6 A (resistive load)
- As built-in device with 1/2 inch thread connection for mounting to or in a UL/NEMA Junction Box with feedthrough of the function wires through the 1/2 inch threaded connector



- Communication objects per actuator channel for moving the sun protection to limit positions or to stop travel and for step-by-step adjustment of blind slats
- Communication objects for moving the sun protection and adjusting blind slats directly to a new position by positioning commands as percentage values
- Automatic opening of blind slats up to a set position after the blinds have been lowered without any stop from upper to lower limit position
- Integrated 1-bit scene control for programming/recalling of 2 favored positions of blind and slats
- Integrated 8-bit scene control and assignment of up to 8 scenes per channel
- An optional object "Sunshine" for activation/deactivation of sunlight tracking of the slats for shading with greatest possible daylight component
- Differentiation between automatic and manual mode and with automatic switch-over from automatic to manual mode of the respective actuator channel on activation of a bus pushbutton for manual control of the sun blind
- Priority of manual mode over automatic positioning commands
- Optional central command object for switching-over of all actuator channels to automatic mode and for moving the sun blinds to the upper or lower limit position
- Alarm object wind/rain/frost per channel for moving the sun protection to the configured safety position in the event of an alarm and with blocking of travel to another position as long as alarm pending
- Travel blocking object per device or per channel for blocking the sun protection in its current position (e.g. during cleaning of an outdoor Venetian blind)
- Status objects per actuator channel for query or automatic transmission of sun blind and slat position as percentage values
- Optional status objects for signalling that the lower or upper limit position has been reached

Dimensions (W x H x D)

70 x 90 x 44,6 mm

Stock No.	Product No.	DT
5WG1521-4CB23	JB 521C23	A

Modular installation system, Room Control Box Junction Box (UL/NEMA) devices

JB 525C23



Universal Dimmer, 1 x AC 120 V, 10...125 VA (R,L,C load)

- Output for switching and dimming resistive, inductive or capacitive loads
- Automatic adjustment to leading edge or trailing edge control, depending on the type of load
- Rated frequency 50...60 Hz
- Electronic protection of the output against overload, short circuit and temperature rise
- Bus-powered electronics
- Integrated bus coupling unit, Bus connection via bus terminal block
- Type of protection: IP 20
- Rated operational voltage 120 V AC
- Rated power at +35°C ambient temperature: 10...125 VA
- Selectable mode for each output (normal mode, one- or two-level timer mode, blinking)
- As built-in device with 1/2 inch thread connection for mounting to or in a UL/NEMA Junction Box with feedthrough of the function wires through the 1/2 inch threaded connector
- Selectable mode for each output (normal mode, one- or two-level timer mode, blinking)
- Adjustable on- and off-delay
- Separately adjustable dimming time from 0...100 % for switching on / off and dimming brighter / darker
- Two dimming value objects, each with individually adjustable dimming time from 0...100 %
- The ability to switch an output on or off by dimming brighter/darker
- Adjustable dimming value when switching on
- Immediate activation (jumping) or dimming to a new dimming value
- Selectable additional status object switching and / or status object dimming value for each output
- Additional object for each output for blocking / releasing the output
- Sending of status objects on request and / or automatically after a change
- Adjustable blocking time for sending status objects after restart and bus voltage recovery
- Adjustable dimming value for each output in the event of bus voltage failure and recovery, as well as for mains voltage recovery
- Additional night mode object for time-limited switching on the output (and hence illumination) at night
- Adjustable on period at night or with timer mode
- Selectable warning of imminent switching off the illumination by dimming to 50 % of the previous dimming value during night mode or timer mode
- Integrated 8-bit scene control and integration of each output in up to 8 scenes
- Separately adjustable dimming time for scene control
- Selectable counting of operating hours and with threshold monitoring of the operating hours
- Selectable counting of load cycles and with threshold monitoring of the load cycles

Dimensions (W x H x D)

70 x 90 x 44,6 mm

Stock No.	Product No.	DT
5WG1525-4CB23	JB 525C23	A

Gateways, interface converters



Overview and selection guides	Gateways in the KNX network	10-2
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Gateways, interface converters

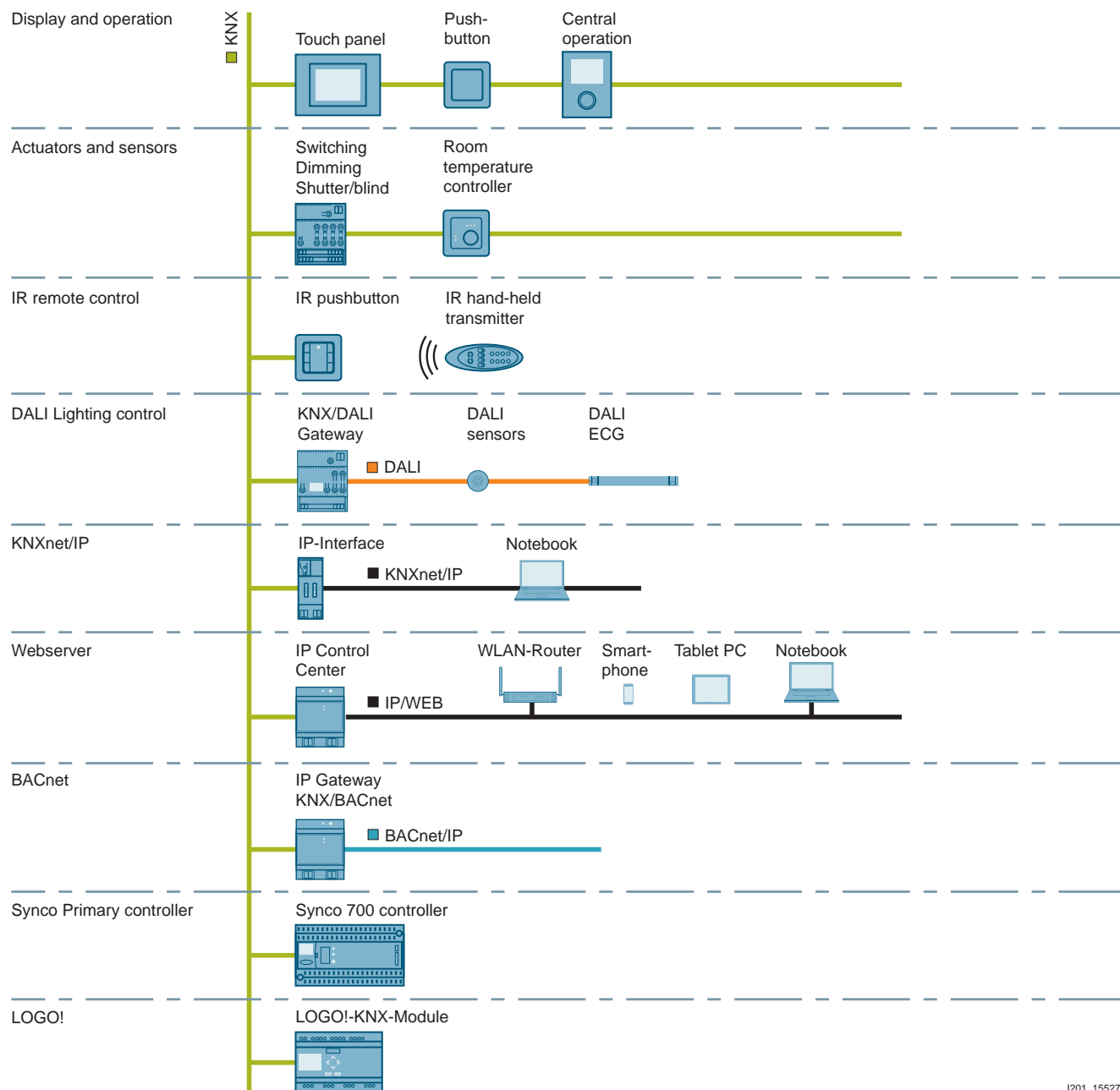
Overview and selection guides

Gateways in the KNX network

The KNX network

GAMMA instabus offers interfaces to many other technologies, such as Ethernet (LAN) and lighting controls with DALI and BACnet network, making it easy to exchange information and data via the KNX network.

Interfaces to KNX

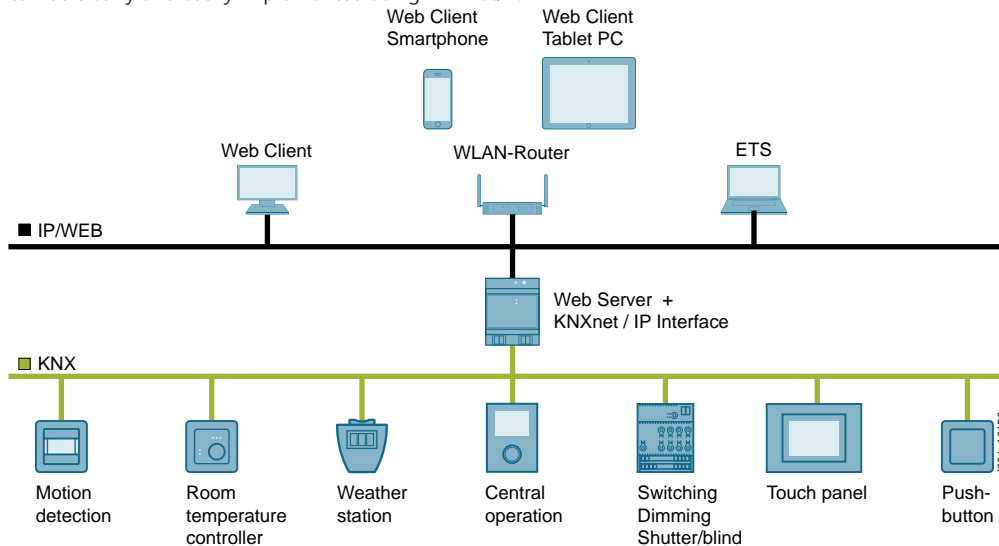


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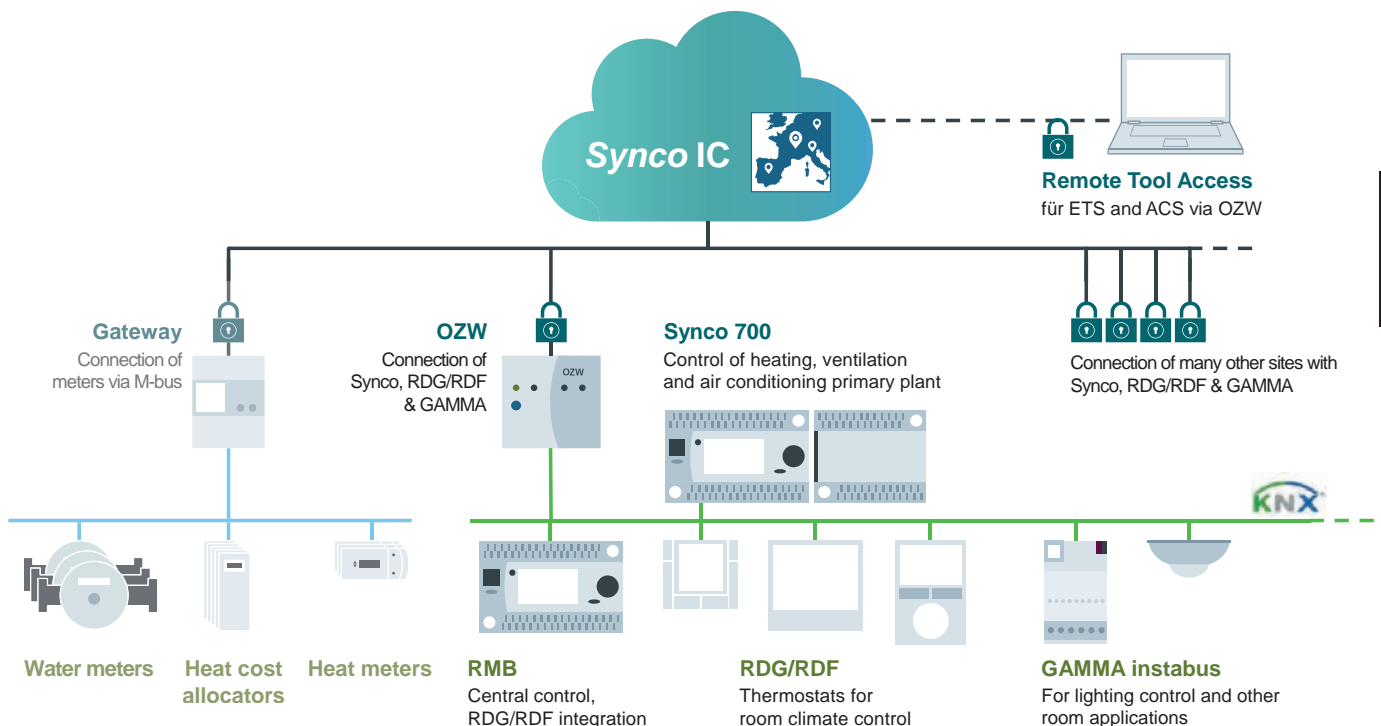
KNX/Ethernet

Faster downloads save time

With the KNXnet/IP standard, KNX telegrams can be transmitted via Ethernet (LAN). This enables applications and solutions. Existing network infrastructures and technologies are used to transmit KNX data over greater distances. Links between buildings and/or building levels can be clearly and easily implemented using KNXnet/IP.








Synco IC



Gateways, interface converters

Technical specification

KNX/Ethernet

KNX/Ethernet					
Type					
Enclosure data					
Design	N	N	N	N	REG
Modular installation devices for mounting on TH35 EN 60715 mounting rail	■	■	■	■	■
Width (1 MW = 18 mm)	2 MW	2 MW	4 MW	4 MW	88x90x40
Display/control elements					
LEDs for indicating that the device is ready-to-run, KNX communication, IP communication	■	■	■	■	■
LCD					
Power supply					
Electronics powered via an external nominal AC/DC power supply unit for 24 V DC	AC/DC 24 V	AC/DC 24 V	DC 24 V	DC 24 V	AC 230V
Power consumption at 24 V DC [mA]	57	57	60	50	
Power supply for the electronics via "Power over Ethernet" according to IEEE 802.3af	■ (0.8 W)	■ (0.8 W)			
Bus connection					
Integrated bus coupling units	■	■	■	■	■
Bus connection via bus terminal	■	■	■	■	■
Main connection					
Ethernet connection via RJ45 socket	■	■	■	■	■
Plug-in terminal block for the connection of an external power supply unit	■	■	■	■	
Gateway					
Supports KNXnet/IP	■	■	■	■	■
Line coupler function (Routing)		■			
Interface functions (Tunneling)	4	4	1	1	1
Interface functions (object server)	1	1	1	1	
Weekly scheduling program				■	
Astro function				■	
Yearly time switching functions				■	
Event entries				■	
Logic gates				■	
Web servers			■	■	■

KNX/DALI





				
Type	N 141/21	N 141/03	N 141/31	N 525E
Name	Twin plus	plus	Twin	
Enclosure data				
Design	N	N	N	N
Modular installation devices for mounting on TH35 EN 60715 mounting rail	■	■	■	■
Dimensions				
Width [mm] (1 MW = 18 mm)	4MW	4 MW	4 MW	4 MW
Display/control elements				
Status indication per output	LED + 7 Segment	LED + 7 Segment	LED + 7 Segment	LED
Power supply				
Electronics powered via an integrated power supply unit	■	■	■	■
DALI outputs powered via an integrated power supply unit	■	■	■	■
Power loss				
Max. power loss [W]	11	6	11	6
Bus connection				
Integrated bus coupling units	■	■	■	■
Bus connection via contact system to data rail				■
Bus connection via bus terminal	■	■	■	■
Outputs				
Control outputs				
DALI outputs (lines)	2	1	2	8
DALI output acc. to IEC 60929 for DALI ECG (16 V, floating, short-circuit resistant)	■	■	■	■
Max. ECG per output	64	64	64	8
Selected DALI sensors	■	■	■	
Functions				
Direct operation	■	■	■	■
Broadcast operation	■	■	■	■
Standalone operation	■	■	■	
Configurable behavior in the event of a bus voltage failure/recovery	■	■	■	■
Support of CIN	■	■		
Scene control				
Integrated 8-bit scene control	■	■	■	■
Scenes to be integrated per DALI output	16	16	16	16
Effect control				
Integrated effect control (one-off or cyclic chaselight operation, color control)	4	4		
Test function via ETS				
Testing individual ECGs	■	■	■	
Testing group assignment	■	■	■	
Testing scenes	■	■	■	
Testing effects	■	■		
Group control				
Up to 16 groups per DALI output				
• Switching ON/OFF	■	■	■	
• BRIGHTER/DARKER dimming	■	■	■	
• Set value	■	■	■	
Individual ECG control				
Operation of individual ECG with				
• Switching ON/OFF	■	■	■ ¹⁾	
• BRIGHTER/DARKER dimming	■	■	■ ¹⁾	
• Set value	■	■	■ ¹⁾	
ETSApp in KNX Online Shop	■	■	■	
Pre-loaded applications	■	■		
Replace defective ECG without software	■	■	■	■
¹⁾ Only with application program 983Dxx				

Gateways, interface converters

Technical specification

KNX/DALI

... Continuation of the table



					
Type	N 141/21	N 141/03	N 141/31		N 525E
Application program ¹⁾	9834xx ¹⁾	9837xx ¹⁾	9833xx ¹⁾	983Dxx	980801
Name	Twin plus	plus	Twin	Twin	
Time functions					
Timer mode, 1-step (automatic stairwell switch)	■	■	■	■	■
Timer mode, 2-step	■	■	■	■	■
Night mode (lighting for cleaning)	■	■	■	■	■
Warning of impending OFF	■	■	■	■	■
Dimming					
BRIGHTER/DARKER dimming	■	■	■	■	■
Adjustable dimming time	■	■	■	■	■
Brightness limitation, adjustable min. dimming value/max. dimming value	■	■	■	■	■
Switching					
Switching ON/OFF	■	■	■	■	■
Configurable starting value	■	■	■	■	■
Switching ON/OFF possible via BRIGHTER/DARKER dimming	■	■	■	■	■
Emergency lighting					
Support for prescribed test sequences for emergency lights	■	■		■	
Controlling single battery lights	■	■		■	
Internal memory for test results	■	■			
Status					
DALI short circuit	■	■	■	■	■ ²⁾
DALI power supply	■	■	■	■	■
Status output (ON/OFF, value, lamp fault, ECG fault)					■
Status group (ON/OFF, value, lamp fault, ECG fault)	■	■	■	■	
Status ECG (ON/OFF, value, lamp fault, ECG fault)	■	■		■	
Further Functions					
DALI sensors ^{3)/} 2-point-control	■	■	■	■	
Stand-by shut down (areas)	12	6		12	
Function burn-in	■	■		■	
Renew defective ECG without software		■	■	■	■
Stand-alone mode	■	■	■	■	
Pre-loaded applications	■	■			

¹⁾ For current application programs, see www.siemens.com/gamma-td

²⁾ Per channel (line)

³⁾ Only selected DALI sensors are supported, see APB www.siemens.com/gamma-td

KNX/Infrared

		
Design	i-system	DELTA style
Type	UP 223/5 ¹⁾	UP 287/..5 ¹⁾
Application program ²⁾	909301	
Enclosure data		
Dimensions		
• Width [mm]	55	68
• Height [mm]	55	68
• Depth [mm]	11	14
Display/control elements		
Individual pushbuttons	6	8
Pushbutton pairs	3	4
Operation (v: vertical, h: horizontal)	h	v
LED per pushbutton pair for status indication	2	2
LED for orientation light (ON/OFF configurable/dimmable)	■	
IR activity display configurable via orientation LED	■	■
LED brightness configurable and controllable via object	■	■
Bus connection		
For plugging onto a bus coupling unit (BTM) or a flush-mounting actuator with bus coupling unit (BTM)	■	■
Inputs		
IR receiver decoder	■	■
IR channels in blocks of 64	16	16
Input functions		
Switching		
Switching ON/OFF/OVER	■	■
Pushbutton function (bell function)	■	■
Dimming		
• Dimming with stop telegram (4-bit)	■	■
• Short button press, ON/OFF	■	■
• Long button press, BRIGHTER/DARKER	■	■
One-pushbutton dimming	■	■
Value transmission		
8 bit/percent/16 bit	■	■
Brightness value	■	■
Temperature value	■	■
Positively driven operation	■	■
Time-delayed transmission of a second telegram, depending on main function	■	■
Button deactivation	■	■
Shutter/blind control		
• Short button press, slat OPEN/CLOSED or STOP,	■	■
• Long button press, UP/DOWN	■	■
One-pushbutton sun protection	■	■
Scene		
Integrated 8-bit scene control (channels)	■	■
Assignments per channel	8	8
Store and call up scene, 8-bit	■	■
Store and call up scene, 1-bit	■	■
Short or long button press (store/call up scene), configurable	■	■
Status		
LED on/off/flashing depending on the value (1 bit/8 bit/16 bit)	■	■
Pushbutton operation display configurable via LED	■	■

¹⁾ IR remote controls must be ordered separately. see chapter Display and Operation Units - IR-System

²⁾ For current application programs, see www.siemens.com/gamma-td

IP interface**N 148/22**

- LEDs for indicating that the device is ready-to-run, KNX communication, IP communication
- Electronics powered via an external nominal 24 V AC/DC power supply unit
- Power consumption at 24 V DC, 57 mA
- Power supply for the electronics via „Power over Ethernet“ according to IEEE 802.3af
- Integrated bus coupling units, Bus connection via bus terminal
- Ethernet connection via RJ45 socket
- Plug-in terminal block for the connection of an external power supply unit
- Supports KNXnet/IP
- 4 Interface functions (Tunneling)
- 1 Interface functions (object server)
- Modular installation devices for mounting on TH35 EN 60715 mounting rail



The external 24 V AC/DC power supply unit must be ordered separately (e. g. 4AC2402).

Dimension width (1 MW = 18 mm) 2 MW

	Stock No.	Product No.	DT
	5WG1148-1AB22	N 148/22	A

Accessories for N 148/22

Product Title	Stock No.	Product No.	DT
Electronic power supply unit, 350 mA	4AC2402	4AC2402	B
LOGO! Power 24 V/1.3 A	6EP3331-6SB00-0AY0	LOGO!POWER 24 V/1,3 A	A

IP Router**N 146/02**

- LEDs for indicating that the device is ready-to-run, KNX communication, IP communication
- Supports KNXnet/IP
- Line coupler function (Routing)
- 4 Interface functions (Tunneling)
- 1 Interface functions (object server)
- Electronics powered via "Power over Ethernet" according to IEEE 802.3af or alternatively by an external safety extra low voltage power supply for AC/DC 24 V, 57 mA
- Ethernet connection via RJ45 socket
- Plug-in terminal block for the connection of an external power supply unit
- Integrated bus coupling units, bus connection via bus terminal
- Modular installation devices for mounting on TH35 EN 60715 mounting rail



The external 24 V AC/DC power supply unit must be ordered separately (e. g. 4AC2402).

Dimension width (1 MW = 18 mm) 2 MW

	Stock No.	Product No.	DT
	5WG1146-1AB02	N 146/02	A

Accessories for N 146/02

Product Title	Stock No.	Product No.	DT
Electronic power supply unit, 350 mA	4AC2402	4AC2402	B
LOGO! Power 24 V/1.3 A	6EP3331-6SB00-0AY0	LOGO!POWER 24 V/1,3 A	A

N 152/01



IP Control Center

Visualisation controller for full-graphic visualizations on web-compatible end devices such as PCs, tablets and smart phones with a standard web browser.

For communication between KNX devices and PCs and, in connection with a LAN-/WLAN modem or DSL router, for remote access to a KNX installation, for usage as an interface for the ETS 3/4/5 and as an interface for a visualization, with usage of the KNXnet/IP protocol, with the following simultaneously usable functions:

- Web server for operating and monitoring up to 1250 statuses and values transmitted by the KNX network, which can be displayed using a standard browser on PCs, tablets, or smartphones connected to the IP network
- Special web page for firmware upgrade
- Graphical web editor for a creation of fully graphical visualization with control and display elements, configurable in various styles
- Smart editor for the creation of a visualisation, tuned for mobile browsers, smartphones, tablets with control and display elements, configurable in various styles and layouts
- Annual timer, with astronomical calendar, for 300 time switch schedules with up to 30 time switch commands per time switch schedule
- Scene module with up to 5000 scenes or events
- Chart module for recording and reporting of up to 10 data points
- Monitoring module for monitoring and storage of up to 1000 events into a ring buffer
- IP interface for control of up to 20 IP-devices via up to 20 TCP/UDP commands per IP-device
- Fully graphical logic module with up to 1000 logic functions
- Alarm function for up to 250 different alarms
- E-mail function, with up to 20 contacts, for transmission of chart data from chart module, logged data from monitoring module or alarm data
- Ethernet interface 10/100 Mbits/s with RJ45 socket for connection to the IP network using the Internet Protocol
- 2 LED displays for IP connection/communication and for error messages
- Integrated bus connector and bus terminal for connection to a KNX network
- Power supply of the electronics by an external voltage source for DC 24 V, 50 mA
- Series installation device for mounting on support rails TH35 DIN EN 60715

Dimension width (1 MW = 18 mm)

4 MW

Stock No.	Product No.	DT
5WG1152-1AB01	N 152/01	A

Accessories for N 152/01

Product Title	Stock No.	Product No.	DT
Electronic power supply unit, 350 mA	4AC2402	4AC2402	B
LOGO! Power 24 V/1.3 A	6EP3331-6SB00-0AY0	LOGO!POWER 24 V/1,3 A	A

Web server for Synco devices

OZW772..

Web server OZW772 allows for remote plant control and monitoring via the web.

- Operate web browser via PC/laptop and Smartphone
- Operate ACS (PC/laptop with ACS plant operating software)
- Connections: USB and Ethernet
- Display fault messages in the web browser
- Send fault messages to a maximum of 4 e-mail recipients
- Periodically send system reports to e-mail recipients
- Visualize the plants in the web browser based on standard plant diagrams and customized plant web pages
- Acquire and display consumption data
- Send consumption data file to 2 email recipients
- Function „Energy indicator“ to monitor data points for energy-related limit values, or „Green limits“
- Web services for external applications via Web API (Web Application Programming Interface)
- Encrypted with https and TLS for e-mails
- Record of trends, display and dispatch to 2 e-mail recipients
- Integration up to 237 S-Mode data points of KNX devices (not OZW772.01)
- Direct commissioning with web browser or ACS service tool
- Easy and secure remote access and plant overview with Synco IC Remote Access - a web-based service for secure remote access (www.siemens-syncoic.com)



Internet portal Synco IC offers simple and secure access to your plants

- Simple and fast set up of access via the Internet (fixed net- or mobile router)
- The portal provides additional functions:
 - Manage one or multiple plants
 - Central user management
 - Display of plant overview, state of Energy indicators and alarms
 - Send alarm notifications per e-mail
 - Secured communications through encryption (https)

Package insert:

Mounting Instructions M5701
Power pack AC 230 V / DC 24 V
Ethernet-cable
USB-cable
2 cable ties

Web servers OZW772.01, OZW772.04, OZW772.16, OZW772.250 can connect 1, 4, 16, or 250 KNX devices from the product ranges Synco 700, Synco RXB, and RDG/RDF/RDU room thermostats, and the QAX Synco living central apartment units.

Data sheet	N5701
Operating voltage	Power pack: AC 230 V Web server: DC 24 V
Communication	KNX TP (twisted pair) Ethernet, RJ45 plug socket (shielded) USB V2.0
Mounting	On DIN rails With Screws
Degree of protection	IP30
Dimensions (W x H x D)	87.5 x 90 x 40 mm

Range overview OZW772..

Product Title	Stock No.	Product No.	DT
Web server for 1 Synco device	BPZ:OZW772.01	OZW772.01	A
Web server for 4 Synco devices	BPZ:OZW772.04	OZW772.04	A
Web server for 16 Synco devices	BPZ:OZW772.16	OZW772.16	A
Web server for 250 Synco devices	BPZ:OZW772.250	OZW772.250	A

N 141/03, N 141/21



KNX/DALI Gateway plus / Twin plus

- With emergency lighting, with sensors
- For communication via KNX EIB with electronic ballasts (ECG) with a DALI interface
- DALI outputs acc. to IEC 62386, each for communication with up to 64 DALI ECG and at least 10 sensors
- Integrated power supply with input voltage AC 110-240 V, 50-60 Hz or DC 120-240 V for powering the gateway electronics and DALI output
- Maximum DALI output voltage of 19 V, short circuit resistant
- Incorrect voltage detection during commissioning, whether incorrect power line is connected to a DALI output
- LED display for displaying operation mode and error messages
- Pushbutton for switching between bus and direct operating mode
- One pair of pushbuttons for switching On/Off of all connected DALI ECG
- One LED per DALI output for status signal of all connected luminaires in direct mode
- Configurable assignment of max. 64 DALI ECG per channel to max. 16 DALI groups per channel, exclusive controlled in groups or single (switching, dimming, set dimming value) and feedback for group status and lamp failure
- Configurable behaviour for bus failure (stand-alone mode)
- Configurable pre-loaded applications without software (ETS)
- Configurable function burn-in for all ECG via pushbutton or single via object
- Scheduler for day, week, date and additional astro function
- Control (switching, dimming, set dimming value) of all connected luminaires together in broadcast mode
- Status signal and display of lamp and ECG failure per group and per DALI device
- Transformation of dimming commands into a temporary set point adjustment for ECG with integrated constant light level control and directly connected light level sensor
- One or two level timer
- Up to four integrated one time or cyclical control of repeatable sequences or color effects
- Distinction between self-contained emergency luminaires with one or two DALI devices
- Starting the self-conducted testing of each individual inverter and reporting the test result via bus or save in a persistent memory with memory space monitoring over object
- Distinction between function test, short duration test, and long duration test
- Optional configuration of any DALI ECG to dim to a preset dimming value in case of emergency mode
- Locking of switching and dimming commands as well as configuration while emergency mode is activated
- Activation of emergency mode based on a configurable number of failed DALI ECG
- Lock object to elimination of failure messages interruption of ECG during emergency lighting testing
- Inhibit mode for disabling battery mode of self-contained emergency luminaires over pushbutton
- Per channel up to six stand-by-area analysis for activation of switch actuators
- Integrated scene control for up to 16 scenes per channel
- 16 integrated 2-level-controller for brightness control
- 16 integrated constant light level controller for main luminaires group and up to four additional luminaires groups
- Possible assignment of a CIN to a DALI ECG
- Possibility to reintegrate defective DALI ECG without software (ETS)
- Assignment of DALI ECG to groups and test option for ECG, groups, scenes and effects via ETS during commissioning
- Assignment of DALI sensors and test option of sensors via ETS during commissioning
- Integrated bus coupling unit with only half a standard bus load, bus connection via bus terminal
- Mounting on DIN rail EN 60715-TH35-7.5

Dimension width (1 MW = 18 mm)

4 MW

Range overview N 141/03, N 141/21

Product Title	Stock No.	Product No.	DT
KNX/DALI Gateway Twin plus, 2 channels	5WG1141-1AB21	N 141/21	A
KNX/DALI Gateway plus, 1 channel	5WG1141-1AB03	N 141/03	A

KNX/DALI Gateway Twin

N 141/31

- Communication via KNX EIB with electronic ballasts (ECG) with a DALI interface
- Two (2) DALI output acc. to IEC 62386, each for communication with up to 64 DALI ballasts and at least 10 sensors
- Integrated power supply with input voltage AC 110...240 V, 50...60 Hz or DC 120...240 V for powering the gateway electronics and DALI output
- Maximum DALI output voltage of 19 V, short circuit resistant
- Incorrect voltage detection during commissioning, whether incorrect power line is connected to a DALI output
- LED display for displaying operation mode and error messages
- Pushbutton for switching between bus and direct operating mode
- One pair of pushbuttons for switching On/Off of all connected DALI ballasts
- One LED per DALI output for status signal of all connected luminaries in direct mode
- Configurable behaviour for bus failure (stand-alone mode)
- Control (switching, dimming, set dimming value) of all connected luminaries together in broad-cast mode
- Status signal and display of lamp and ECG failure per group and per DALI device
- One or two level timer
- Integrated scene control for up to 32 scenes
- Assignment of DALI ECG to groups and test option for ECG, groups and scenes via ETS during commissioning
- Possibility to reintegrate defective DALI ECG without software
- Integrated bus coupling unit with only half a standard bus load
- Bus connection via bus terminal
- Mounting on DIN rail EN 60715-TH35-7.5
- Width 4 MW (1 Modular Width = 18 mm)

The following options are selectable, depending on the application program:

- Configurable assignment of max. 128 DALI ECG to max. 32 DALI groups, exclusive controlled in groups or single (switching, dimming, set dimming value) and feedback for group status and lamp failure
- Configurable function burn-in for all ECG via pushbutton or single via object
- Up to twelve stand-by-area analysis for activation of switch actuators
- Distinction between self-contained emergency luminaries with one or two DALI devices
- Optional configuration of any DALI ECG to dim to a preset dimming value in case of emergency mode
- Locking of switching and dimming commands as well as configuration while emergency mode is activated
- Activation of emergency mode based on a configurable number of failed DALI ECG
- Lock object to elimination of failure messages interruption of ECG during emergency lighting testing
- Inhibit mode for disabling battery mode of self-contained emergency luminaries over pushbutton
- 16 integrated 2-level-controller for brightness control
- Assignment of DALI sensors and test option of sensors via ETS during commissioning

Dimension width (1 MW = 18 mm)

4 MW



Stock No.	Product No.	DT
5WG1141-1AB31	N 141/31	A

N 525E01



Switch/dimming actuator, 8 x DALI, 8 ECGs per DALI output

- 8 DALI outputs
- Control capacity for up to 8 DALI-ECGs per DALI output
- Power supplied to the electronics and the DALI outputs through an integrated power supply unit for 230 V AC
- Green LED for status display
- Pushbutton for selecting and switching over 4 DALI outputs respectively between bus and direct mode
- Yellow LED for indicating which 4 DALI outputs the direct mode is activated for
- 1 red LED per DALI output for indicating the circuit state or fault (e.g. lighting medium failure) of the connected group
- Four pushbutton pairs for switching and dimming of 4 DALI outputs in direct mode, functional when 230 V AC is applied (also when no bus voltage is connected and also when bus communication has not yet been started or is interrupted)
- Selection of identical or individual configuration of all DALI outputs
- Selectable operating mode per DALI output (normal mode, 1-level or 2-level time-switch mode)
- Per DALI output with command objects for switching on/off, dimming brighter/darker and setting dimming value
- Per DALI output optionally with up to 4 add-on status objects (circuit state and lighting medium failure, dimming value status and DALI status)
- Sending of status objects on request and/or automatically after change
- Per DALI output with add-on object for time-limited switching on of lighting in night mode (cleaning light)
- Warning approx. 1 minute before imminent switching off, by dimming to 50% of former dimming value in night or timer mode
- Adjustable switching on and/or off of a channel through dimming brighter/darker, dimming value when switching on, actuating or dimming a new dimming value, dimming time from 0% to 100%
- Adjustable behavior on bus voltage or mains voltage failure and bus voltage or mains voltage recovery
- Add-on object and integrated 8bit scene control for saving and restoring up to 16 scenes per DALI output
- Integrated bus coupling unit as only half standard bus load
- Bus connection through bus terminal as well as contact system to data rail
- Device for mounting on rail TH35 DIN EN 60715

Base function	DALI
Rated voltage	AC 120 V
	AC 230 V
Number of channels	8
Switch-off warning	Yes
Constant light level control	Yes
Dimension width (1 MW = 18 mm)	4 MW

Stock No.	Product No.	DT
5WG1525-1EB01	N 525E01	A

Accessories for KNX / DALI Gateway

DALI Push button interface 4fold

- Binary input device
- 4 inputs to connect installation buttons
- Supported actions per input
 - Short button press
 - Long button press
- Integrated DALI bus coupling unit for communicating with a central DALI controller/gateway
- Power supply through DALI line with 6 mA DALI bus load
- For flush-mounting wall or ceiling outlet installations with a 60 mm diameter and depth of 60 mm
- Plug-in terminals for connecting the DALI line
- Cable set for connecting pushbuttons

Dimensions (W x H x D) 43 x 43 x 11 mm

UP 141/71



Stock No.	Product No.	DT
5WG1141-2AB71	UP 141/71	A

N 143/01



IP Gateway KNX/BACnet

- BACnet Application Specific Controller (B-ASC) as Gateway between KNX TP and BACnet IP
- Up to 250 BACnet objects
- Up to 455 BACnet COV subscriptions
- Automatic translation of KNX communication objects into BACnet objects according to the configuration with ETS
- For communication between KNX EIB devices and PCs or other devices with Ethernet (10BaseT) interface, as well as in conjunction with a LAN modem or DSL router for remote access to an KNX EIB installation
- For use as an interface e.g. for ETS3 or for visualization software
- Use the KNXnet/IP protocol
- KNXnet/IP Tunneling connection for parallel bus access by ETS and further PC software
- ObjectServer connection for visualization via network connections with long signal transmission duration
- Assignment of the network parameters by the installer using ETS, or automatically by a DHCP server in the network
- 2 LEDs for display of operational availability and IP communication
- Additional power supply by an external safety extra low voltage power supply for AC/DC 24 V, 40 mA
- Pluggable terminal block for connection of external power supply unit (not included)
- Integrated bus coupling unit with bus connection via bus terminal
- Ethernet connection via RJ45 socket
- Mounting on DIN rail EN 60715-TH35-7.5

Dimension width (1 MW = 18 mm)

4 MW

Stock No.	Product No.	DT
5WG1143-1AB01	N 143/01	A

Accessories for N 143/01

Product Title	Stock No.	Product No.	DT
Electronic power supply unit, 350 mA	4AC2402	4AC2402	B
LOGO! Power 24 V/1.3 A	6EP3331-6SB00-0AY0	LOGO!POWER 24 V/1,3 A	A

USB Interface

N 148/12

- Compatible with USB 2.0 and USB 3.0
- For isolated access to the bus line over the built-in USB socket (type B)
- For connection of a PC for addressing, parameterization, visualization, logging and diagnosis of bus devices
- Access to all bus devices in the whole bus system
- Support of bus telegrams with up to 64 bytes length
- Power supply over the bus line and over USB through the connected PC
- Integrated bus coupling unit, bus connection over contact system to data rail and parallel over bus terminal
- Transmission at USB 2.0 speed (max. 12 Mbit/s) between PC and USB interface
- Modular installation device for mounting on TH35 DIN EN 60715 mounting rail

Dimension width (1 MW = 18 mm)

1 MW



Stock No.	Product No.	DT
5WG1148-1AB12	N 148/12	A

USB - KNX Service interface

OCI702

The service interface consists of:

- OCI702 service interface
- USB 2.0 cable (Type A / B)
- KNX service cable for Synco™ controllers (RJ45 / RJ45)
- KNX service cable for Desigo™ TRA (RJ45 / jack plug 2.5 mm)
- KNX service cable (RJ45 / KNX bus terminal)

With the respective PC software, the interfaces allows to commission and service devices with KNX communication, e.g. from the following ranges:

- Synco™ 700 controllers and room devices
- KNX room thermostats RDF..., RDG..., RDU341
- Individual room controllers RXB..
- Synco™ living central apartment units QAX9...
- Desigo TRA
- GAMMA devices

Data sheet

A6V10438951



Stock No.	Product No.	DT
S55800-Y101	OCI702	A

UP 223/..5



Pushbutton with scene controller and IR receiver decoder, i-system

- Pushbutton in 3 pairs
- Horizontal operation
- Per pushbutton selectable function, scene controller
- LED for orientation light
- Labeling field
- IR receiver for IR handheld transmitter S 425/72
- Connectable bus coupling unit (BTM) or flush-mounted actuators via BTI

Dimensions (W x H x D)

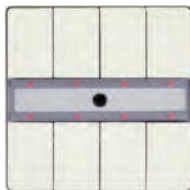
55 x 55 x 11 mm

Range overview UP 223/..5

Product Title	Stock No.	Product No.	DT
Pushbutton, triple, with status LED, with scene controller, with IR receiver decoder, titanium white	5WG1223-2DB15	UP 223/15	A
Pushbutton, triple, with status LED, with scene controller, with IR receiver decoder, aluminum metallic	5WG1223-2DB35	UP 223/35	A

The bus transceiver module (BTM) (see Chapter System Products and Accessories) or flush-mounting actuator with bus transceiver module (BTM) must be ordered separately. The matching design frame must be ordered separately. See Chapter Display and Operation Units - Pushbutton accessories.

UP 287/..5



Pushbutton with scene controller and IR receiver decoder, DELTA style

- Pushbutton in 4 pairs
- Vertical operation
- Per pushbutton selectable function, scene controller
- LED for orientation light
- Labeling field
- IR receiver for IR handheld transmitter S 425/72
- Connectable bus coupling unit (BTM) or flush-mounted actuators via BTI

Dimensions (W x H x D)

68 x 68 x 14 mm

Range overview UP 287/..5

Product Title	Stock No.	Product No.	DT
Pushbutton, quadruple, with status LED, with scene controller, with IR receiver decoder, titanium white	5WG1287-2DB15	UP 287/15	A
Pushbutton, quadruple, with status LED, with scene controller, with IR receiver decoder, platinum metallic	5WG1287-2DB45	UP 287/45	A

The bus transceiver module (BTM) (see Chapter System Products and Accessories) or flush-mounting actuator with bus transceiver module (BTM) must be ordered separately. The matching design frame must be ordered separately. See Chapter Display and Operation Units - Pushbutton accessories.

IR receiver decoder

S 450/03

- For receiving IR signals transmitted from IR hand-held transmitters
- Conversion of IR signals received from up to 32 IR channels into bus telegrams
- Configurable evaluation of the IR signals per IR channel as single button or as button pair
- Per IR button selectable functions
 - Switching on/off/over
 - Switching on or off at either rising or falling edge
 - Single button dimming
 - Single button sun protection control
 - 1-/8-bit scene control
 - 8-/16-bit value
 - Percentage value
 - Temperature value
 - Brightness value
 - Positively driven operation
- Depending on the selected main function
 - Per IR button selectable additional function executed either after a time delay (time delay configurable from 100 ms to 6550 s) or alternatively on a long button press
- Per IR button pair selectable functions
 - 2-button dimming with stop telegram
 - 2-button sun protection control
 - Transmission variable percentage value
 - Transmission variable 8-bit value
 - 1-/8-bit scene control
 - Positively driven operation
- Depending on the selected main function: per IR button selectable additional functions
 - Switching on/off
 - 8-16-bit value
 - Percentage value
 - Temperature value
 - Brightness value
 - Recall/save 1-bit scene 1
 - Recall/save 1-bit scene 2
 - Recall 8-bit scene
 - Positively driven on/off/deactivate
- Blocking can selected for each IR button and configured individually
- Integrated bus coupling units, Bus connection via bus terminal
- Bus-powered electronics
- Including clamping spring and rosette for installation in ceilings, walls or lights
- For commissioning when mounted, a magnet is required



Dimensions (W x H x D) 25 x 26 x 75 mm

Stock No.	Product No.	DT
5WG1450-7AB03	S 450/03	A

LOGO! CMK2000



Communication Module LOGO! CMK2000

- For communication between LOGO! 8 and KNX devices via the KNX bus
- Transformation of typical PLC signals into KNX telegrams and vice versa
- Linking transmitted KNX data points and LOGO! inputs and outputs via logic and control functions through LOGO!
- The following channels are available at the maximum configuration level of the LOGO!:
 - 24 binary inputs
 - 20 binary outputs
 - 8 analog inputs
 - 8 analog outputs
- Date and time can be synchronized via KNX
- 50 configurable communication objects
- Communication via Ethernet with LOGO! 8

Dimension width (1 MW = 18 mm) 4 MW

	Stock No.	Product No.	DT
	6BK1700-0BA20-0AA0	LOGO! CMK2000	A

Physical sensors



Technical specifications	Physical sensors with KNX connection	11-2
	Physical sensors without KNX connection	11-4
with KNX connection	Motion/presence	11-5
	Brightness	11-8
	Temperature, humidity	11-9
	Temperature, humidity, air quality	11-15
without KNX connection	Motion	11-18
	Temperature	11-19
	Humidity	11-22
	Air quality	11-25
	Sunlight intensity	11-29

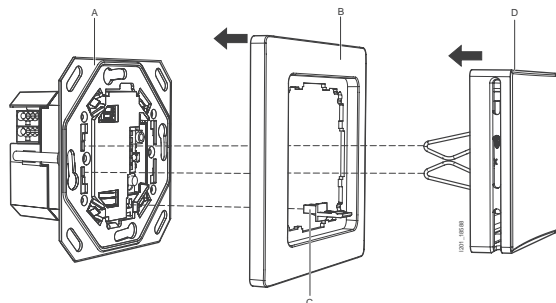
Physical sensors

Technical specification

Physical sensors with KNX connection

Room sensors for flush mounting

The Symaro sensor front module is equipped with spring clips. The spring clips ensure easy and error-free mounting of the front module to the basic module. In addition, an anti-theft device prevents unauthorized removal of the front module.



A: Basic module AQR257../AQR254...

B: DELTA frame see chapter Display and operation units - Pushbutton accessories

C: Anti-theft device

D: Front module AQR253..

Overview of module combinations – Room sensors

Communicating sensors		Mounting ¹⁾	Measuring Variables			Display	Input	
Basic module	Front module		CO2	Relative humidity	Temperature	CO2-indicator	passive Temperature NTC 10k	Two potential-free contacts
AQR2570Nx	+ AQR2532NNW	UP			■		■	■
AQR2570Nx	+ AQR2535NNW	UP		■	■		■	■
AQR2576Nx	+ AQR2530NNW	UP	■				■	■
AQR2576Nx	+ AQR2532NNW	UP	■		■		■	■
AQR2576Nx	+ AQR2535NNW	UP	■	■	■		■	■
AQR2576Nx	+ AQR2535NNWQ	UP	■	■	■ (radial)	■	■	■
QMX3.P30		AP			■			
QMX3.P40		AP		■	■			
QMX3.P70		AP	■	■	■	■		

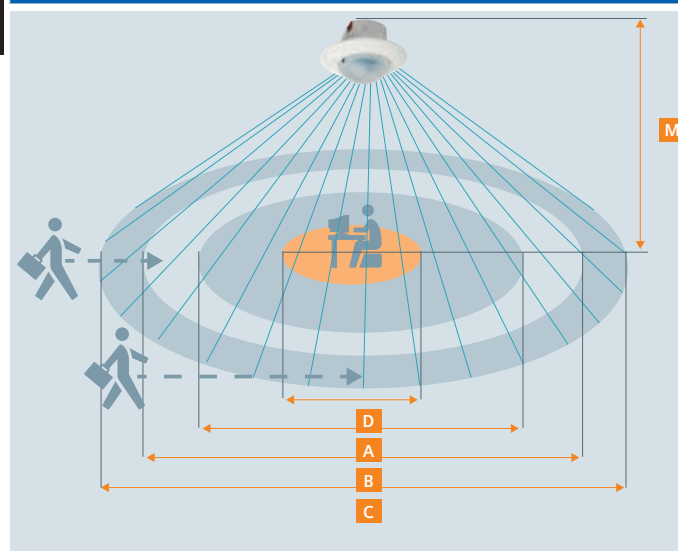
Replace x with:

- F for VDE/CEE (70x70 mm)
- H for British Standard (83x83 mm)
- G for Italian Standard 3 modular (110x64 mm)
- J for UL Standard 2" x 4" (64x110 mm)

¹⁾ AP surface mounted, UP flush mounted

11

Detection range










The maximum detection ranges to be achieved are as follows divided:

- A Sitting person
- B Walking person straight
- C Walking person crosswise (tangential)
- D Brightness measurement
- M Mounting height from floor level

Maximum achievable detection ranges for UP 258E22 / UP 258D12 (in meters)

M	A	B	C	D
5,0	–	Ø 8,5	Ø 14	Ø 3,0
4,0	–	Ø 7,5	Ø 12	Ø 2,3
3,5	Ø 5,5	Ø 6,5	Ø 10	Ø 2,0
3,0	Ø 5,0	Ø 6,0	Ø 8	Ø 1,6
2,5	Ø 4,5	Ø 5,0	Ø 7	Ø 1,2

Physical Sensors with KNX connection

							
Type	UP 258E22 UP 258D12	AP 251/..1	UP 258D21	N 258/02	AP 254/02	AQR257..	QMX3..
Enclosure data							
Mounting ¹⁾	UP/AP	AP	UP	N	AP	UP	AP
Degree of protection	IP20	IP55	IP20	IP20	IP54	IP20	IP30
Dimensions							
• Width/Ø [mm] (1 MW = 18 mm)	88	82	88	4 MW	72	71	89
• Height [mm]	63 ²⁾	80	63 ²⁾		110	71	134
• Depth [mm]		182			54	39	18
Power supply							
Bus-powered electronics	KNX	KNX	KNX	AC 230V	KNX	KNX	KNX
Bus connection							
Integrated bus coupling units	■	■	■	■	■	■	■
Plug onto UP 110 bus coupling unit							
Bus connection via bus terminal	■	■	■	■	■	■	■
Bus connection via contact system to data rail				■			
Transmission of sensor values via bus	■	■	■	■	■	■	■
Motion/presence							
Motion	■	■					
Presence	■						
HVCA message output	■						
Horizontal sensing angle	360°	290°					
Vertical sensing angle	105°						
Range to the front [m]		8					
Range on each side, up to [m]	7 ³⁾	16					
Adjustable range							
Brightness							
Measuring range [Lux]	20...1000		20...1000		1...100000		
For measuring outdoor brightness					■		
For measuring indoor brightness (mixed light)	■		■				
Temperature							
Measuring range [°C]				-40...+150	-25...+55	0...50 ⁴⁾	0...50 ⁴⁾
Temperature sensor inputs				4 x Pt1000		NTC 10k ⁴⁾	
Max. cable length, unshielded, twisted [m]				50		10 ⁷⁾	
Humidity [% r.F.]						0...100 ⁴⁾	0...100 ⁴⁾
CO2 [ppm]						0...5000 ⁴⁾	0...5000 ⁴⁾

¹⁾ AP flush mounted, UP flush mounted

²⁾ For flush mounting, mounting height approx. 31 mm, for surface mounting with AP 258E surface-mounting enclosure, approx. 73 mm. In conjunction with AP 258E surface-mounting enclosure

³⁾ For complete technical data visit www.siemens.de/gamma-td

⁴⁾ Only with according combination or variant available

Physical sensors

Technical specification

Physical sensors without KNX connection

Physical Sensors without KNX connection

Active sensors			Measuring Variables					Display	Relay contact
Basic module	+	Front module	Mounting ⁵⁾	CO ₂	VOC	Relative humidity	Active temp.	Passive temp.	
AQR2540Nx	+	AQR2532NNW	UP				■		
AQR2540Nx	+	AQR2535NNW	UP			■	■		
AQR2540Nx	+	AQR2534ANW	UP			■	■	LG-Ni1000	
AQR2546Nx	+	AQR2530NNW	UP	■					
AQR2546Nx	+	AQR2532NNW	UP	■			■		
AQR2546Nx	+	AQR2535NNW	UP	■		■	■ ²⁾		
AQR2546Nx	+	AQR2535NNWQ	UP	■		■	■ ²⁾		■
AQR2546Nx	+	AQR2534ANW	UP	■		■	■ ²⁾	LG-Ni1000	
AQR2547Nx	+	AQR2530NNW	UP		■				
AQR2547Nx	+	AQR2532NNW	UP		■		■		
AQR2547Nx	+	AQR2535NNW	UP		■	■	■ ²⁾		
AQR2547Nx	+	AQR2534ANW	UP		■	■	■ ²⁾	LG-Ni1000	
AQR2548Nx	+	AQR2530NNW	UP	■	■ ¹⁾				
AQR2548Nx	+	AQR2532NNW	UP	■	■ ¹⁾		■		
AQR2548Nx	+	AQR2535NNW	UP	■	■ ¹⁾	■	■ ²⁾		
AQR2548Nx	+	AQR2535NNWQ	UP	■	■ ¹⁾	■	■ ²⁾		■
AQR2548Nx	+	AQR2534ANW	UP	■	■ ¹⁾	■	■ ²⁾	LG-Ni1000	
AQR2500Nx	+	AQR2531ANW	UP					LG-Ni1000	
Room sensor									
QAA2012			AP					Pt1000 ³⁾	
QAA2061			AP				■ ⁴⁾	Pt1000 ³⁾	
QAA2061D			AP				■ ⁴⁾	Pt1000 ³⁾	
QAA2071			AP				■ ⁴⁾	Pt1000 ³⁾	
Contact sensor									
QAD2012			AP					Pt1000 ³⁾	
External sensor									
QAC2012			AP					Pt1000 ³⁾	
QAC3161			AP				■ ⁴⁾		
Room sensor									
QFA2000			AP			■			
QFA2060			AP			■	■ ⁴⁾		
QFA2060D			AP			■	■ ⁴⁾		■
Hygrostats									
QFA1000			AP			■ ⁴⁾			■
QFA1001			AP			■ ⁴⁾			■
Room sensor									
QPA2000			AP	■					
QPA2002			AP	■	■				
QPA2060			AP	■			■ ⁴⁾		
QPA2062			AP	■		■	■ ⁴⁾		
QPA2062D			AP	■		■	■ ⁴⁾		■

¹⁾ Here, the in-door air quality is calculated from the CO₂ and VOC measuring variables. VOC is not available as direct measuring variable

²⁾ The measuring variable is solely available as switch output

³⁾ Can be connected to the N 258/02 temperature sensor (5WG1258-1AB02), see Physical sensors - with KNX connection

⁴⁾ Measuring range adjustable

⁵⁾ AP surface mounted, UP flush mounted

Presence detector / Motion detector with constant light level control

UP 258E22

Passive infrared detector for ceiling mounting indoors

- Optional blinding of parts of the detection area
- Mixed light measurement
- Cyclical sending or sending on change of value of the measured brightness value (Lux)
- Integrated two-position controller
- Constant light level control for a main group of luminaries and up to four additional groups of luminaries
- Lighting control configurable as fully automatic or semi-automatic
- Motion detection for three function blocks (presence detector, motion detector, and HVAC detector)
- 2 per function block selectable functions (A, B) on start of the presence detection and two per function block selectable functions (C, D) on expiration of the presence detection
- Configurable delay of 0...255 seconds between sending of function A and B respectively C and D
- Selection per function (A, B, C, D) switching On/Off, 8-bit value, selectable 8-bit value, 16-bit value, temperature value, brightness value, 8-bit scene control
- Blocking object per function block
- Per function block configurable overshoot time, in each case configurable as a fixed time, as switchable between two times via the bus, or settable to a value via the bus
- Parallel operation of several presence detectors (master-slave, master-master) without additional logic module
- Integrated IR receiver and IR decoder for IR remote controls with six pairs of pushbuttons
- Functions of the IR remote control selectable per pair of pushbuttons or per each single pushbutton of a button pair
- Per pushbutton selectable function toggle, switching on, switching off, 8-bit scene recall, 8-bit value, 16-bit value, temperature value, brightness value
- For each pair of pushbuttons selectable function switching On/Off, 2-button dimming with stop telegram, 2-button solar protection control, variable 8-bit value, 8-bit scene control
- Blocking object for IR decoder
- Test mode for easy start-up
- LED for display of detected movements in test mode, to be configured using ETS
- Integrated bus coupling unit, bus connection via bus terminal, Power supply over the bus line
- Ceiling mounting on a flush-mounting box with 60 mm diameter and min. 40 mm depth or in a housing for surface-mounting (to be ordered separately)
- Monitoring motion range horizontal 360°, vertical approx. 105°
- Monitoring motion of an area of diameter 8 m (depending on mounting/room height)
- Programming button reachable from front



Sensing range	6 m
Constant light level control	Yes
Brightness-dependent switching	Yes

Stock No.	Product No.	DT
5WG1258-2EB22	UP 258E22	C

Physical sensors

with KNX connection

Motion/presence

UP 258D12



Presence detector with brightness sensor

- Passive infrared detector for ceiling mounting indoors
- Mixed light measurement
- Ceiling mounting on a flush-mounting box with 60 mm diameter and min. 40 mm depth or in a housing for surface-mounting (to be ordered separately)
- Integrated IR decoder for S 255/11
- Programming button reachable from front

Sensing range	6 m
Brightness-dependent switching	Yes
Dimension (Ø x H)	88 x 63 mm

	Stock No.	Product No.	DT
	5WG1258-2DB12	UP 258D12	A

Accessories for UP 258.B..1

S 255/11



IR remote control

- 6 pushbutton pairs for the remote control of lighting, shutter/blinds and scenes
- Parameterization is via ETS in the UP 258E, UP 258D or UP 255D21 presence detector
- Range: approx. up to 10 m
- Power supply: CR2025 lithium button cell
- Degree of protection (acc. to EN 60529): IP40

Dimensions (W x H x D)	40 x 87 x 6 mm
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	Stock No.	Product No.	DT
	5WG1255-7AB11	S 255/11	A

Surface-mounting enclosures

AP 258E10

- For fixing the presence detectors UP 258D12 and UP 258E22 and the brightness sensor UP 255D21 as a surface mounting device

Dimension (Ø x H) 88 x 44 mm



Stock No.	Product No.	DT
5WG1258-7EB01	AP 258E10	A

Motion detector

AP 251..

- To detect and report motion, optionally with or without a brightness threshold taken into consideration
- Sensing angle 290°, including masking to limit the capture zone, range up to 16 m (radius) with mounting height 2...4 m and at 22 °C
- Integrated infrared receiver to set brightness threshold and delay time, as well as operating mode (test mode, standard mode, pulse mode) via an infrared remote control
- Blocking and release of reporting mode through a communication object
- Bus-powered electronics
- Integrated bus coupling units, Bus connection via bus terminal
- Device for wall or ceiling mounting
- Degree of protection IP 55 zur Montage auch im Außenbereich

Dimensions (W x H x D) 180 x 86 x 74 mm



Range overview AP 251..

Product Title	Stock No.	Product No.	DT
Motion detector IP55, titanium white	5WG1251-3AB11	AP 251/11	A
Motion detector IP55, anthracite	5WG1251-3AB21	AP 251/21	A

Physical sensors with KNX connection Brightness

UP 255D21



Brightness sensor with constant light level controller

- Mixed light measurement
- Ceiling mounting on a flush-mounting box with 60 mm diameter and min. 40 mm depth or in a housing for surface-mounting (to be ordered separately)
- Programming button reachable from front
- Integrated IR decoder for S 255/11
- Integrated 2-point control (switching)
- Constant light level control for main group of luminaries and up to 4 additional groups of luminaries incl. automatic calibrating

Constant light level control	Yes
Brightness-dependent switching	Yes
Dimension (Ø x H)	88 x 63 mm

Stock No.	Product No.	DT
5WG1255-2DB21	UP 255D21	A

AP 254/02



Dual sensor for brightness measurement, temperature measurement, sun protection control, lighting control

- Brightness measurement, temperature measurement, sun protection control, lighting control
- For the detection and transmission of brightness and temperature
 - Temperature measuring range -25 °C...+55 °C
 - Brightness measuring range 1 Lux...100 kLux
 - Horizontal sensing angle -60°...+60°, vertical -35°...+66.5°
- For the control of switch, dimming and shutter/blind actuators, depending on the ambient luminosity and/or ambient temperature
- One sun protection channel for the automatic control of sun protection equipment, with
 - Starting and stopping of automation by means of an object or a dusk threshold
 - Up to three brightness thresholds for determining the height and position of the shutters/blinds or roller shutters
- Optional teach-in of dusk thresholds and brightness thresholds by means of a teach-in facility
- Blocking object for the temporary deactivation of the sun protection channel function
- Up to four universal channels for the control of switch, dimming and shutter/blind actuators, depending on ambient luminosity and/or temperature. Optionally available with:
 - Threshold switches for brightness
 - Threshold switches for temperature
 - Threshold switches with logical combination of brightness and temperature
 - Optional teach-in of brightness threshold for each universal channel by means of an associated teach-in facility
 - Deactivation option for each universal channel by means of an associated blocking object (1 bit)
 - Optional second object for transmission of a second telegram on fulfillment of threshold conditions
- Bus-powered electronics
- Integrated bus coupling units
- Bus connection via bus terminal
- Surface mounting
- Degree of protection: IP54

Brightness-dependent switching	Yes
Dimensions (W x H x D)	72 x 110 x 54 mm

Stock No.	Product No.	DT
5WG1254-3EY02	AP 254/02	A

Temperature sensor 4 x Pt1000

N 258/02

- For four Pt1000 sensors
- For the measurement and transmission of 4 temperatures in the range -40...+150 °C
- For connection of four Pt1000 temperature sensors²⁾, each via a 2-wire cable up to 50 m in length
- Configurable smoothing of a measured value through mean value generation
- Monitoring of a lower and upper limit value for each measured value, with configurable hysteresis for limit value signals
- Electronics powered via an integrated power supply unit for 230 V AC
- Green LED for displaying ready-to-run status
- Integrated bus coupling units
- Bus connection via bus terminal or contact system to data rail
- Modular installation devices for mounting on TH35 EN 60715 mounting rail



The accompanying physical sensors must be ordered separately. See chapter Physical sensors - sensors without KNX connection.

Dimension width (1 MW = 18 mm) 4 MW

Stock No.	Product No.	DT
5WG1258-1AB02	N 258/02	A

Accessories for N 258/02

Room temperature sensor Pt1000

QAA2012

- Passive sensors for acquiring the temperature in rooms.

Data sheet	N1745
Sensing element, temperature	Pt1000
Time constant	7 min
Measurement accuracy	At 0...50 °C: ±0.6 K
Data sheet	N1745



Stock No.	Product No.	DT
BPZ:QAA2012	QAA2012	A

Variants QAA..N = no logo

Cable temperature sensor silicone 1.5 m, Pt1000

QAP2012.150

Data sheet	N1831
Cable length	1.5 m
Sensing element, temperature	Pt1000
Connection cable	Silicone
Measurement accuracy	At -30...130 °C: ±0.95 K
Measuring range, temperature	-30...130 °C



Stock No.	Product No.	DT
BPZ:QAP2012.150	QAP2012.150	A

Physical sensors

with KNX connection

Temperature, humidity

AQR2530NNW



Front module for base module, without sensor

- Front module without sensor for plugging onto the Base module
- Matching the DELTA line and DELTA miro frame program

Data sheet

N1411

	Stock No.	Product No.	DT
	S55720-S137	AQR2530NNW	A

Matching the DELTA line and DELTA miro frame program. See chapter Display and Operation Units.
 The relevant base modules must be ordered separately. See chapter Physical sensors - Without KNX connection.

AQR2532NNW



Front module for base module, temperature (active)

- Front module with sensor for plugging onto the Base module
- Matching the DELTA line and DELTA miro frame program

Data sheet

N1411

Measuring range, temperature

0...50 °C

Signal output temperature

Active

	Stock No.	Product No.	DT
	S55720-S136	AQR2532NNW	A

Matching the DELTA line and DELTA miro frame program. See chapter Display and Operation Units.
 The relevant base modules must be ordered separately. See chapter Physical sensors - Without KNX connection.

Front module for base module, humidity and temperature (active)

AQR2535NNW

- Front module with humidity and temperature sensor for plugging onto the Base module
- Matching the DELTA line and DELTA miro frame program

Data sheet	N1411
Measuring range, temperature	0...50 °C
Signal output temperature	Active
Measurement range humidity	0...100 %



Stock No.	Product No.	DT
S55720-S141	AQR2535NNW	A

Matching the DELTA line and DELTA miro frame program. See chapter Display and Operation Units.
The relevant base modules must be ordered separately. See chapter Physical sensors - Without KNX connection.

Base module with KNX for temperature and humidity measurement

AQR2570..

- Base module without sensor for plugging onto a front module
- 1 analog input to connect temperature sensors with NTC 10k sensing element to measure room, floor, or ceiling temperature
- 2 multifunctional binary inputs to connect window contacts or buttons
- Power supply via KNX bus, bus load < 5 mA
- Temperature control as continuous control (PID algorithm) for pure heating operation, heating and cooling operation, and adjustable positioning variable as continuous positioning signal 0...100%, or as pulse-width modulated (PWM) switching signal On/Off,
- Ventilation control across 3 settable switching steps for relative humidity, and 3 switching signal objects On/Off, or one positioning signal object 0...100% to control a ventilation actor
- Via setpoints for room temperature and relative humidity adjustable via KNX bus
- Adjustable commissioning and control parameters
- Integrated bus coupler with programming button and LED

Data sheet	N1411
Voltage supply	KNX bus
Analog inputs, number	1
Analog inputs	Passive temperature sensor NTC 10k
Digital inputs, number	2
Digital inputs	Potential-free contacts



Range overview AQR2570..

Mechanical design	Dimensions (W x H)	Stock No.	Product No.	DT
EU (CEE/VDE)	70.8x70.8 mm	S55720-S203	AQR2570NF	A
IT (3 Modular)	110x64 mm	S55720-S205	AQR2570NG	A
UK (British Standard)	83x83 mm	S55720-S204	AQR2570NH	C
US (UL)	64x110 mm	S55720-S206	AQR2570NJ	A

Physical sensors with KNX connection Temperature, humidity

AP 254/02



Dual sensor for brightness measurement, temperature measurement, sun protection control, lighting control

- Brightness measurement, temperature measurement, sun protection control, lighting control
- For the detection and transmission of brightness and temperature
 - Temperature measuring range -25 °C...+55 °C
 - Brightness measuring range 1 Lux...100 kLux
 - Horizontal sensing angle -60°...+60°, vertical -35°...+66.5°
- For the control of switch, dimming and shutter/blind actuators, depending on the ambient luminosity and/or ambient temperature
- One sun protection channel for the automatic control of sun protection equipment, with
 - Starting and stopping of automation by means of an object or a dusk threshold
 - Up to three brightness thresholds for determining the height and position of the shutters/blinds or roller shutters
 - Optional teach-in of dusk thresholds and brightness thresholds by means of a teach-in facility
 - Blocking object for the temporary deactivation of the sun protection channel function
- Up to four universal channels for the control of switch, dimming and shutter/blind actuators, depending on ambient luminosity and/or temperature. Optionally available with:
 - Threshold switches for brightness
 - Threshold switches for temperature
 - Threshold switches with logical combination of brightness and temperature
 - Optional teach-in of brightness threshold for each universal channel by means of an associated teach-in facility
 - Deactivation option for each universal channel by means of an associated blocking object (1 bit)
 - Optional second object for transmission of a second telegram on fulfillment of threshold conditions
- Bus-powered electronics
- Integrated bus coupling units
- Bus connection via bus terminal
- Surface mounting
- Degree of protection: IP54

Brightness-dependent switching
Dimensions (W x H x D)

Yes
72 x 110 x 54 mm

Stock No.	Product No.	DT
5WG1254-3EY02	AP 254/02	A

QMX3.P30



Room sensor KNX for temperature, white

Functions:

- Temperature sensor
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX

Data sheet
Dimensions (W x H x D)

N1602
88.4 x 133.4 x 18 mm

Stock No.	Product No.	DT
S55624-H103	QMX3.P30	A

Room sensor KNX for temperature, black

QMX3.P30-1BSC

Functions:

- Temperature sensor
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm



Stock No.	Product No.	DT
S55624-H123	QMX3.P30-1BSC	A

Room sensor KNX for temperature and humidity, white

QMX3.P40

Functions:

- Multisensor for temperature and humidity
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm



Stock No.	Product No.	DT
S55624-H116	QMX3.P40	A

Physical sensors with KNX connection Temperature, humidity

QMX3.P40-1BSC

Room sensor KNX for temperature and humidity, black



Functions:

- Multisensor for temperature and humidity
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm

Stock No.	Product No.	DT
S55624-H124	QMX3.P40-1BSC	A

Accessories for QMX3..

Product Title	Dimensions (W x H)	Stock No.	Product No.	DT
Basic plate for conduit and cavity wall box	80.5 x 115 mm	S55624-H110	QMX3.MP1	B

QAP1030.200

Cable temperature sensor PVC 2 m, NTC 10k



Data sheet

N1831

Cable length

2 m

Sensing element, temperature

NTC 10k

Connection cable

PVC

Measurement accuracy

At -25...95 °C: ±1.4 K

Measuring range, temperature

-25...95 °C

Stock No.	Product No.	DT
BPZ:QAP1030.200	QAP1030.200	A

Front modules for base modules

AQR253..

- Front module with sensors
- Matching the DELTA line and DELTA miro frame program

Data sheet	N1411
Color	Titanium white
Degree of protection	IP30
Dimensions (W x H)	55 x 55 mm



Range overview AQR253..

Measuring range, temperature [°C]	Signal output temperature	Measurement range humidity [%]	Display	Stock No.	Product No.	DT
0...50	Active			S55720-S137	AQR2530NNW	A
0...50	Active	0...100		S55720-S136	AQR2532NNW	A
0...50	Active	0...100		S55720-S141	AQR2535NNW	A
0...50	Active	0...100	CO2 indicator by LED	S55720-S219	AQR2535NNWQ	A

Matching the DELTA line and DELTA miro frame program. See chapter Display and Operation Units.
The relevant base modules must be ordered separately. See chapter Physical sensors - Without KNX connection.

Base modules with KNX for CO₂ measurement

AQR2576..

- Base module with maintenance and recalibration-free CO₂ sensor to plug onto a front module
- 1 analog input to connect temperature sensors with NTC 10k sensing element to measure room, floor, or ceiling temperature
- 2 multifunctional binary inputs to connect window contacts or buttons
- Power supply via KNX bus, bus load < 5 mA
- Ventilation control across 3 settable switching steps for relative humidity & CO₂ concentration, and 3 switching signal objects On/Off, or one positioning signal object 0...100% to control a ventilation actor
- Temperature control as continuous control (PID algorithm) for pure heating operation, heating and cooling operation, and adjustable positioning variable as continuous positioning signal 0...100%, or as pulse-width modulated (PWM) switching signal On/Off
- Via setpoints for room temperature and relative humidity, and CO₂ concentration, adjustable via KNX bus
- Adjustable commissioning and control parameters
- Integrated bus coupler with programming button and LED

Data sheet	N1411
Voltage supply	KNX bus
Measuring range	CO ₂ : 0...5000 ppm
Analog inputs, number	1
Analog inputs	Passive temperature sensor NTC 10k
Digital inputs, number	2
Digital inputs	Potential-free contacts



Range overview AQR2576..

Mechanical design	Dimensions (W x H)	Stock No.	Product No.	DT
EU (CEE/VDE)	70.8x70.8 mm	S55720-S207	AQR2576NF	A
IT (3 Modular)	110x64 mm	S55720-S209	AQR2576NG	C
UK (British Standard)	83x83 mm	S55720-S208	AQR2576NH	C
US (UL)	64x110 mm	S55720-S210	AQR2576NJ	A

Physical sensors with KNX connection Temperature, humidity, air quality

QMX3.P70

Room sensor KNX for temperature, humidity, CO2, white



Functions:

- Multisensor for temperature, humidity and CO2
- Air quality indicator with LED
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm

Stock No.	Product No.	DT
S55624-H104	QMX3.P70	A

QMX3.P70-1BSC

Room sensor KNX for temperature, humidity, CO2, black



Functions:

- multisensor for temperature, humidity and CO2
- Air quality indicator with LED
- Temperature control, adjustable as PWM control and/or modulating control (PID algorithm), for pure heating mode, pure cooling mode, heating and cooling mode
- Operating modes switchable via KNX and/or display: Comfort mode, Pre-Comfort, energy savings and protection mode
- Adjustable commissioning and control parameters for radiated heating, slow and fast, floor heating slow and fast
- Integrated bus coupling unit
- 3 independently adjustable switching values for CO2 concentration and relative air humidity for air quality control
- Actuating variable for 1, 2, or 3-stage fans (humidity and CO2)
- Actuating variable for 1, 2, or 3-point positioning signal (humidity and CO2)
- Setpoint for room temperature and relative humidity and CO2 concentration adjustable via KNX

Data sheet

N1602

Dimensions (W x H x D)

88.4 x 133.4 x 18 mm

Stock No.	Product No.	DT
S55624-H125	QMX3.P70-1BSC	A

Accessories for QMX3..

Product Title	Dimensions (W x H)	Stock No.	Product No.	DT
Basic plate for conduit and cavity wall box	80.5 x 115 mm	S55624-H110	QMX3.MP1	B

Cable temperature sensor PVC 2 m, NTC 10k

QAP1030.200

Data sheet	N1831
Cable length	2 m
Sensing element, temperature	NTC 10k
Connection cable	PVC
Measurement accuracy	At -25...95 °C: ±1.4 K
Measuring range, temperature	-25...95 °C



Stock No.	Product No.	DT
BPZ:QAP1030.200	QAP1030.200	A

Physical sensors without KNX connection Motion

5TC72200



Surface-mounting motion detector, AC 230 V 50 Hz

- Surface-mounting motion detector for ceilings
- AC 230 V 50 Hz
- Power consumption < 1 W
- Contact Capacity: 16 A cos ϕ = 1
- Switching capacity:
 - Incandescent lamps or halogen lamps 230 V: 3000 W
 - Halogen lamps with electronic transformer: 3000 W
 - Halogen lamps with ferromagnetic transformer: 2400 W
 - Fluorescent lamps: 1300 W (130 μ F)
 - Compact lamps: 18 x 7 W, 12 x 11 W, 10 x 15 W, 10 x 20 W, 10 x 23 W
 - LED lamps
- Capture area: 360° circle
- Capture area: Ø m at 2,5 m installation height and a temperature of 18°C
- Configuration via potentiometer
- Luminance: 5 - 1200 Lux
- Adjustable time period: from 6 seconds up to 12 minutes
- Dimensions (mounted): 118,5 mm x 45 mm. Protection class: IP40 / class II. Allowed operating temperature: -10°C to + 45°C.

Dimensions (W x H)

118.5 x 45 mm

Stock No.

Product No.

DT

5TC7220-0

5TC72200

C

5TC72201



Flush-mounting motion detector, AC 230 V 50 Hz

- Flush-mounting motion detector for ceilings
- AC 230 V 50 Hz
- Power consumption < 1 W
- Contact Capacity: 16 A cos ϕ = 1
- Switching capacity:
 - Incandescent lamps or halogen lamps 230 V: 3000 W
 - Halogen lamps with electronic transformer: 3000 W
 - Halogen lamps with ferromagnetic transformer: 2400 W
 - Fluorescent lamps: 1300 W (130 μ F)
 - Compact lamps: 18 x 7 W, 12 x 11 W, 10 x 15 W, 10 x 20 W, 10 x 23 W
 - LED lamps
- Capture area: 360° circle
- Capture area: Ø m at 2,5 m installation height and a temperature of 18°C
- Configuration via potentiometer
- Luminance: 5 - 1200 Lux
- Adjustable time period: from 6 seconds up to 12 minutes
- Dimensions (mounted): 118,5 mm x 45 mm. Protection class: IP40 / class II. Allowed operating temperature: -10°C to + 45°C.

Dimensions (W x H)

118.5 x 45 mm

Stock No.

Product No.

DT

5TC7220-1

5TC72201

C

Front module for base module, temperature (active)

AQR2532NNW

- Front module with sensor for plugging onto the Base module
- Matching the DELTA line and DELTA miro frame program

Data sheet	N1411
Measuring range, temperature	0...50 °C
Signal output temperature	Active



Stock No.	Product No.	DT
S55720-S136	AQR2532NNW	A

Matching the DELTA line and DELTA miro frame program. See chapter Display and Operation Units.
The relevant base modules must be ordered separately. See chapter Physical sensors - Without KNX connection.

Base modules for temperature and humidity measurement

AQR2540..

- Base module without sensor for plugging onto a front module

Data sheet	N1410
Operating voltage	AC 24 V DC15...36 V
Connection, electrical	Screw terminals
Analogue output, signal	DC 0...10 V DC 2...10 V DC 0...5 V DC 0...20 mA DC 4...20 mA DC 0...10 mA
Digital outputs	1-pin Potential-free Changeover contact



Range overview AQR2540..

Mechanical design	Dimensions (W x H)	Stock No.	Product No.	DT
EU (CEE/VDE)	70.8 x 70.8 mm	S55720-S142	AQR2540NF	A
IT (3 modular)	110 x 64 mm	S55720-S144	AQR2540NG	A
UK (British Standard)	83 x 83 mm	S55720-S143	AQR2540NH	A

Strap-on temperature sensor Pt1000

QAD2012

- Supplied complete with strap for pipe diameters from 15...140 mm.

Data sheet	N1801
Sensing element, temperature	Pt1000
Measuring range, temperature	-30...130 °C
Time constant	3 s



Stock No.	Product No.	DT
BPZ:QAD2012	QAD2012	A

Physical sensors without KNX connection Temperature

QAA20..1

Room temperature sensor, active



Data sheet	N1749
Measuring range, temperature	0...50 °C
Time constant	7 min
Measurement accuracy	at AC 24 V in the range of -25 °C...+25 °C ± 0.75 K -50 °C...+50 °C ± 0.9 K
Connection, electrical	Screw terminals
Degree of protection	IP30
Dimensions (W x H x D)	90 x 100 x 36 mm

Range overview QAA20..1

Analog output, signal	Operating voltage [V]	Display	Stock No.	Product No.	DT
DC 0...10 V	AC 24 DC 13.5...35		BPZ:QAA2061	QAA2061	A
DC 0...10 V	AC 24 DC 13.5...35	LCD	BPZ:QAA2061D	QAA2061D	A
DC 4...20 mA	DC 13.5...35		BPZ:QAA2071	QAA2071	A

QAA2012

Room temperature sensor Pt1000



- Passive sensors for acquiring the temperature in rooms.

Data sheet	N1745
Sensing element, temperature	Pt1000
Time constant	7 min
Measurement accuracy	At 0...50 °C: ±0.6 K
Data sheet	N1745

Stock No.	Product No.	DT
BPZ:QAA2012	QAA2012	A

Variants QAA..N = no logo

QAC2012

Outside sensor Pt1000



- For acquiring the outside temperature and – to a lesser degree – solar radiation, the effect of wind and the temperature of the wall.

Data sheet	N1811
Measuring range, temperature	-50...70 °C
Sensing element, temperature	Pt1000
Measurement accuracy	At 0 °C: ±0.3 K
Time constant	14 min

Stock No.	Product No.	DT
BPZ:QAC2012	QAC2012	A

Connectable with temperature sensor N 258/02 (5WG1258-1AB02), see chapter Physical Sensors - with KNX connection.

Outside/room temperature sensor DC 0...10 V

QAC3161

Active sensor for acquiring the outside temperature. For use in heating, ventilation and air conditioning plants.

The QAC31.. may be used as an high-quality room sensor.

Data sheet	N1814
Analog output, signal	DC 0...10 V
Operating voltage	AC 24 V
	DC 13.5...35 V
Measurement accuracy	At -50...50 °C: ± 0.9 K



	Stock No.	Product No.	DT
	BPZ:QAC3161	QAC3161	A

Physical sensors without KNX connection Humidity

AQR2540..



Base modules for temperature and humidity measurement

- Base module without sensor for plugging onto a front module

Data sheet	N1410
Operating voltage	AC 24 V DC 15...36 V
Connection, electrical	Screw terminals
Analog output, signal	DC 0...10 V DC 2...10 V DC 0...5 V DC 0...20 mA DC 4...20 mA DC 0...10 mA
Digital outputs	1-pin Potential-free Changeover contact

Range overview AQR2540..

Mechanical design	Dimensions (W x H)	Stock No.	Product No.	DT
EU (CEE/VDE)	70.8x70.8 mm	S55720-S142	AQR2540NF	A
IT (3 modular)	110x64 mm	S55720-S144	AQR2540NG	A
UK (British Standard)	83x83 mm	S55720-S143	AQR2540NH	A

AQR2535NNW



Front module for base module, humidity and temperature (active)

- Front module with humidity and temperature sensor for plugging onto the Base module
- Matching the DELTA line and DELTA miro frame program

Data sheet	N1411
Measuring range, temperature	0...50 °C
Signal output temperature	Active
Measurement range humidity	0...100 %



Stock No.	Product No.	DT
S55720-S141	AQR2535NNW	A

Matching the DELTA line and DELTA miro frame program. See chapter Display and Operation Units.
The relevant base modules must be ordered separately. See chapter Physical sensors - Without KNX connection.

QFA2000



Room sensor for humidity (DC 0...10 V)

- For relative humidity and temperature.

Data sheet	N1857
Signal output humidity	DC 0...10 V
Operating voltage	AC 24 V DC 13.5...35 V

Stock No.	Product No.	DT
BPZ:QFA2000	QFA2000	A

Connectable with temperature sensor N 258/02 (5WG1258-1AB02), see chapter Physical Sensors - with KNX connection.

Room sensor for humidity (DC 0...10 V) and temperature (DC 0...10 V)

QFA2060

- For relative humidity and temperature.

Data sheet	N1857
Signal output humidity	DC 0...10 V
Signal output temperature	DC 0...10 V
Operating voltage	AC 24 V
	DC 13.5...35 V
Measuring range, temperature	0...50 °C
	-35...35 °C
	-40...70 °C



Stock No.	Product No.	DT
BPZ:QFA2060	QFA2060	A

Connectable with temperature sensor N 258/02 (5WG1258-1AB02), see chapter Physical Sensors - with KNX connection.

Room sensor for humidity (DC 0...10 V) and temperature (DC 0...10 V), with digital Display

QFA2060D

- For relative humidity and temperature.

Data sheet	N1857
Signal output humidity	DC 0...10 V
Signal output temperature	DC 0...10 V
Operating voltage	AC 24 V
	DC 13.5...35 V
Measuring range, temperature	0...50 °C
	-35...35 °C
	-40...70 °C



Stock No.	Product No.	DT
BPZ:QFA2060D	QFA2060D	C

Connectable with temperature sensor N 258/02 (5WG1258-1AB02), see chapter Physical Sensors - with KNX connection.

Room hygrostat, setpoint setting range 30...90 % r.h., setpoint adjuster inside device

QFA1000

- 2-position controller with humidity sensor
- Setpoint adjuster inside device

Data sheet	N1518
Setpoint setting range	30...90 % r.h.
Switching differential	6 % r.h.
Time constant	At v = 0.2 m/s: 5 min
Digital outputs	1-pin
	Potential-free
	Changeover contact
Connection, electrical	Screw terminals
Digital output, switching voltage	AC 230 V
Digital output, switching current	5 (3) A
Degree of protection	IP20
Dimensions (W x H x D)	76 x 76 x 34 mm



Stock No.	Product No.	DT
BPZ:QFA1000	QFA1000	A

Physical sensors
without KNX connection
Humidity

QFA1001



Room hygrostat, setpoint setting range 30...90 % r.h., external setpoint adjustment

- 2-position controller with humidity sensor
- External setpoint adjustment

Data sheet	N1518
Setpoint setting range	30...90 % r.h.
Switching differential	6 % r.h.
Digital outputs	1-pin
	Potential-free
	Changeover contact
Connection, electrical	Screw terminals
Digital output, switching voltage	AC 230 V
Digital output, switching current	5 (3) A
Degree of protection	IP20
Dimensions (W x H x D)	76 x 76 x 34 mm

	Stock No.	Product No.	DT
	BPZ:QFA1001	QFA1001	A

Front modules for base modules

AQR253..

- Front module with sensors
- Matching the DELTA line and DELTA miro frame program

Data sheet	N1411
Color	Titanium white
Degree of protection	IP30
Dimensions (W x H)	55 x 55 mm



Range overview AQR253..

Measuring range, temperature [°C]	Signal output temperature	Measurement range humidity [%]	Display	Stock No.	Product No.	DT
0...50	Active			S55720-S137	AQR2530NNW	A
0...50	Active	0...100		S55720-S136	AQR2532NNW	A
0...50	Active	0...100		S55720-S141	AQR2535NNW	A
0...50	Active	0...100	CO2 indicator by LED	S55720-S219	AQR2535NNWQ	A

Matching the DELTA line and DELTA miro frame program. See chapter Display and Operation Units.
The relevant base modules must be ordered separately. See chapter Physical sensors - Without KNX connection.

Base modules with integrated CO₂ measurement

AQR2546..

- Base module with maintenance-free CO₂ sensing element to plug onto a front module

Data sheet	N1410
Operating voltage	AC 24 V DC 15...36 V
Analog output, signal	DC 0...10 V DC 2...10 V DC 0...5 V DC 0...20 mA DC 4...20 mA DC 0...10 mA
Measuring range	CO ₂ : 0...2000 ppm
Connection, electrical	Screw terminals
Digital outputs	1-pin Potential-free Changeover contact



Range overview AQR2546..

Mechanical design	Dimensions (W x H)	Stock No.	Product No.	DT
EU (CEE/VDE)	70.8 x 70.8 mm	S55720-S147	AQR2546NF	A
IT (3 modular)	110 x 64 mm	S55720-S153	AQR2546NG	C
UK (British Standard)	83 x 83 mm	S55720-S150	AQR2546NH	C

Physical sensors without KNX connection Air quality

AQR2547..



Base modules with integrated VOC measurement

- Base module with VOC sensing element to plug onto a front module

Data sheet	N1410
Operating voltage	AC 24 V DC 15...36 V DC 0...10 V DC 2...10 V DC 0...5 V DC 0...20 mA DC 4...20 mA DC 0...10 mA
Analog output, signal	VOC: 0...100 %
Measuring range	Screw terminals
Connection, electrical	1-pin
Digital outputs	Potential-free Changeover contact

Range overview AQR2547..

Mechanical design	Dimensions (W x H)	Stock No.	Product No.	DT
EU (CEE/VDE)	70.8x70.8 mm	S55720-S146	AQR2547NF	A

For the complete flush mount sensor assortment including mounting plates and design frames, see chapter 6.

AQR2548..



Base modules with integrated CO₂ and VOC measurement

- Base module with maintenance-free CO₂/VOC sensing element to plug onto a front module

Data sheet	N1410
Operating voltage	AC 24 V DC 15...36 V DC 0...10 V DC 2...10 V DC 0...5 V DC 0...20 mA DC 4...20 mA DC 0...10 mA
Analog output, signal	CO ₂ + VOC: 0...100 % CO ₂ : 0...2000 ppm
Measuring range	Screw terminals
Connection, electrical	1-pin
Digital outputs	Potential-free Changeover contact

Range overview AQR2548..

Mechanical design	Dimensions (W x H)	Stock No.	Product No.	DT
EU (CEE/VDE)	70.8x70.8 mm	S55720-S148	AQR2548NF	A

For the complete flush mount sensor assortment including mounting plates and design frames, see chapter 6.

Room air quality sensor CO₂

QPA2000

Note: Not suited for safety-related applications!

Data sheet N1961
Measuring range CO₂: 0...2000 ppm



Stock No.	Product No.	DT
BPZ:QPA2000	QPA2000	A

With the QPA2080 and QPA2080D the passive temperature element is freely selectable, enclosed in the delivery are LG-Ni1000, Pt1000, Pt100, NTC 10kOhm

Room air quality sensor CO₂+VOC

QPA2002

Note: Not suited for safety-related applications!

Data sheet N1961
Measuring range CO₂: 0...2000 ppm
CO₂+VOC: 0...2000 ppm



Stock No.	Product No.	DT
BPZ:QPA2002	QPA2002	A

With the QPA2080 and QPA2080D the passive temperature element is freely selectable, enclosed in the delivery are LG-Ni1000, Pt1000, Pt100, NTC 10kOhm

Room air quality sensor CO₂+temperature

QPA2060

Note: Not suited for safety-related applications!

Data sheet N1961
Measuring range CO₂: 0...2000 ppm
Measuring range, temperature 0...50 °C
-35...35 °C



Stock No.	Product No.	DT
BPZ:QPA2060	QPA2060	A

With the QPA2080 and QPA2080D the passive temperature element is freely selectable, enclosed in the delivery are LG-Ni1000, Pt1000, Pt100, NTC 10kOhm

Physical sensors
without KNX connection
Air quality

QPA2062



Room air quality sensor CO₂+temperature+rel. air humidity

Note: Not suited for safety-related applications!

Data sheet	N1961
Measuring range	CO ₂ : 0...2000 ppm
Measuring range, temperature	0...50 °C
	-35...35 °C
Measurement range humidity	0...95 % r.H.

Stock No.	Product No.	DT
BPZ:QPA2062	QPA2062	A

With the QPA2080 and QPA2080D the passive temperature element is freely selectable, enclosed in the delivery are LG-Ni1000, Pt1000, Pt100, NTC 10kOhm

QPA2062D



Room air quality sensor CO₂+temperature+rel. air humidity with display

Note: Not suited for safety-related applications!

Data sheet	N1961
Measuring range	CO ₂ : 0...2000 ppm
Measuring range, temperature	0...50 °C
	-35...35 °C
Measurement range humidity	0...95 % r.H.
Display	LCD

Stock No.	Product No.	DT
BPZ:QPA2062D	QPA2062D	A

With the QPA2080 and QPA2080D the passive temperature element is freely selectable, enclosed in the delivery are LG-Ni1000, Pt1000, Pt100, NTC 10kOhm

Solar sensor

QLS60

- For measuring the solar radiation intensity.

Data sheet	N1943
Operating voltage	AC 24 V DC 18...30 V
Power consumption	2.5 VA
Measuring range	0...1000 W/m²
Time constant	≤2 s
Connection, electrical	Screw terminals
Analog output, signal	DC 0...10 V DC 4...20 mA
Degree of protection	IP65
Dimensions (W x H x D)	51 x 92 x 46 mm



Stock No.	Product No.	DT
BPZ:QLS60	QLS60	A

Control and automation devices





Technical specifications	Logic and control functions	12-2
	Programmable logic controllers	12-3
Logic and control functions	IP control devices	12-5
	Scene-/event controller	12-6
Programmable logic controllers	LOGO! Communication module	12-7
	LOGO8! Basic modules	12-8
	LOGO8! Expansion modules	12-10
	LOGO! Power	12-13

Control and automation devices

Technical specification

Logic and control functions

Logic and control functions		
	IP control device	Scene / event controller
		
Type	N 152/01	N 305/01
Application program	983501	750005
Enclosure data		
Modular installation devices for mounting on TH35 EN 60715 mounting rail		
Width (1 MW = 18 mm)	4 MW	1 MW
Ethernet connection via RJ45 socket	■	
Power supply		
Bus-powered electronics		■
Electronics powered via an external power supply unit [V]	DC 12...30	
Bus connection		
Integrated bus coupling units	■	■
Bus connection via bus terminal	■	■
Bus connection via contact system to data rail		■
Functions		
Logic gate	1.000	
Scheduled entries	300 ¹⁾	
Master clock (time source)	■ ²⁾	
Event entries	5.000 ³⁾	80 ⁴⁾
Scenes	5.000 ³⁾	8
Effect control	5.000 ³⁾	
Alarms	250	
Email contacts	20	













¹⁾ Per week

²⁾ Via time server

³⁾ The sum of event entries, scenes and effects can be 5.000 maximum

⁴⁾ 10 entries per trip unit (8)

Programmable logic controllers

	LOGO! 8 Basic modules					LOGO! 8 Expansion modules						
												
Type	LOGO! CMK2000	LOGO! 12/24 RCE	LOGO! 230 RCE	LOGO! 12/24 RCEo	LOGO! 230 RCEo	LOGO! DM8 12/24 R	LOGO! DM8 230 R	LOGO! DM16 24 R	LOGO! DM16 230 R	LOGO! AM2	LOGO! AM2 RTD	LOGO! AM2 AQ
Enclosure data												
Dimensions												
• Width [mm] (1 MW = 18 mm)	4 MW	4 MW	4 MW	4 MW	4 MW	2 MW	2 MW	4 MW	4 MW	2 MW	2 MW	2 MW
• Height [mm]	90	90	90	90	90	90	90	90	90	90	90	90
• Depth [mm]	58,5	60	60	60	60	58	58	60	60	58	58	58
Power supply												
Power supply AC/DC 115...230 V			■		■		■		■			
Power supply DC 12...24 V		■		■		■				■	■	
Power supply DC 24 V	■							■				■
Inputs												
Control inputs												
• Digital input		8 (4) ¹⁾	8	8 (4) ¹⁾	8	4	4	8	8			
• Analog input (0...10 V)		up to 4		up to 4								
• Analog input (0...10 V or 0/4...20 mA)										2 ²⁾		
Sensor inputs												
Temperature sensor input PT100 and/or PT1000 automatic detection											2	
Measuring range [°C]											-50... +200 ³⁾	
Outputs												
Digital output, relays		4	4	4	4	4	4	8	8			
Analog output (0...10 V or 0/4...20 mA)												2 ²⁾
Rated current [A] resistive load/ inductive load		10/ 3	10/ 3	10/ 3	10/ 3	5/ 3	5/ 3	5/ 3	5/ 3			
LCD display, 6 lines		■	■									
Cursor keys		■	■									
Ethernet interface	■	■	■	■	■							
Modbus TCP/IP (client/server) ⁴⁾		■	■	■	■							
Time synchronisation via NTP (client and server) ⁴⁾		■	■	■	■							
Integrated web server		■	■	■	■							

¹⁾ 8 digital inputs, of which 4 can be used as analog inputs 0...10 V

²⁾ resolution 10 bit

³⁾ resolution 0,25°C

⁴⁾ function is available in basic modules issue status FS:04 and higher

IP Control Center

N 152/01

Visualisation controller for full-graphic visualizations on web-compatible end devices such as PCs, tablets and smart phones with a standard web browser.

For communication between KNX devices and PCs and, in connection with a LAN-/WLAN modem or DSL router, for remote access to a KNX installation, for usage as an interface for the ETS 3/4/5 and as an interface for a visualization, with usage of the KNXnet/IP protocol, with the following simultaneously usable functions:

- Web server for operating and monitoring up to 1250 statuses and values transmitted by the KNX network, which can be displayed using a standard browser on PCs, tablets, or smartphones connected to the IP network
- Special web page for firmware upgrade
- Graphical web editor for a creation of fully graphical visualization with control and display elements, configurable in various styles
- Smart editor for the creation of a visualisation, tuned for mobile browsers, smartphones, tablets with control and display elements, configurable in various styles and layouts
- Annual timer, with astronomical calendar, for 300 time switch schedules with up to 30 time switch commands per time switch schedule
- Scene module with up to 5000 scenes or events
- Chart module for recording and reporting of up to 10 data points
- Monitoring module for monitoring and storage of up to 1000 events into a ring buffer
- IP interface for control of up to 20 IP-devices via up to 20 TCP/UDP commands per IP-device
- Fully graphical logic module with up to 1000 logic functions
- Alarm function for up to 250 different alarms
- E-mail function, with up to 20 contacts, for transmission of chart data from chart module, logged data from monitoring module or alarm data
- Ethernet interface 10/100 Mbits/s with RJ45 socket for connection to the IP network using the Internet Protocol
- 2 LED displays for IP connection/communication and for error messages
- Integrated bus connector and bus terminal for connection to a KNX network
- Power supply of the electronics by an external voltage source for DC 24 V, 50 mA
- Series installation device for mounting on support rails TH35 DIN EN 60715



Dimension width (1 MW = 18 mm) 4 MW

	Stock No.	Product No.	DT
	5WG1152-1AB01	N 152/01	A

Accessories for N 152/01

Product Title	Stock No.	Product No.	DT
Electronic power supply unit, 350 mA	4AC2402	4AC2402	B
LOGO! Power 24 V/1.3 A	6EP3331-6SB00-0AY0	LOGO!POWER 24 V/1,3 A	A

N 305/01



Scene-/Event Controller

- 80 Event entries, 8 Event trigger, Sequence control
- 1-bit-/8-bit integrated scene control, 8 scenes to be integrated
- Bus-powered electronics
- Integrated bus coupling units, bus connection via bus terminal or contact system to data rail
- Modular installation devices for mounting on TH35 EN 60715 mounting rail

Dimension width (1 MW = 18 mm) 1 MW

Stock No.	Product No.	DT
5WG1305-1AB01	N 305/01	A

Communication Module LOGO! CMK2000

- For communication between LOGO! 8 and KNX devices via the KNX bus
- Transformation of typical PLC signals into KNX telegrams and vice versa
- Linking transmitted KNX data points and LOGO! inputs and outputs via logic and control functions through LOGO!
- The following channels are available at the maximum configuration level of the LOGO!:
 - 24 binary inputs
 - 20 binary outputs
 - 8 analog inputs
 - 8 analog outputs
- Date and time can be synchronized via KNX
- 50 configurable communication objects
- Communication via Ethernet with LOGO! 8

Dimension width (1 MW = 18 mm)

4 MW

LOGO! CMK2000



Stock No.	Product No.	DT
6BK1700-0BA20-0AA0	LOGO! CMK2000	A

Communication Module LOGO! CSM 12/24

- Connect LOGO! and up to three additional devices to an Ethernet network with 10/100 Mbps in line, tree, or star topology
- Unmanaged 4-port switch, one port at the front for easy diagnostic access
- Easy connection via four RJ45 connectors
- Cost-efficient solution to realize small, local Ethernet networks, also stand-alone
- Power supply DC 12/24 V

Dimension width (1 MW = 18 mm)

4 MW

LOGO! CSM 12/24



Stock No.	Product No.	DT
6GK7177-1MA20-0AA0	LOGO! CSM 12/24	C

Control and automation devices

Programmable logic controllers

LOGO! Basic modules

LOGO! 8 12/24 RCE, RCEo Basic Modules

- Power supply DC 12...24 V
- 8 digital inputs DC 12/24 V, of which 4 can be used as analog inputs (0...10 V)
- 4 floating relay contacts 10 A
- Integrated time switch
- Ethernet interface
- Integrated customer specific web server
- Modbus TCP/IP (client/ server)
- Time synchronisation via NTP (client and server)
- 400 function blocks linkable
- Expandable with extra modules

Dimension width (1 MW = 18 mm)

4 MW

LOGO! 8 12/24 RCE



Basic Modules

- Power supply DC 12...24 V
- 8 digital inputs DC 12/24 V, of which 4 can be used as analog inputs (0...10 V)
- 4 floating relay contacts 10 A
- Integrated time switch
- Ethernet interface
- Integrated customer specific web server
- Modbus TCP/IP (client/ server)
- Time synchronisation via NTP (client and server)
- 400 function blocks linkable
- Expandable with extra modules

Stock No.

Product No.

DT

6ED1052-1MD08-0BA0

LOGO! 8 12/24 RCE

A

LOGO! 8 12/24 RCEo



Basic Modules

- Power supply DC 12...24 V
- 8 digital inputs DC 12/24 V, of which 4 can be used as analog inputs (0...10 V)
- 4 floating relay contacts 10 A
- Integrated time switch
- Ethernet interface
- Integrated customer specific web server
- Modbus TCP/IP (client/ server)
- Time synchronisation via NTP (client and server)
- 400 function blocks linkable
- Expandable with extra modules

Stock No.

Product No.

DT

6ED1052-2MD08-0BA0

LOGO! 8 12/24 RCEo

A

Basic Modules

LOGO! 8 230 RCE, RCEo

- Power supply AC/DC 115...230 V
- 8 digital inputs AC/DC 115...230 V
- 4 floating relay contacts 10 A
- Integrated time switch
- Ethernet interface
- Integrated customer specific web server
- Modbus TCP/IP (client/ server)
- Time synchronisation via NTP (client and server)
- 400 function blocks linkable
- Expandable with extra modules

Dimension width (1 MW = 18 mm)

4 MW

Basic Modules

LOGO! 8 230 RCE

- Power supply AC/DC 115...230 V
- 8 digital inputs AC/DC 115...230 V
- 4 floating relay contacts 10 A
- Integrated time switch
- Ethernet interface
- Integrated customer specific web server
- Modbus TCP/IP (client/ server)
- Time synchronisation via NTP (client and server)
- 400 function blocks linkable
- Expandable with extra modules



Stock No.	Product No.	DT
6ED1052-1FB08-0BA0	LOGO! 8 230 RCE	A

Basic Modules

LOGO! 8 230 RCEo

- Power supply AC/DC 115...230 V
- 8 digital inputs AC/DC 115...230 V
- 4 floating relay contacts 10 A
- Integrated time switch
- Ethernet interface
- Integrated customer specific web server
- Modbus TCP/IP (client/ server)
- Time synchronisation via NTP (client and server)
- 400 function blocks linkable
- Expandable with extra modules



Stock No.	Product No.	DT
6ED1052-2FB08-0BA0	LOGO! 8 230 RCEo	A

Control and automation devices

Programmable logic controllers

LOGO! Expansion modules

LOGO! DM8 12/24 R



Expansion Module LOGO! DM8 12/24 R

- Power supply DC 12...24 V
- 4 digital inputs DC 12...24 V
- 4 floating relay contacts 5 A

Dimension width (1 MW = 18 mm)

2 MW

Stock No.

Product No.

DT

6ED1055-1MB00-0BA2

LOGO! DM8 12/24 R

A

LOGO! DM16 24 R



Expansion Module LOGO! DM16 24 R

- Power supply DC 24 V
- 8 digital inputs DC 24 V
- 8 floating relay contacts 5 A

Dimension width (1 MW = 18 mm)

4 MW

Stock No.

Product No.

DT

6ED1055-1NB10-0BA2

LOGO! DM16 24 R

A

LOGO! DM..230 R

Expansion Modules

Power supply AC/DC 115...230 V

LOGO! DM 8 230 R

Expansion Modules LOGO! DM 8 230 R

- 4 digital inputs AC/DC 115...230 V
- 4 floating relay contacts 5 A

Dimension width (1 MW = 18 mm)

2 MW



Stock No.

Product No.

DT

6ED1055-1FB00-0BA2

LOGO! DM 8 230 R

A

Expansion Modules LOGO! DM 16 230 R

- 8 digital inputs AC/DC 115...230 V
- 8 floating relay contacts 5 A

Dimension width (1 MW = 18 mm)

4 MW

LOGO! DM 16 230 R



Stock No.	Product No.	DT
6ED1055-1FB10-0BA2	LOGO! DM 16 230 R	A

Expansion Module LOGO! AM2

- Power supply DC 12...24 V
- 2 analog inputs 0...10 V or 0/4...20 mA, resolution 10 bit

Dimension width (1 MW = 18 mm)

2 MW

LOGO! AM2



Stock No.	Product No.	DT
6ED1055-1MA00-0BA2	LOGO! AM2	A

Expansion Module LOGO! AM2 RTD

- Power supply DC 12...24 V
- 2 analog inputs PT 100/1000, temperature range -50 °C...200 °C

Dimension width (1 MW = 18 mm)

2 MW

LOGO! AM2 RTD



Stock No.	Product No.	DT
6ED1055-1MD00-0BA2	LOGO! AM2 RTD	A

LOGO! AM2 AQ



Expansion Module LOGO! AM2 AQ

- Power supply DC 24 V
- 2 analog outputs 0...10 V or 0/4...20 mA, resolution 10 bit

Dimension width (1 MW = 18 mm)

2 MW

	Stock No.	Product No.	DT
	6ED1055-1MM00-0BA2	LOGO! AM2 AQ	A

LOGO! Power 12 V/0.9 A

LOGO!POWER 12 V/0,9 A

- Controlled power supply 12 V/0.9 A DC
- For connection to a 1-phase AC system
- Rated input voltage 100...240 V AC wide-range input
- Range input voltage 85...264 V AC/110...300 V DC
- Nominal output voltage 12 V DC
- Nominal output current 0.9 A
- Efficiency during operation at rated value typ. 78 %
- Power loss < 0.3 Watt
- Ambient temperature -25...70 °C
- Protection class II, Degree of protection: IP20
- Potential separation SELV acc. to EN 60950 and EN 50178
- Emitted interference class B acc. to EN 55022
- Approval acc. to CE, cULus, cURus, NEC Class 2, FM, ATEX, IECEx
- Marine approval DNV GL, BV, LRS



Dimension width (1 MW = 18 mm) 1 MW

Stock No.	Product No.	DT
6EP3320-6SB00-0AY0	LOGO!POWER 12 V/0,9 A	A

LOGO! Power 12 V/1.9 A

LOGO!POWER 12 V/1,9 A

- Controlled power supply 12 V/1.9 A DC
- For connection to a 1-phase AC system
- Rated input voltage 100...240 V AC wide-range input
- Range input voltage 85...264 V AC/110...300 V DC
- Nominal output voltage 12 V DC, setting range 10.5...16.1 V
- Nominal output current 1.9 A
- Measuring point for output voltage
- Efficiency during operation at rated value typ. 81 %
- Power loss < 0.3 Watt
- Ambient temperature -25...70 °C
- Protection class II, Degree of protection: IP20
- Potential separation SELV acc. to EN 60950 and EN 50178
- Emitted interference class B acc. to EN 55022
- Approval acc. to CE, cULus, cURus, NEC Class 2, FM, ATEX, IECEx
- Marine approval DNV GL, BV, LRS



Dimension width (1 MW = 18 mm) 2 MW

Stock No.	Product No.	DT
6EP3321-6SB00-0AY0	LOGO!POWER 12 V/1,9 A	A

LOGO!POWER 12 V/4,5 A LOGO! Power 12 V/4.5 A



- Controlled power supply 12 V/4.5 A DC
- For connection to a 1-phase AC system
- Rated input voltage 100...240 V AC wide-range input
- Range input voltage 85...264 V AC/110...300 V DC
- Nominal output voltage 12 V DC, setting range 10.5...16.1 V
- Nominal output current 4.5 A
- Measuring point for output voltage
- Efficiency during operation at rated value typ. 87 %
- Power loss < 0.3 Watt
- Ambient temperature -25...70 °C
- Protection class II, Degree of protection: IP20
- Potential separation SELV acc. to EN 60950 and EN 50178
- Emitted interference class B acc. to EN 55022
- Approval acc. to CE, cULus, cURus, NEC Class 2, FM, ATEX, IECEx
- Marine approval DNV GL, BV, LRS

Dimension width (1 MW = 18 mm) 3 MW

Stock No.	Product No.	DT
6EP3322-6SB00-0AY0	LOGO!POWER 12 V/4,5 A	A

LOGO!POWER 24 V/0,6 A LOGO! Power 24 V/0.6 A



- Controlled power supply 24 V/0.6 A DC
- For connection to a 1-phase AC system
- Rated input voltage 100...240 V AC wide-range input
- Range input voltage 85...264 V AC/110...300 V DC
- Nominal output voltage 24 V DC
- Nominal output current 0.6 A
- Efficiency during operation at rated value typ. 80 %
- Power loss < 0.3 Watt
- Ambient temperature -25...70 °C
- Protection class II, Degree of protection: IP20
- Potential separation SELV acc. to EN 60950 and EN 50178
- Emitted interference class B acc. to EN 55022
- Approval acc. to CE, cULus, cURus, NEC Class 2, FM, ATEX, IECEx
- Marine approval DNV GL, BV, LRS

Dimension width (1 MW = 18 mm) 1 MW

Stock No.	Product No.	DT
6EP3330-6SB00-0AY0	LOGO!POWER 24 V/0,6 A	A

LOGO! Power 24 V/1.3 A

- Controlled power supply 24 V/1.3 A DC
- For connection to a 1-phase AC system
- Rated input voltage 100...240 V AC wide-range input
- Range input voltage 85...264 V AC/110...300 V DC
- Nominal output voltage 24 V DC, setting range 22.2...26.4 V DC
- Nominal output current 1.3 A
- Measuring point for output voltage
- Efficiency typ. 86 %
- Power loss < 0.3 Watt
- Ambient temperature -25...70 °C
- Protection class II, Degree of protection: IP20
- Potential separation SELV acc. to EN 60950 and EN 50178
- Emitted interference class B acc. to EN 55022
- Approval acc. to CE, cULus, cURus, NEC Class 2, FM, ATEX, IECEx
- Marine approval DNV GL, BV, LRS

Dimension width (1 MW = 18 mm) 2 MW

LOGO!POWER 24 V/1,3 A



Stock No.	Product No.	DT
6EP3331-6SB00-0AY0	LOGO!POWER 24 V/1,3 A	A

LOGO! Power 24 V/2.5 A

- Controlled power supply 24 V/2.5 A DC
- For connection to a 1-phase AC system
- Rated input voltage 100...240 V AC wide-range input
- Range input voltage 85...264 V AC/110...300 V DC
- Nominal output voltage 24 V DC, setting range 22.2...26.4 V DC
- Nominal output current 2.5 A
- Measuring point for output voltage
- Efficiency typ. 90 %
- Power loss < 0.3 Watt
- Ambient temperature -25...70 °C
- Protection class II, Degree of protection: IP20
- Potential separation SELV acc. to EN 60950 and EN 50178
- Emitted interference class B acc. to EN 55022
- Approval acc. to CE, cULus, cURus, NEC Class 2, FM, ATEX, IECEx
- Marine approval DNV GL, BV, LRS

Dimension width (1 MW = 18 mm) 3 MW

LOGO!POWER 24 V/2,5 A



Stock No.	Product No.	DT
6EP3332-6SB00-0AY0	LOGO!POWER 24 V/2,5 A	A

Control and automation devices

Programmable logic controllers

LOGO! Power

LOGO!POWER 24 V/4 A



LOGO! Power 24 V/4 A

- Controlled power supply 24 V/4 A DC
- For connection to a 1-phase AC system
- Rated input voltage 100...240 V AC wide-range input
- Range input voltage 85...264 V AC/110...300 V DC
- Nominal output voltage 24 V DC, setting range 22.2...26.4 V DC
- Nominal output current 4 A
- Measuring point for output voltage
- Efficiency typ. 89 %
- Power loss < 0.3 Watt
- Ambient temperature -25...70 °C
- Protection class II, Degree of protection: IP20
- Potential separation SELV acc. to EN 60950 and EN 50178
- Emitted interference class B acc. to EN 55022
- Approval acc. to CE, cULus, cURus, NEC Class 2, FM, ATEX, IECEx
- Marine approval DNV GL, BV, LRS

Dimension width (1 MW = 18 mm)

4 MW

	Stock No.	Product No.	DT
	6EP3333-6SB00-0AY0	LOGO!POWER 24 V/4 A	A

Accessories for programmable logic controllers LOGO!

Product Title	Product Description	Stock No.	Product No.	DT
LOGO! 8 12/24 V Starter Kit	LOGO! 12/24 RCE, LOGO! Power 24 V, 1,3 A	6ED1057-3BA00-0AA8	LOGO! 8 12/24 V Starter Kit	A
LOGO! 8 12/24 V Starter Kit	LOGO! 12/24 RCE, LOGO! Power 24 V, 1,3 A	6ED1057-3BA01-0AA8	LOGO! 8 12/24 V Starter Kit	C
LOGO! 8 230 V Starter Kit	LOGO! 230 RCE	6ED1057-3BA03-0AA8	LOGO! 8 230 V Starter Kit	C
LOGO! 8 TDE Starter Kit	LOGO! 12/24 RCEo, LOGO! Power 24 V, 1,3 A, LOGO! TDE	6ED1057-3BA11-0AA8	LOGO! 8 TDE Starter Kit	C
LOGO! 8 12/24 V + KP300 Basic Starter Kit	LOGO! 12/24 RCE, LOGO! Power 24 V, 1,3 A, SIMATIC HMI KP300 Basic mono PN	6AV2132-0HA00-0AA1	LOGO! 8 12/24 V + KP300	A
LOGO! 8 12/24 V + KTP400 Basic Starter Kit	LOGO! 12/24 RCE, LOGO! Power 24 V, 1,3 A, SIMATIC HMI KTP400 Basic	6AV2132-0KA00-0AA1	LOGO! 8 12/24 V + KTP400	A
LOGO! 8 12/24 V + KTP700 Basic Starter Kit	LOGO! 12/24 RCE, LOGO! Power 24 V, 1,3 A, SIMATIC HMI KTP700 Basic	6AV2132-3GB00-0AA1	LOGO! 8 12/24 V + KTP700	A
LOGO! Soft Comfort V8	for Windows 8, 7, XP, Linux and Mac OSX, on DVD, downwards compatible	6ED1058-0BA08-0YA1	LOGO! Soft Comfort V8	X

System products and accessories



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System products and accessories

Overview and selection guides

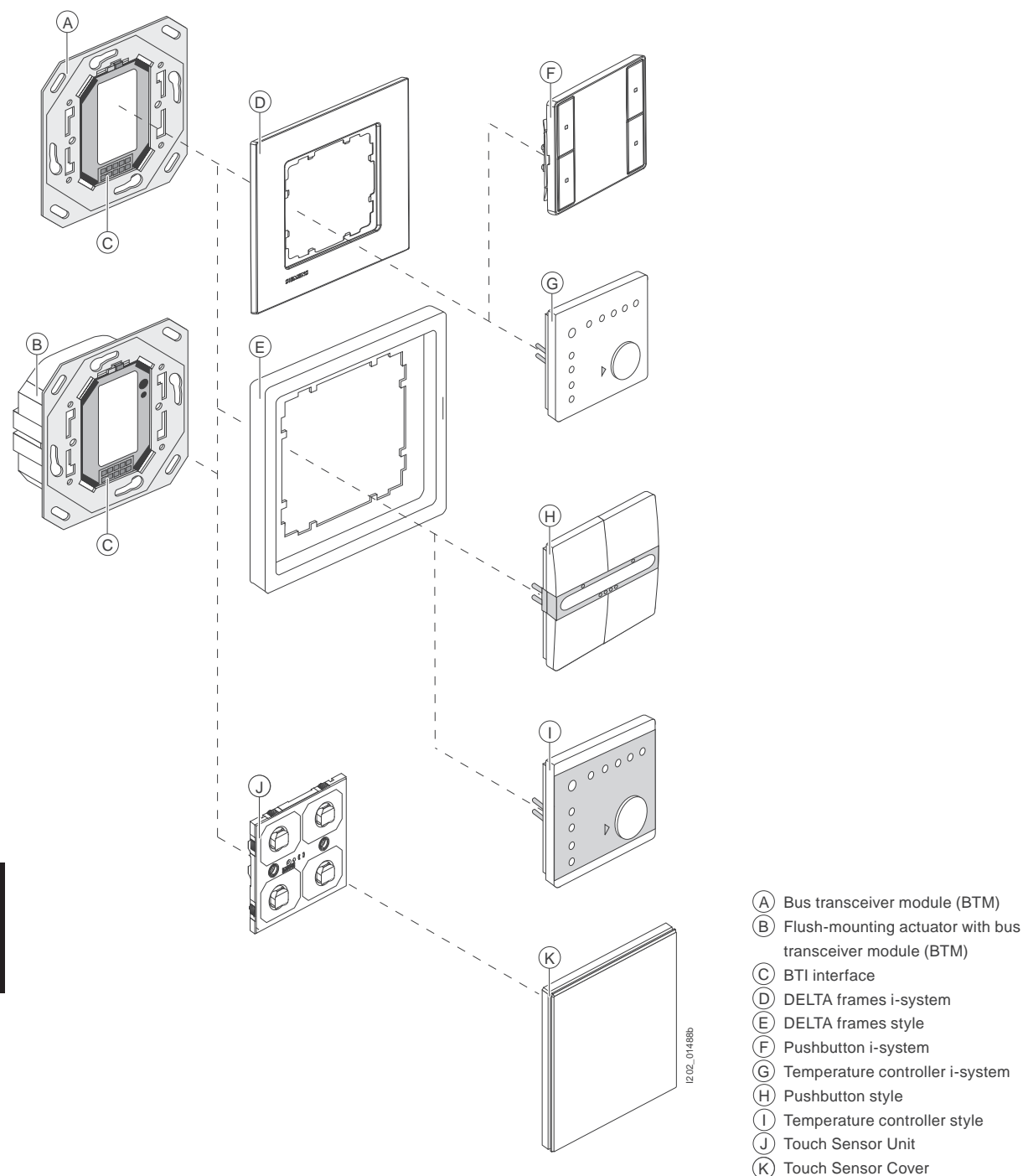
Bus coupling units and accessories

Modular bus coupling unit and flush-mounting actuator

A key feature of the GAMMA instabus is its uniform bus coupling unit. The bus transceiver module (BTM) can be used as a stand-alone unit, as well as a combined version in various devices of the flush-mounting actuator range.

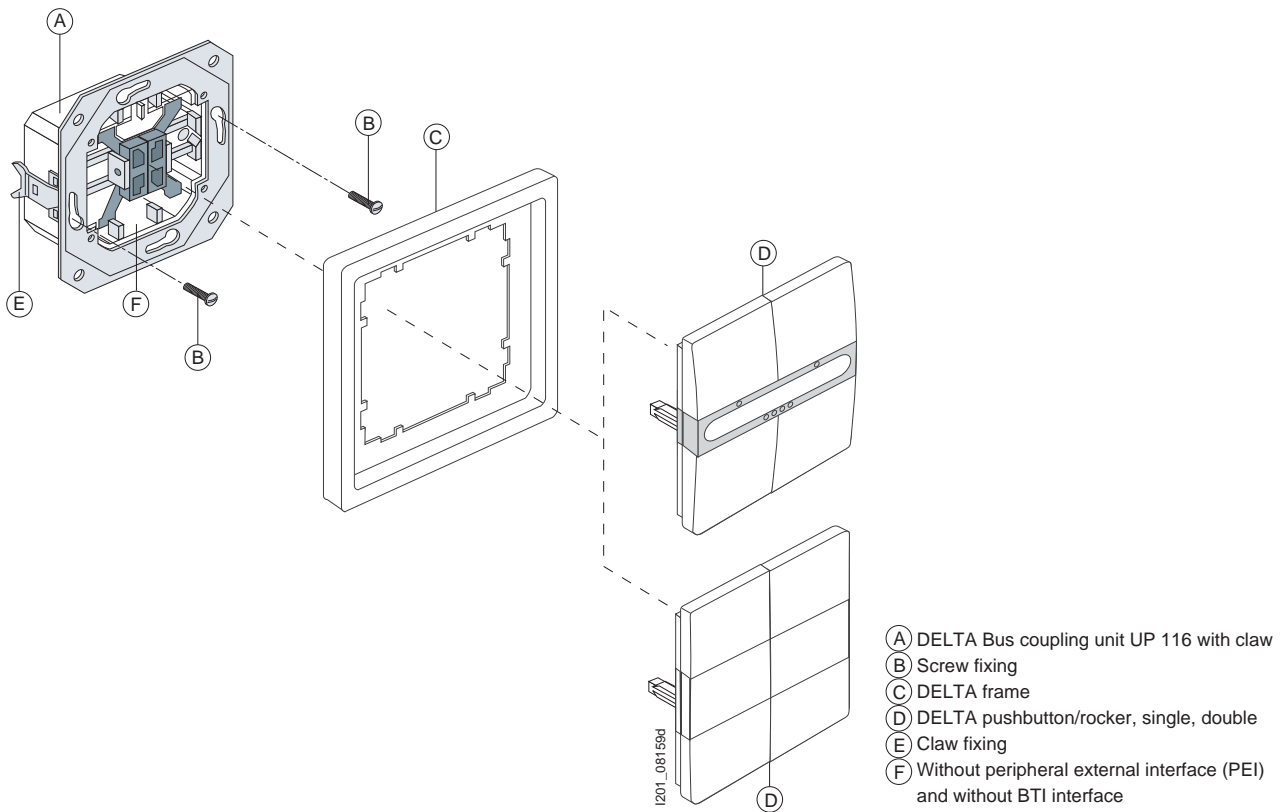
Implementation of the BTI interface (Bus Transceiver Interface) with the bus transceiver module (BTM) ensures maximum flexibility and an impressive range of functions. Bus coupling units (BTM) and flush-mounting actuators with integrated bus transceiver modules (BTM) enable the use of GAMMA display/operator interfaces, such as pushbuttons, room temperature controllers and operation units in a wide range of designs. Thus, all GAMMA instabus operator interfaces with BTI interface in the design lines i-system and DELTA style can be combined with either a bus transceiver module (BTM) or a flush-mounting actuator with bus transceiver module (BTM).

This reduces planning work and facilitates installation and commissioning. The application programs of the flush-mounting actuators are identical to those of the functionally equivalent devices from the modular room control range. This means that all devices have the same standard application program – regardless of mounting type – whether flush-mounting, with or without mounting frame – or whether designed for installation in the room control box and automation module box.



- (A) Bus transceiver module (BTM)
- (B) Flush-mounting actuator with bus transceiver module (BTM)
- (C) BTI interface
- (D) DELTA frames i-system
- (E) DELTA frames style
- (F) Pushbutton i-system
- (G) Temperature controller i-system
- (H) Pushbutton style
- (I) Temperature controller style
- (J) Touch Sensor Unit
- (K) Touch Sensor Cover

Operator interfaces with DELTA bus coupling unit



System products and accessories

Overview and selection guides

Power supply units

Fitting power supplies for every KNX system

Each bus line needs its own power supply unit. The power supply unit provides the system power necessary for the instabus KNX. The KNX system provides for decentralized and central power supply units. Central power supply units are installed as DIN rail mounted devices in distribution boards and control cabinets, while decentralized power supply units are designed for installation in junction boxes, in parapet channels or in room control boxes.

Central power supply units provide 160 mA, 320 mA or 640 mA bus current. Maximum up to two central power supply units may be attached to a single bus line. A second unit is not required unless the supply voltage at a bus device is less than 21 V. When more than 30 bus devices are installed in short bus cable distance (e.g. 10 m), e.g. in distribution boards, the power supply unit should be arranged near these bus devices. The distance between power supply unit and any of its bus devices must not exceed 350 m.

A decentralized power supply provides 80 mA bus current. This allows for decentralized solutions for self-sufficient control of a single room or, by integration of several room control islands, of a floor or even a complete building. Up to eight decentralized power supply units may be operated in parallel, such that a complete KNX bus line can be setup with e.g. eight room control boxes.

When several bus devices are installed in short bus cable distance (e.g. 10 m), e.g. in distribution boards, or in a room control box AP 641, the power supply units shall be arranged near these bus devices. The distance along the bus wire between any bus device and the closest power supply unit must not exceed 350 m. If only the decentralized power supply RL 125/23 is used, then the maximum KNX cable length in a bus line is 350 m for one, 700 m for two, and 1000 m for 3 or more decentralized power supplies RL 125/23.

In principle, central and decentralized power supply units can be operated in parallel with each other. Consideration must be taken regarding the sum of the short circuit currents of the power supply units, which must be lower than 3 amperes.

The following table shows the respective short circuit current:

Material number	Type	Short circuit current	Bus current
5WG1 125-4AB23	RL 125/23	< 0,2 A	80 mA
5WG1 125-1AB02	N 125/02	< 1,0 A	160 mA
5WG1 125-1AB12	N 125/12	< 1,0 A	320 mA
5WG1 125-1AB22	N 125/22	< 1,5 A	640 mA

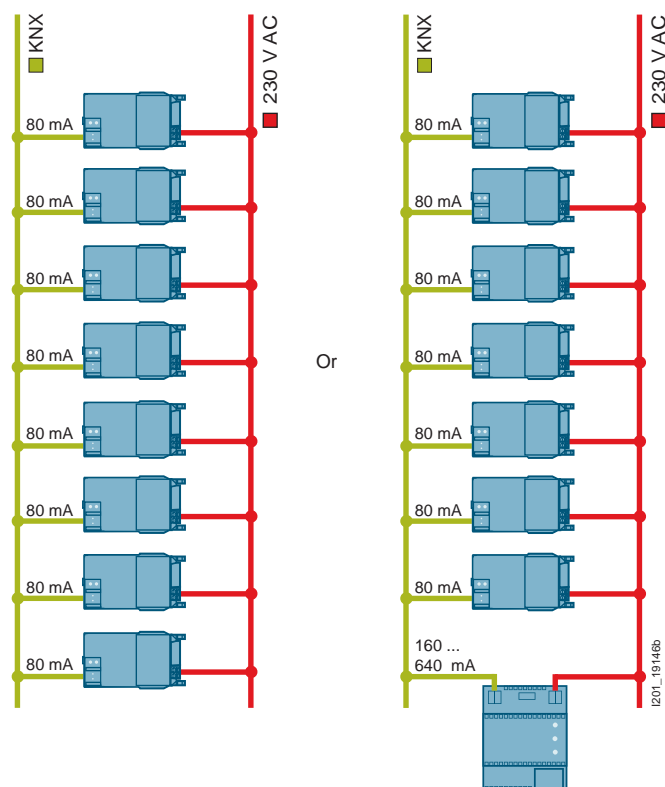
With eight decentralized power supply units RL 125/23 operated in parallel the maximum short circuit current is 1.6 A.

Additionally, it is possible to operate a power supply unit N 125/02 or N 125/12 in parallel to eight RL 125/23. Only with the power supply unit N 125/22 observe that it has a short circuit current of 1.5 A, which is why only seven decentralized power supply units can be operated in parallel.

To ensure an uninterrupted power supply a separate circuit with safety separation should be used for the power supply unit N 125/x2 power supply line.

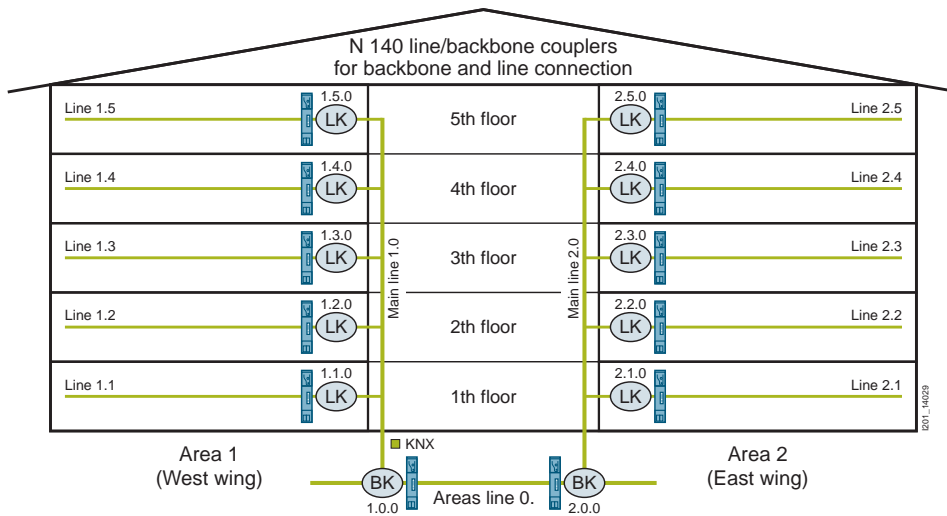
The power supply units N 125/x2 can supply DC 24 V power from an additional pair of terminals (yellow-white). This DC 24 V output voltage can be used to power e.g. an additional line via a separate choke N 120.

All power supply units N 125/x2, RL 125/23 and JB 125C23 can be powered by AC 120...230 V or by DC 220 V. A minimum cable length is not required between these power supply units from Siemens.



For example

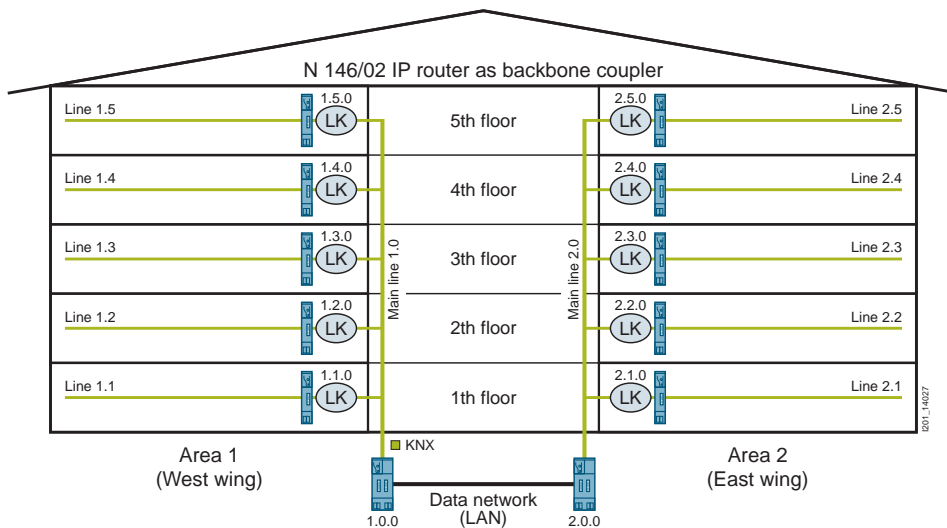
Classic topology



In conventional topologies, all line and backbone couplers have usually been designed as KNX couplers.

This topology is proven and widely used. For the most part, the bus line lengths are limited to one building.

Modern topology

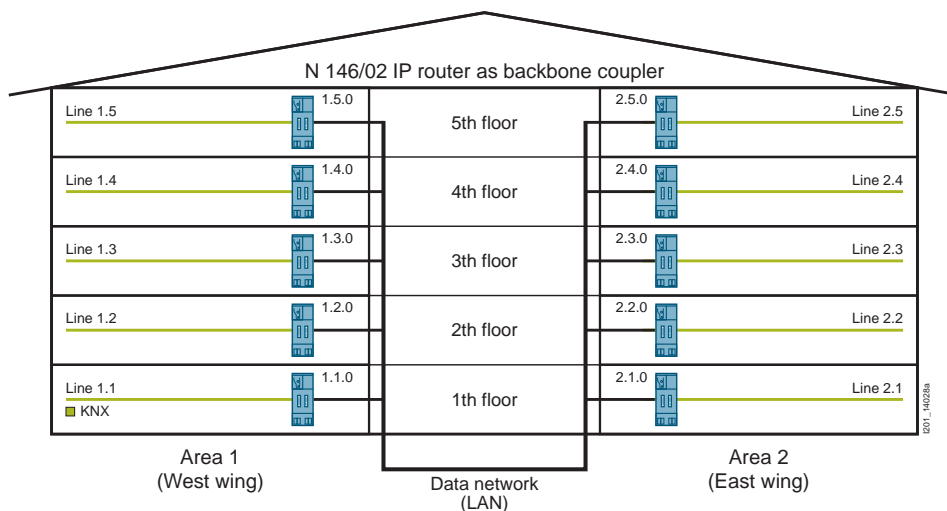


In this modern topology, the backbone couplers are replaced with N 146/02 IP routers.

Thanks to the use of standard network components, the connection for example of two building sections is no longer limited to bus line lengths.

Use of other media such as fiberoptic cabling or WLAN is also possible for the purpose of coupling distant buildings and exchanging group address telegrams.

Innovative topology






In this innovative topology, all line couplers are replaced with N 146/02 IP routers.

Backbone couplers are no longer needed. This configuration allows to connect every building floor by Ethernet (LAN) and utilize existing LAN networks.






Moreover, correct configuration of the N 146/02 IP router enables major projects to be commissioned as smaller, individual subprojects in a simpler, clearer manner.

It's possible to exchange group address telegrams despite the separation into individual projects.





Bus coupling units and accessories

			
Type	UP 117/12	UP 116/01 UP 116/21	UP 116/11 UP 116/31
Enclosure data			
For installation in flush-mounting switch and socket boxes with Ø = 60 mm	■	■	■
For mounting rockers from the DELTA product ranges		■	■
10-pole BTI socket connector (BTI: Bus-Transceiver-Interface) for plugging onto a bus terminal	■		
Dimensions			
• Width [mm]	71	71	71
• Height [mm]	71	71	71
• Depth [mm]	18	32	32
Mounting type			
Claw fixing		■	■
Screw fixing	■	■	■
Display/control elements			
LED for status indication		■	■
LED for orientation light		■	■
Bus connection			
Integrated bus coupling units	■	■	■
Bus connection via bus terminal	■	■	■

Power supply units

					
Type	N 125/02	N 125/12	N 125/22	RL 125/23	JB 125C23
Enclosure data					
Modular installation devices for mounting on TH35 EN 60715 mounting rail	■	■	■		
Device for installation in Control Module Box AP 118 or Room Control Box AP 641				■	
Device for installation in Junction Box 4" x 4"					■
Dimensions					
• Width (1 MW = 18 mm)	4 MW	4 MW	4 MW	47,8 mm	70 mm
• Height [mm]				86,5 mm	90 mm
• Depth [mm]				36,2 mm	44,6 mm
Bus connection					
Integrated chokes	■	■	■	■	■
Bus connection optional via contact system to data rail	■	■	■		
Bus connection via bus terminal	■	■	■	■	■
Outputs					
Rated operational voltage					
• V AC	120...230	120...230	120...230	120...230	120...230
• V DC	220	220	220	220	220
50...60 Hz	■	■	■	■	■
Output voltage, DC [V]	29	29	29	29	29
Output current [mA]	160	320	640	80	80
Additional unchoked output for 29 V DC, for powering a second bus line via an external choke (e. g. N 120/02)	■	■	■		
Number of decentralized power supplies installed in parallel on the same bus line	8	8	7	8	8

Network gateways

				
Type	N 148/22	N 146/02	N 152/01	N 143
Enclosure data				
Design	N	N	N	N
Modular installation devices for mounting on TH35 EN 60715 mounting rail	■	■	■	■
Width (1 MW = 18 mm)	2 MW	2 MW	4 MW	4 MW
Display/control elements				
LEDs for indicating that the device is ready-to-run, KNX communication, IP communication	■	■	■	■
Power supply				
Electronics powered via an external nominal AC/DC power supply unit for 24 V DC	■	■	DC 24 V	■
Power consumption at 24 V DC [mA]	57	57	50	60
Power supply for the electronics via "Power over Ethernet" according to IEEE 802.3af	■ (0.8 W)	■ (0.8 W)		
Bus connection				
Integrated bus coupling units	■	■	■	■
Bus connection via bus terminal	■	■	■	■
Mains connection				
Ethernet connection via RJ45 socket	■	■	■	■
Plug-in terminal block for the connection of an external power supply unit	■	■	■	■
Gateway				
Supports KNXnet/IP	■	■	■	■
Line coupler function (Routing)		■		
Interface functions (Tunneling)	4	4	1	1
Interface functions (object server)	1	1	1	
Weekly scheduling program			■	
Astro function			■	
Yearly time switching functions			■	
Event entries			■	
Logic gates			■	
Web servers			■	■

Bus transceiver modules, mounting depth 18 mm

UP 117/12

- For connection of a modular bus device to the bus line
- 10-pole BTI socket (BTI - Bus Transceiver Interface) for plugging of bus terminal devices with BTI connector
- For installation in flush-mounting switch and socket boxes with Ø 60 mm in diameter 40 mm deep
- Screw fixing
- Bus connection via bus terminal

Dimensions (W x H x D)

71 x 71 x 18 mm



Stock No.	Product No.	DT
5WG1117-2AB12	UP 117/12	A

Bus Coupling Unit (BTM), modular

UP 117B12

- Connection of modular bus device to the bus line
- 10-pole Bus Transceiver Interface (BTI) socket for clipping on an application module with BTI plug connector, with DC converter with output voltage/current of DC 5 V / 30 mA and DC 20 V / 25 mA for supply of the clipped on bus device via the bus line
- Mounting bracket for installation in a CEI wall box according to EN 60670-1 with minimum inside dimensions 89 x 52 x 40 mm (W x H x D), with screw connection
- Mounting depth 19 mm
- Bus connection via bus terminal
- Type of protection: IP20

The matching design frame must be ordered separately. See Chapter Display and Operation Units - Pushbutton accessories.

Dimensions (W x H x D)

65 x 111 x 19 mm



Stock No.	Product No.	DT
5WG1117-2BB12	UP 117B12	A

UP 117C12



Bus Coupling Unit (BTM), NEMA

- For connection of a modular bus device to the bus line
- 10-pole Bus Transceiver Interface (BTI) socket for clipping on an application module with BTI plug connector, with DC converter with output voltage / current of DC 5 V / 30 mA and DC 20 V / 25 mA for supply of the clipped on bus device via the bus line
- Mounting bracket for installation in a NEMA wall box with minimum inside dimensions 50 x 89 x 40 mm (W x H x D), with screw connection
- Mounting depth 19mm
- Bus connection via bus terminal
- Type of protection: IP 20

The matching design frame must be ordered separately. See Chapter Display and Operation Units - Pushbutton accessories.

Dimensions (W x H x D)

111 x 65 x 19 mm

Stock No.	Product No.	DT
5WG1117-2CB12	UP 117C12	A

DELTA Bus coupling unit

UP 116..

- For installation in flush-mounting switch and socket boxes with diameter = 60 mm, for Screw fixing and prepared for Claw fixing
- LED per pushbutton pair for status indication or configurable as orientation light
- Mounting of rockers from the DELTA product ranges
- Integrated bus coupling units, bus connection via bus terminal

Dimensions (W x H x D)

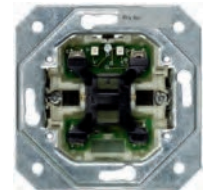
71 x 71 x 32 mm

DELTA bus coupling unit, single, intermediate position, with 2 LEDs

UP 116/01

- One Rocker button, intermediate position (pushbutton with 2 operating points)
- The following functions can be assigned per operating point as required:
 - Switching on/off/over
 - Dimming with stop telegram (4-bit) Short button press, on/off Long button press, brighter/darker
 - Dimming with cyclic transmission (4-bit) Short button press, on/off Long button press, brighter/darker
 - Shutter/blind control Short button press, slat open/closed or stop Long button press, up/down
 - Store and call up scene, 1-bit in conjunction with scene module
 - Short or long button press (store/call up scene), configurable
 - Display of any status objects (1-bit)
 - Display of pushbutton objects

The required single or multiple rocker (with or without window) must be ordered separately.



Stock No.	Product No.	DT
5WG1116-2AB01	UP 116/01	A

DELTA bus coupling unit, double, intermediate position, with 2 LEDs

UP 116/11

- Two Rocker button, intermediate position (pushbutton with 2 operating points)
- The following functions can be assigned per operating point as required:
 - Switching on/off/over
 - Dimming with stop telegram (4-bit) Short button press, on/off Long button press, brighter/darker
 - Dimming with cyclic transmission (4-bit) Short button press, on/off Long button press, brighter/darker
 - Shutter/blind control Short button press, slat open/closed or stop Long button press, up/down
 - Store and call up scene, 1-bit in conjunction with scene module
 - Short or long button press (store/call up scene), configurable

The required single or multiple rocker (with or without window) must be ordered separately.



Stock No.	Product No.	DT
5WG1116-2AB11	UP 116/11	A

System products and accessories

System products

Bus coupling units and accessories

UP 116/21



DELTA bus coupling unit, single, pushbutton position, with 2 LEDs

- One Rocker button, pushbutton position (pushbutton with 1 operating point)
- Optional assigned functions Switching on/off/over
- Display of pushbutton objects

The required single or multiple rocker (with or without window) must be ordered separately.

Stock No.	Product No.	DT
5WG1116-2AB21	UP 116/21	A

UP 116/31



DELTA bus coupling unit, double, pushbutton position, with 2 LEDs

- Two Rocker button, pushbutton position (pushbutton with 1 operating point)
- The following functions can be assigned per operating point as required:
 - Switching on/off/over
 - Dimming with stop telegram (4-bit) Short button press, on/off Long button press, brighter/darker
 - Dimming with cyclic transmission (4-bit) Short button press, on/off Long button press, brighter/darker
 - Shutter/blind control Short button press, slat open/closed or stop Long button press, up/down
 - Display of pushbutton objects

The required single or multiple rocker (with or without window) must be ordered separately.

Stock No.	Product No.	DT
5WG1116-2AB31	UP 116/31	A

Accessories for UP 116..

Product Title	Stock No.	Product No.	DT
Sealing sets for rockers, IP44, for single or double rockers	5TG4324	5TG4324	B

Power supply unit**N 125/..2**

- Integrated chokes
- Bus connection via bus terminal or contact system to data rail
- Rated operational voltage 120...230 V AC, 50...60 Hz, 220 V DC
- Output voltage 29 V DC
- Additional unchoked output for 29 V DC, for powering a second bus line via an external choke N 120/2
- Modular installation devices for mounting on TH35 EN 60715 mounting rail

Dimension width (1 MW = 18 mm)

4 MW

**Range overview N 125/..2**

Product Title	Stock No.	Product No.	DT
Power supply unit DC 29 V, 160 mA with additional unchoked output, N 125/02	5WG1125-1AB02	N 125/02	A
Power supply unit DC 29 V, 320 mA with additional unchoked output, N 125/12	5WG1125-1AB12	N 125/12	A
Power supply unit DC 29 V, 640 mA with additional unchoked output, N 125/22	5WG1125-1AB22	N 125/22	A

Decentralized power supply, 80 mA, AC 230 V**RL 125/23**

- Integrated choke
- Output voltage 29 V DC
- Output current 80 mA
- Connection of choke-protected output voltage via a plug-in extra-low voltage terminal or bus terminal
- Type of protection: IP 20 (installed)
- Rated operational voltage AC 120...230 V, 50...60 Hz, DC 220 V
- For mounting in AP 118 automation module box or AP 641 room control box

The AP 641 room control box and AP 118 automation module box must be ordered separately.
See Chapter Modular Installation System - Room control box - Module boxes.

Dimensions (W x H x D)

86,5 x 47,8 x 36,2 mm



Stock No.	Product No.	DT
5WG1125-4AB23	RL 125/23	A

Decentralized Power Supply, 80 mA, AC 120 V**JB 125C23**

- Integrated choke
- Output voltage 29 V DC
- Output current 80 mA
- Connection of choke-protected output voltage via a plug-in extra-low voltage terminal or bus terminal
- Type of protection: IP 20 (installed)
- Rated operational voltage AC 120 V, 50...60 Hz
- Built-in device with 1/2 inch thread connection for mounting to or in a UL/NEMA Junction Box with feedthrough of the function wires through the 1/2 inch threaded connector

Dimensions (W x H x D)

70 x 90 x 44,6 mm



Stock No.	Product No.	DT
5WG1125-4CB23	JB 125C23	A

N 120/02



Choke, 640 mA

- For operation with a KNX power supply without integrated choke or for connection to the unchoked output of the KNX N 125/x2 power supplies
- Contact system for data rail
- Low-voltage terminal for unchoked voltage and bus
- Modular installation devices for mounting on TH35 EN 60715 mounting rail

The optional data rail must be ordered separately.

Dimension width (1 MW = 18 mm) 2 MW

	Stock No.	Product No.	DT
	5WG1120-1AB02	N 120/02	A

4AC2402



Electronic power supply unit, 350 mA

- Max. cable length between power supply unit and weather system: 100 m
- Rated operational voltage 85...265 V AC (50/60 Hz), 85...300 V DC
- Rated secondary voltage 24 V DC, + 5 %,
- Residual ripple < 100 mV
- Rated secondary current 0.35 A
- Electronic overload protection
- Permissible ambient operating temperature: - 20...+60 °C
- Degree of protection: IP20
- For mounting on EN 60715-TH35-7.5 mounting rail

	Stock No.	Product No.	DT
	4AC2402	4AC2402	B

Line/backbone coupler**N 140/..3**

- For data exchange between two KNX bus lines with telegrams of up to 64 byte
- For use as line coupler for connecting a line to the main line or as backbone coupler for connecting a main line to the backbone line or as repeater for connecting two segments of the same line, with electrical isolation of the two bus lines
- Loadable filter table for control of the data exchange between the two bus lines
- Additional loadable filter table for telegrams with LTE addressing
- Detection of a communication fault on the lower-level line and signaling to the higher-level line
- 3 LEDs for display of availability and receipt of a telegram per line
- Power supply from the main line
- Modular installation devices for mounting on TH35 EN 60715 mounting rail

Line/backbone coupler for data rail**N 140/03**

Bus connection to the line and to the main line via bus terminal.

The needed data rail must be ordered separately.

Dimension width (1 MW = 18 mm)

1 MW

Bus connection

Via bus terminal

Via data rail



Stock No.	Product No.	DT
5WG1140-1AB03	N 140/03	A

Line/backbone coupler**N 140/13**

With bus connection to the line via contact system for data rail and to the main line via bus terminal.

Dimension width (1 MW = 18 mm)

2 MW

Bus connection

Via bus terminal



Stock No.	Product No.	DT
5WG1140-1AB13	N 140/13	A

N 146/02

IP Router



- LEDs for indicating that the device is ready-to-run, KNX communication, IP communication
- Supports KNXnet/IP
- Line coupler function (Routing)
- 4 Interface functions (Tunneling)
- 1 Interface functions (object server)
- Electronics powered via "Power over Ethernet" according to IEEE 802.3af or alternatively by an external safety extra low voltage power supply for AC/DC 24 V, 57 mA
- Ethernet connection via RJ45 socket
- Plug-in terminal block for the connection of an external power supply unit
- Integrated bus coupling units, bus connection via bus terminal
- Modular installation devices for mounting on TH35 EN 60715 mounting rail

The external 24 V AC/DC power supply unit must be ordered separately (e. g. 4AC2402).

Dimension width (1 MW = 18 mm)

2 MW

Stock No.	Product No.	DT
5WG1146-1AB02	N 146/02	A

Accessories for N 146/02

Product Title	Stock No.	Product No.	DT
Electronic power supply unit, 350 mA	4AC2402	4AC2402	B
LOGO! Power 24 V/1.3 A	6EP3331-6SB00-0AY0	LOGO!POWER 24 V/1,3 A	A

IP interface**N 148/22**

- LEDs for indicating that the device is ready-to-run, KNX communication, IP communication
- Electronics powered via an external nominal 24 V AC/DC power supply unit
- Power consumption at 24 V DC, 57 mA
- Power supply for the electronics via „Power over Ethernet“ according to IEEE 802.3af
- Integrated bus coupling units, Bus connection via bus terminal
- Ethernet connection via RJ45 socket
- Plug-in terminal block for the connection of an external power supply unit
- Supports KNXnet/IP
- 4 Interface functions (Tunneling)
- 1 Interface functions (object server)
- Modular installation devices for mounting on TH35 EN 60715 mounting rail



The external 24 V AC/DC power supply unit must be ordered separately (e. g. 4AC2402).

Dimension width (1 MW = 18 mm) 2 MW

	Stock No.	Product No.	DT
	5WG1148-1AB22	N 148/22	A

Accessories for N 148/22

Product Title	Stock No.	Product No.	DT
Electronic power supply unit, 350 mA	4AC2402	4AC2402	B
LOGO! Power 24 V/1.3 A	6EP3331-6SB00-0AY0	LOGO!POWER 24 V/1,3 A	A

IP Router**N 146/02**

- LEDs for indicating that the device is ready-to-run, KNX communication, IP communication
- Supports KNXnet/IP
- Line coupler function (Routing)
- 4 Interface functions (Tunneling)
- 1 Interface functions (object server)
- Electronics powered via "Power over Ethernet" according to IEEE 802.3af or alternatively by an external safety extra low voltage power supply for AC/DC 24 V, 57 mA
- Ethernet connection via RJ45 socket
- Plug-in terminal block for the connection of an external power supply unit
- Integrated bus coupling units, bus connection via bus terminal
- Modular installation devices for mounting on TH35 EN 60715 mounting rail



The external 24 V AC/DC power supply unit must be ordered separately (e. g. 4AC2402).

Dimension width (1 MW = 18 mm) 2 MW

	Stock No.	Product No.	DT
	5WG1146-1AB02	N 146/02	A

Accessories for N 146/02

Product Title	Stock No.	Product No.	DT
Electronic power supply unit, 350 mA	4AC2402	4AC2402	B
LOGO! Power 24 V/1.3 A	6EP3331-6SB00-0AY0	LOGO!POWER 24 V/1,3 A	A

N 152/01



IP Control Center

Visualisation controller for full-graphic visualizations on web-compatible end devices such as PCs, tablets and smart phones with a standard web browser.

For communication between KNX devices and PCs and, in connection with a LAN-/WLAN modem or DSL router, for remote access to a KNX installation, for usage as an interface for the ETS 3/4/5 and as an interface for a visualization, with usage of the KNXnet/IP protocol, with the following simultaneously usable functions:

- Web server for operating and monitoring up to 1250 statuses and values transmitted by the KNX network, which can be displayed using a standard browser on PCs, tablets, or smartphones connected to the IP network
- Special web page for firmware upgrade
- Graphical web editor for a creation of fully graphical visualization with control and display elements, configurable in various styles
- Smart editor for the creation of a visualisation, tuned for mobile browsers, smartphones, tablets with control and display elements, configurable in various styles and layouts
- Annual timer, with astronomical calendar, for 300 time switch schedules with up to 30 time switch commands per time switch schedule
- Scene module with up to 5000 scenes or events
- Chart module for recording and reporting of up to 10 data points
- Monitoring module for monitoring and storage of up to 1000 events into a ring buffer
- IP interface for control of up to 20 IP-devices via up to 20 TCP/UDP commands per IP-device
- Fully graphical logic module with up to 1000 logic functions
- Alarm function for up to 250 different alarms
- E-mail function, with up to 20 contacts, for transmission of chart data from chart module, logged data from monitoring module or alarm data
- Ethernet interface 10/100 Mbits/s with RJ45 socket for connection to the IP network using the Internet Protocol
- 2 LED displays for IP connection/communication and for error messages
- Integrated bus connector and bus terminal for connection to a KNX network
- Power supply of the electronics by an external voltage source for DC 24 V, 50 mA
- Series installation device for mounting on support rails TH35 DIN EN 60715

Dimension width (1 MW = 18 mm)

4 MW

Stock No.	Product No.	DT
5WG1152-1AB01	N 152/01	A

Accessories for N 152/01

Product Title	Stock No.	Product No.	DT
Electronic power supply unit, 350 mA	4AC2402	4AC2402	B
LOGO! Power 24 V/1.3 A	6EP3331-6SB00-0AY0	LOGO!POWER 24 V/1,3 A	A

IP Gateway KNX/BACnet**N 143/01**

- BACnet Application Specific Controller (B-ASC) as Gateway between KNX TP and BACnet IP
- Up to 250 BACnet objects
- Up to 455 BACnet COV subscriptions
- Automatic translation of KNX communication objects into BACnet objects according to the configuration with ETS
- For communication between KNX EIB devices and PCs or other devices with Ethernet (10BaseT) interface, as well as in conjunction with a LAN modem or DSL router for remote access to an KNX EIB installation
- For use as an interface e.g. for ETS3 or for visualization software
- Use the KNXnet/IP protocol
- KNXnet/IP Tunneling connection for parallel bus access by ETS and further PC software
- ObjectServer connection for visualization via network connections with long signal transmission duration
- Assignment of the network parameters by the installer using ETS, or automatically by a DHCP server in the network
- 2 LEDs for display of operational availability and IP communication
- Additional power supply by an external safety extra low voltage power supply for AC/DC 24 V, 40 mA
- Pluggable terminal block for connection of external power supply unit (not included)
- Integrated bus coupling unit with bus connection via bus terminal
- Ethernet connection via RJ45 socket
- Mounting on DIN rail EN 60715-TH35-7.5



Dimension width (1 MW = 18 mm)

4 MW

Stock No.

Product No.

DT

5WG1143-1AB01

N 143/01**A**

System products and accessories

System accessories

Bus terminals

S 193/01



Bus terminal, 2-pole, 4 plug-in connectors, red/dark gray

- For connection of bus devices to the bus cable
- For connection of up to 4 bus cables
- Comprising two engaged clamp parts + (red) and - (dark gray), each with 4 screwless plug-in terminals per clamp part for solid conductors, Ø 0.6 mm...0.8 mm

Dimensions (W x H x D)

10 x 12.4 x 10 mm

Stock No.	Product No.	DT
5WG1193-8AB01	S 193/01	A

Overvoltage protection, as fine protection for bus devices

S 190/01

- For the overvoltage fine protection of bus devices
- For inserting in a bus device instead of a 193 bus terminal or for direct connection to a bus terminal
- For surge protection through connection of the yellow/green ground conductor to the next grounding point
- 2 socket contacts (1 mm Ø) for insertion in bus devices
- 2 solid wires (0.8 mm Ø) for connection to the bus terminal
- A solid wire (0.75 mm Ø) for surge protection
- Rated voltage 24 V DC
- Rated current 6 A
- Rated discharge surge current 5 kA
- Protection level 350 V



Dimensions (W x H x D)

11.6 x 10.5 x 11.1 mm

Stock No.	Product No.	DT
5WG1190-8AD01	S 190/01	A

Home Automation System



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Home Automation System

Overview and selection guides

Product range overview Synco™ living

Central apartment unit (1)



The heart and brain of the system. From here you can control all different functions for up to 12 rooms quickly and easily and monitor them via the display.

Room unit / room temperature sensor (2)



The room unit measures the room temperature and allows the settings entered into the central apartment unit, such as temperature and operating parameters, to be adjusted for individual rooms. The comfort settings can be extended at the push of a button. The room temperature sensor measures the room temperature and communicates this by radio to the central apartment unit.

Radiator control actuator (3)



The radiator control actuator receives the pre-set desired temperature for this room by radio signal from the central apartment unit and regulates room temperature by adjusting the radiator valve. It can also be regulate up to 5 additional radiators per room, thereby ensuring an even temperature between radiators.

Heating circuit controller / Multicontroller (4)



The heating circuit controller compares the actual values and setpoints for each room communicated from the central apartment unit via RF and regulates the temperature by adjusting the valve settings of the heat distributor. The multicontroller is for precontrol of up to 2 independent hydraulic room groups (e.g. radiators, floor heating) or for control of ventilation plant with up to 3 stages.

Web server (5)



The web server connects the home automation system to the internet. It allows you to access and operate the system from a remote location via Smartphone, tablet or PC. With the HomeControl app from Siemens, you have an intuitive and simple control for your heating, air conditioning and ventilation system, as well as light and shading control. Alarm messages, reports and consumption data can be sent to email recipients as required.

Consumption data interface (6)



The consumption data interface collects consumption data of heat/cool energy, electricity, water and gas.

Meteo sensor (7)



The meteo sensor acquires the outside temperature and atmospheric pressure and communicates this via RF to the central apartment unit.

Lighting and blind control (8)



Convenient control of lighting and blinds – centrally, locally in the room, or as a scene. Naturally, the components can also be operated automatically, e.g. via time programs or simulation of presence.

Door / window contact (9)



The door / window contact monitors the status of windows, doors and gates and transmits the relevant data to the central apartment unit. In the case of deviations from the norm, the system can alert you in a variety of ways. In addition, it saves energy and stay comfortable.

Use Synco™ living – and technology becomes your valued companion in the house

Synco™ living is the outstanding modular Homeautomation system from Siemens. It offers central operation and adapts all parameters for comfortable living, such as optimum room temperatures, air and light conditions, safety and security, plus economical use of energy and financial resources, to individual needs. The system can be dynamically matched to changing living conditions. Information within the system is transmitted either wire-bound (KNX TP) or via radio (KNX RF).

To be able to satisfy all kinds of requirements in the residential sector, today's Homeautomation systems must be compatible with a large number of systems on the market. Synco™ living offers absolute openness. This means that – now or later – you can integrate almost any type of system into your Synco™ living configuration conforming to international KNX standard.

More information about Synco living see www.siemens.com/syncoliving



Home Automation System

Overview and selection guides

Home automation system

Synco living – more comfort at home

Synco living is specially tailored to the needs of private areas. The unique home automation system unites all functions such as heating, ventilation, lighting, blinds, security technology as well as consumption data acquisition. All components can be integrated wired or wireless in a flexible way. The control in line with the demand allows up to 30% less heating energy use – and lower CO2 emissions for your home. Synco living fulfils all requirements to achieve energy efficiency class A in accordance with EN 15232. In addition the eu.bac certification demonstrates proven quality and energy efficiency according to European standards and directives.

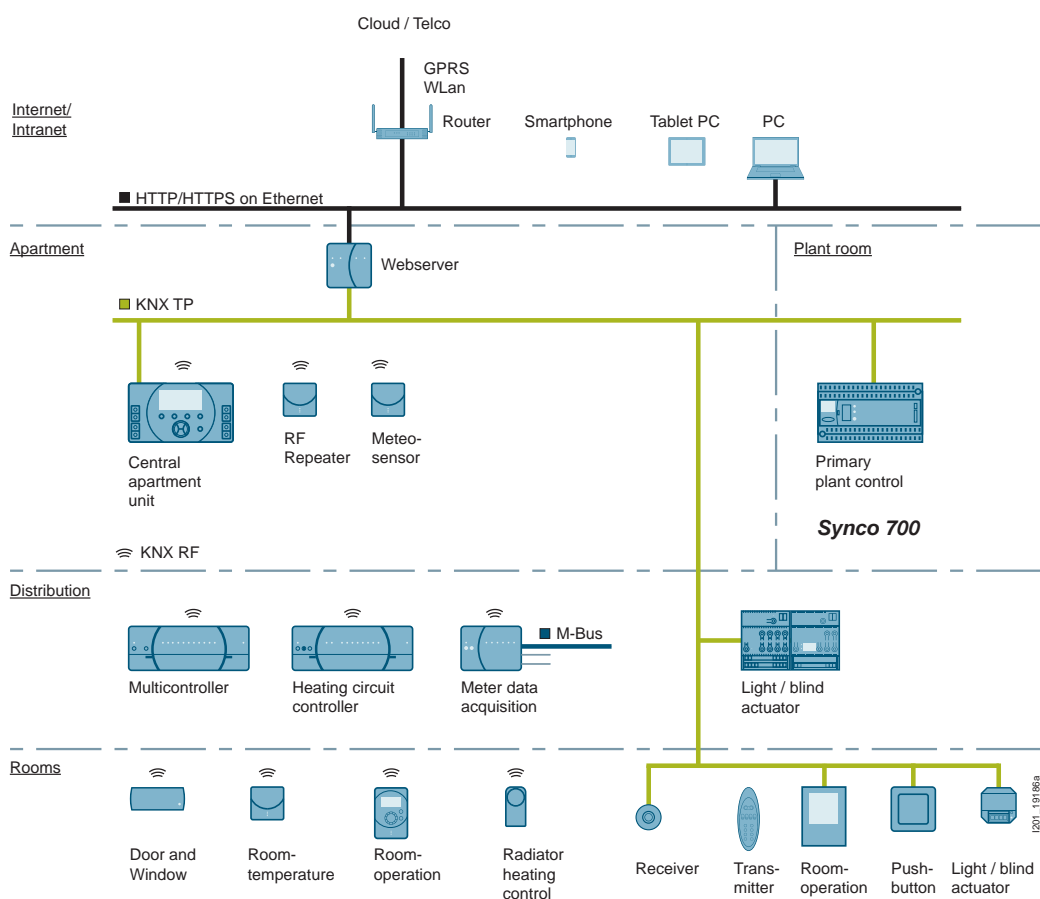
Synco operating – efficient operation of plant with straightforward remote control

Thanks to Synco's Web server, plant operation and monitoring can be effected from a PC or Smartphone at any time and from any location. An alarm system delivers fault status or maintenance messages in due time, also via SMS or e-mail, if required. The app allows operation from under-way or from the sofa.

Monitored energy efficiency

The energy indicator monitors end user settings, shows exceeded limit values and reports them to the residents periodically via e-mail or app. A leaf symbol shows the energy status for each setting: Green means that the setting is correct from an energetic point of view; orange signals that a setting is energetically unfavorable. This way, each deviation is made transparent and visible at all times.

Communication-Network



Synco living

GAMMA

GAMMA - The tried-and-tested building control

Building GAMMA instabus control enables all components in house and building control systems to be networked flexibly via the two wires of the bus cable. Whether you want to realize highly complex multi-utility systems or are looking for small solutions – this technology can be adapted to your individual requirements.

Synco 700 – versatile HVAC controller range of modular design

Being the heart for manages the primary energy plant. This modular product range controls and monitors the HVAC plant. Installation and commissioning work can be performed quickly and efficiently: The extension modules simply click onto the controllers. Thanks to standard applications integrated in the controllers, there is no need for programming. The documentation gives you an overview of all integrated applications. Also, customized configurations can be made very straightforwardly.

Overview

	AP 260/11	ERF910	OZW772..	QAA910	QAC910	QAW910	QAW912	QAX903-9	QAX913-9	RRV912	RRV918	RRV934	SSA955	WR1982
Type														
Enclosure data														
Dimension														
• Width [mm]	87	84	87.5	84	80	84	84	84	230	230	180	245	245	120
• Height [mm]	36	84	90	84	92	84	130	130	130	98	98	98	95	90
• Depth [mm]	27	23	40	23	50	23	23.6	23.6	29.7	29.7	50	50	80.6	50
Mounting														
Wall mounting														
• With screws	■	■	■	■	■	■	■	■	■	■	■	■		■
• Adhesive fastening	■													
On TH35 EN 60715 mounting rail			■								■	■	■	■
Direct mounting on valve														
• M30 x 1.5 Siemens													■	
• With adaptors for other manufacturers													■	
Display/control elements														
Pushbuttons	1	1	2	1		1	1	1	5	5	2	2	2	2
• Operating mode									■	■				
• Apartment timer									■	■				
• Absence									■	■				
• Domestic hot water/ventilation									- / ■	■ / ■				
• Info pages									■	■				
• Programming RF	■	■		■		■	■	■	■	■	■	■	■	■
• Addressing mode			■											
• Remote-button			■											
Two-way pushbuttons									4					
• Switching									■					
• Dimming									■					
• Shutter/Blind									■					
• Scene									■					
• Info pages									■					
Display														
LCD with rotary switch							■	■						
LCD with menu control									■	■				
LED status display	1	1	4	1		1	1	1			8	12	13	7
• Channel status											■	■	■	■
• Communication status	■	■	■	■		■	■	■	■	■	■	■	■	■
• Power supply status											■	■	■	■
• Operation , portal connection and „Energy indicator“			■											
• Fault			■											
• Addressing mode bus			■											
Power supply														
Electronics powered via an integrated power supply unit for supply voltage									■	■	■	■	■	■
Electronics powered via an external 230 V AC wall power supply (enclosed)		■	■											
Electronics powered by alkaline cells LR6 (AA), 1.5 V (enclosed)				2 x		2 x	2 x	2 x					3 x	
Electronics powered by a lithium battery ½ AA, 3.6 V (enclosed)	1 x													
Bus connection														
Integrated bus coupling unit			■						■	■				
Bus connection via screw terminal			■						■	■				
KNX RF with integrated antenna	■	■		■		■	■	■	■	■	■	■	■	■

Home Automation System




Technical specification

Overview

... Continuation of the table

Type	AP 260/11	ERF910	OZW772..	QAA910	QAC910	QAW910	QAW912	QAX903-9	QAX913-9	RRV912	RRV918	RRV934	SSA955	WRI982
Inputs														
Universal inputs	1							1	1	1	1	4		
• Digital 0/1	■							■	■	■	■	■		
• LG-Ni1000								■	■	■	■	■		
• DC 0...10 V												■		
Pulse inputs														2
• Reed contact														■
• Reed contact with NAMUR-circuitry														■
M-Bus channels														3
Selected M-Bus meters														■
Outputs														
Universal outputs										1		2		
DC 0...10 V (max. DC 1 mA)										■		■		
Relay outputs								1	1	2	1	4 / 5		
• Universal								■	■	■	■	■		
• 3-position actuator												■		
NO contact, AC 24...230 V, AC 0,02...2 (2) A								■	■	■	■	■		
Controller outputs										2	8			
• PWM, NO or NC										■	■			
• 3-position										■				
TRIAC, AC 230V, AC 5..30 mA										■	■			

Central functions

Type	Central apartment unit		Multicontroller
	 QAX903-9	 QAX913-9	 RRV934
Basis function			
Clock with power reserve	■	■	
Meteorological forecast	■	■	
Warning messages and failure indication	■	■	
Device supervision	■	■	
Activation			
• Present / absent	■	■	
• Partial or entire monitoring		■	
Monitoring functions			
Fault inputs via RF and TP		■	
Monitoring delay		■	
Triggering of switching groups / scenes		■	
Tripping of cut-off valves		■	
Announcement delay		■	
Fault outputs via RF and TP		■	
Light, blind and scene control			
Switching, dimming		■	
Open, close, steps		■	
Triggering		■	
Time program including absent logic		■	
Twilight control		■	
Presence simulation		■	
HVAC apartment functions			
Setpoint limitation (heating, cooling)	■	■	
Antilime function	■	■	
Outside temperature controlled...			
• night setback	■	■	
• minimum flow setpoint	■	■	
Summer operation mode with predefined valve position			
• Manuel	■	■	
• Fixed date	■	■	
• Outside temperature dependent	■	■	
• Digital input	■	■	



Home Automation System

Technical specification







Central functions

... Continuation of the table			
Type	Central apartment unit		Multicontroller
	QAX903-9	QAX913-9	RRV934
Domestic hot water			
• Charge, changeover, release		■	
• Temperature control		■	
• Time program		■	
Floor cooling			
• Override of room controller	■	■	
• Flow temperature control with cooling curve	■	■	
• Dew point monitoring			■
• Cooling demand per room group			■
Domestic ventilation			
• Fan steps	3	3	3
• Night cooling	■	■	
• Operation-hour counter / maintenance message	■	■	
Superordinated HVAC functions			
Demand signals			
• Heat request, switching / continuous	■ / ■	■ / ■	
• Refrigeration request, switching / continuous	■ / ■	■ / ■	
Room groups / zone control			
• Room group pump	■	■	■
• Flow temperature control			■
• Flow temperature limitation			■
• Return temperature limitation			■

Individual room control

Type	Central apartment unit	
		
	QAX903-9	QAX913-9
HVAC room functions		
Number of rooms / zones	12	12
Heating setpoints and room operation modes	■	■
Cooling setpoints and room operation modes	■	■
Weekly time program	■	■
Room unit / room temperature sensor with averaging	1 + 2	1 + 2
Window monitoring	■	■
Parallel operation		
• Heating circuits	■	■
• Radiator control actuator	■	■
Refrigeration release	■	■
Control of external air con	■	■

Individual room control





Type	Radiator control actuator	Heating circuit controller		Room temperature sensor / Room unit		Door / window contact
						
	SSA955	RRV912	RRV918	QAA910	QAW910	AP 260/11
Room control						
Sensor						
• Room temperature	■ ¹⁾			■	■	
• Window contact (intern + terminal block)						■
Control						
• Operation modes with individual setpoint	■	■	■			
• PID control	■	■	■			
• Thermal actuator		■	■			
• Electromotoric actuator	■	■				

¹⁾ Limited temperature measurement accuracy due to mounting condition

Home Automation System

Technical specification

Consumption data acquisition

Consumption data acquisition				
	Consumption data interface	Central apartment unit		Web server
				
Type	WRI982	QAX903-9	QAX913-9	OZW772..
Inputs				
Pulse inputs	2			
• Reed contact	■			
• Reed contact with NAMUR circuitry	■			
M-bus channels	3			
Selected M-Bus meters	■			
Display				
Type of meters				
• Heat and / or cooling energy meter		4	4	■
• Cold water meter		4	4	■
• Hot water meter		4	4	■
• Power meter		3	3	■
• Gas meter		3	3	■
• Other meter		2	2	■
Functions				
Current value	■	■	■	■
Monthly values, due date values	■	■	■	■
Billing data transmission		■	■	■
Reporting				
Consumption data file				
• Remote read out via Web				■
• Periodical transmission to email receivers				2
• Encryption				■

Central apartment unit for HVAC and energy consumption data collection

QAX903-9

The central apartment unit serves as an operator and display unit for an apartment. It manages individual room control (heating/cooling) of up to 12 rooms, comfort ventilation, precontrol, control of air conditioning equipment, and acquires the consumption data of heat, water, electricity and gas.



- Management of heating and cooling control for one apartment
- Suited for heating and cooling plants with central distribution (e.g. underfloor heating) and radiators with decentral connections
- Selection of operating mode, timer and holidays / special day function for the apartment
- Independent time switches and operating modes for 12 rooms
- Flow temperature control of 2 independent room groups including limitation (min. / max.) and maintained return temperature (high / low)
- Increase of economy room temperature setpoint and minimum flow temperature setpoint depending on the composite outside temperature
- Collection of heat / cooling requests from the individual rooms and forwarding the requests to the heat/cooling sources via wired bus, heat/cooling demand relay or DC 0...10 V output to the RRV912 or RRV934
- Absence function (heating, cooling, ventilation)
- Management of 3-stage ventilation plant via RRV934 multicontroller, incl. night cooling
- Control of air conditioners (split units) via universal outputs (locally and RRV91x) or via S-Mode (KNX TP)
- Collection of meter data (heat / cool, electricity, water, gas) to support automated meter reading & billing
- Display of meteorological data
- Presentation of key data on info pages
- Plain text output in bg, cs, de, dk, el, en, es, fi, fr, hr, hu, it, nl, no, pl, pt, ro, ru, sk, sl, sr, sv, tr
- Wireless communication with the devices of Synco living product ranges
- Remote access via Siemens web server OZW772.xx
- Intuitive and simple control with Android or IOS App

Data sheet	N2741
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	7 VA
Display	Full graphic backlit display
Communication	KNX RF-compatible, 868.3 MHz bidirectional (RF) and KNX TP (wired bus)
Indoor wireless range	30 m
Universal inputs, number	1
Universal inputs	Digital 0/1 LG-Ni1000
Universal input, signal	Digital 0/1 LG-Ni1000
Relay outputs, number	1
Relay output, switching voltage	AC 24...230 V NO - contact
Relay output, switching current	AC 0.02...2 (2) A
Mounting	With screws
Degree of protection	IP20D
Dimensions (W x H x D)	230 x 130 x 29.7 mm

	Stock No.	Product No.	DT
	S55621-H125	QAX903-9	A

Manuals in several languages are available for download as PDF files from www.siemens.com/syncliving-td

QAX913-9



Central apartment unit with energy consumption data collection

The central apartment unit serves as an operator and display unit for an apartment. It manages individual room control (heating/cooling) of up to 12 rooms, comfort ventilation, precontrol and DHW control, control of air conditioning equipment, and acquires the consumption data of heat, water, electricity and gas. Additional functions include the control of lights and blinds. Door and window contacts plus smoke detectors and water monitors can be integrated for monitoring purposes.

- Management of heating and cooling control for one apartment
- Suited for heating and cooling plants with central distribution (e.g. underfloor heating) and radiators with decentral connections
- Selection of operating mode, timer and holidays / special day function for the apartment
- Independent time switches and operating modes for 12 rooms
- Flow temperature control of 2 independent room groups including limitation (min. / max.) and maintained return temperature (high / low)
- Increase of economy room temperature setpoint and minimum flow temperature setpoint depending on the composite outside temperature
- Collection of heat / cooling requests from the individual rooms and forwarding the requests to the heat/cooling sources via wired bus, heat/cooling demand relay or DC 0...10 V output to the RRV912 or RRV934
- Absence function (heating, cooling, ventilation, lights) with simulation of presence (lights)
- DHW heating with time switch and selection of operating mode
- Management of 3-stage ventilation plant via RRV934 multicontroller, incl. night cooling
- Control of air conditioners (split units) via universal outputs (locally and RRV91x) or via S-Mode (KNX TP)
- Collection of meter data (heat / cool, electricity, water, gas) to support automated meter reading & billing
- Operation of lights and blinds via 4 softkeys, time switch and events
- Monitoring door contacts, window contacts and smoke detectors
- Display of meteorological data
- Presentation of key data on info pages
- Plain text output in bg, cs, de, dk, el, en, es, fi, fr, hr, hu, it, nl, no, pl, pt, ro, ru, sk, sl, sr, sv, tr
- Remote access via Siemens web server OZW772.xx
- Intuitive and simple control with Android or IOS App

Data sheet	N2740
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	7 VA
Display	Full graphic backlit display
Communication	KNX RF-compatible, 868.3 MHz bidirectional (RF) and KNX TP (wired bus)
Indoor wireless range	30 m
Universal inputs, number	1
Universal inputs	Digital 0/1 LG-Ni1000
Universal input, signal	Digital 0/1 LG-Ni1000
Relay outputs, number	1
Relay output, switching voltage	AC 24...230 V NO - contact
Relay output, switching current	AC 0.02...2 (2) A
Mounting	With screws
Degree of protection	IP20D
Dimensions (W x H x D)	230 x 130 x 29.7 mm

Stock No.	Product No.	DT
S55621-H126	QAX913-9	A

Manuals in several languages are available for download as PDF files from www.siemens.com/syncoliving-td

Web server for QAX9..

Product Title	Data sheet	Stock No.	Product No.	DT
Web server for 1 Synco device	N5701	BPZ:OZW772.01	OZW772.01	A
Web server for 4 Synco devices	N5701	BPZ:OZW772.04	OZW772.04	A
Web server for 16 Synco devices	N5701	BPZ:OZW772.16	OZW772.16	A
Web server for 250 Synco devices	N5701	BPZ:OZW772.250	OZW772.250	A

Home automation system

Synco™ living

Room unit QAW91.. and room sensor QAA91..

QAW910



Room unit

Wireless room unit.
The QAW910 is used for the operation and display of basic space heating functions. It also forwards the acquired room temperature to the central apartment unit QAX9.., either periodically or when changes occur. The room temperature is shown on the display of the QAW910.

- Operation and display of space heating functions
 - Selection of room operating mode, timer function and room temperature setpoint readjustment
 - Display of space heating function and status messages
- Acquisition of the room temperature
- Battery-powered by commercially available 1.5 V batteries (contained in the scope of delivery)
- Especially suited for:
 - Renovation projects (old buildings, museums, churches, historical buildings, etc.)
 - Difficult wall-mounting situations (sandstone, glass, etc.)
 - Variable floor plans (different décors, furniture changes)
 - New houses and buildings
- RF communication based on KNX standard (868 MHz, bidirectional)

Data sheet	N2703
Voltage supply	Mignon (2xAA) LR6
Battery capacity	2.5 Ah
Battery life	3 years
Measuring range, temperature	0...50 °C
Display	Segment LCD
Display size	Resolution 0.1 °C
Communication	KNX RF-compatible, 868.3 MHz bidirectional (RF)
Indoor wireless range	30 m
Degree of protection	IP40
Dimensions (W x H x D)	84 x 130 x 23.6 mm

	Stock No.	Product No.	DT
	BPZ:QAW910	QAW910	A

Room unit with KNX RF for 2 heating zones

QAW912

Wireless room unit

The QAW912 manages room heating control of up to 2 heating zones (rooms) and 6 SSA955 radiator control actuators. The unit facilitates full control of the room heating functions. All data are clearly shown on the display. Furthermore, the QAW912 acquires the room temperature in the relevant room.

- Operation and display of the room heating functions of both heating zones:
 - Selection of room operating mode
 - Activation of comfort timer / absence timer
 - Setting of 7-day time switch, holiday period and room temperature setpoints
 - Display of room heating function and status messages (incl. all SSA955 connected via radio link)
- Acquisition of the room temperature in one room
- Battery-powered by commercially available 1.5 V batteries (supplied with the unit)
- Collection of heat requests from both rooms and forwarding them to heat generation via the RRV912
- Specifically suited:
 - For renovation projects (old building, museums, churches, historical building, etc)
 - When wall mounting is difficult (sandstone, glass, etc.)
 - If flexible floor plans are required (changing decor, different furniture)
 - For new buildings
- Radio communication based on KNX standard (868 MHz bidirectional)
- Commissioning via operating buttons - no tools required



Data sheet	N2720
Voltage supply	Mignon (2xAA) LR6
Battery life	Typically 2 years (with battery capacity ≥2.5 Ah)
Measuring range, temperature	0...50 °C
Display	Segment LCD
Display size	Resolution 0.1 °C
Communication	KNX RF-compatible, bidirectional, 868.3 MHz
Indoor wireless range	30 m
Degree of protection	IP40
Dimensions (W x H x D)	84 x 130 x 23.6 mm

	Stock No.	Product No.	DT
	S55621-H102	QAW912	A

Home automation system
Synco™ living
Room unit QAW91.. and room sensor QAA91..

QAA910



Room temperature sensor

Wireless room temperature sensor for acquiring the room temperature.
During operation, the QAA910 forwards the acquired room temperature to the central apartment unit QAX9.., either periodically or in the case of changes.

- Battery-powered by commercially available 1.5 V batteries (contained in the scope of delivery)
- Especially suited for:
 - Renovation projects (old buildings, museums, churches, historical buildings, etc.)
 - Difficult wall-mounting situations (sandstone, glass, etc.)
 - Variable floor plans (different décors, furniture changes)
 - New construction projects
- RF communication based on KNX standard (868 MHz, unidirectional)

Data sheet	N2701
Voltage supply	Mignon (2xAA) LR6
Battery capacity	2.5 Ah
Battery life	3 years
Measuring range, temperature	0...50 °C
Communication	KNX RF-compatible, 868.3 MHz unidirectional (RF)
Indoor wireless range	30 m
Degree of protection	IP40
Dimensions (W x H x D)	84 x 84 x 23 mm

	Stock No.	Product No.	DT
	BPZ:QAA910	QAA910	A

Radiator control actuator

SSA955

RF-based actuator for radiator valves.

The SSA955 controls the room temperature based on the data forwarded by the central apartment unit QAX9...

- Battery-powered by commercially available 1.5 V batteries (contained in the scope of delivery)
- Silent mode (e.g. for use in sleeping rooms)
- Automatic identification of valve stroke
- Parallel connection of multiple actuators possible
- Integrated temperature sensor
- For direct mounting with coupling nut (no tools required)
- Manual adjustment
- RF communication based on KNX standard (868 MHz, bidirectional)



Suitable adaptors for valves of other manufacturers refer to AV5.. and AV6..

Data sheet	N2700
Voltage supply	Mignon (3xAA) LR6
Battery life	3 years (2 years in silent mode)
Battery capacity	2.5 Ah
Communication	KNX RF-compatible, 868.3 MHz bidirectional (RF)
Indoor wireless range	30 m
Sound power level	Silent mode: <25 dB (A) Normal mode: <30 dB (A)
Stroke	2.5 mm
Positioning force	110 N
Medium temperature	1...110 °C
Measuring range, temperature	0...50 °C
Ambient temperature, operation	1...50 °C
Connecting thread	M30 x 1.5
Mounting position	Upright to 90° inclined
Degree of protection	IP40
Dimensions (W x H x D)	48 x 95 x 80.6 mm

Stock No.	Product No.	DT
BPZ:SSA955	SSA955	A

Home automation system
Synco™ living
Heating circuit controller RRV91..

RRV912



Heating circuit controller, 2 heating circuits

RF-based heating circuit controller for up to 2 heating circuits and DHW heating.
In operation, the RRV912 maintains the required room temperature of the individual heating circuits.
The central apartment unit QAX9.. forwards the relevant data via RF.

- Suited for use in heating and cooling plants
- With central distributors (e.g. underfloor heating or soft steel piping system)
- For use with motorized radiator valves (e.g. with sill covers)
- Heating circuit control with 2- or 3-position actuators
- 2 universal relay outputs, e.g. for control of the room group pump and DHW heating
- 1 universal input, e.g. for connection of a DHW temperature sensor or an alarm
- 1 universal output DC 0...10 V for forwarding the heat / cooling demand signal
- RF communication based on KNX standard (868 MHz, bidirectional)

Data sheet	N2705
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	7 VA
Control algorithm	2-position: PID, 3-position: PID
Communication	KNX RF-compatible, 868.3 MHz bidirectional (RF)
Universal inputs, number	1
Universal input, signal	Digital 0/1 LG-Ni1000
Measuring range, temperature	0...120 °C
Universal outputs, number	1
Universal output, signal	DC 0...10 V
Universal output, current	max. DC 1 mA
Relay outputs, number	2
Relay output, switching voltage	AC 24...230 V NO - contact
Relay output, switching current	AC 0.02...2 (2) A
Triac outputs, number	2
Triac output, switching voltage	AC 230 V
Triac output, switching current	30 mA
Mounting	On DIN rail With screws
Degree of protection	IP30
Dimensions (W x H x D)	180 x 98 x 50 mm

	Stock No.	Product No.	DT
	BPZ:RRV912	RRV912	A

Heating circuit controller, 8 heating circuits

RRV918

RF-based heating circuit controller for up to 8 heating circuits.

In operation, the RRV918 maintains the required room temperature of the individual heating circuits.

The central apartment unit QAX9.. forwards the relevant data via RF.



- Suited for use in heating and cooling plants
- With central distributors (e.g. underfloor heating or soft steel piping system)
- For use with motorized radiator valves (e.g. with sill covers)
- Connection facility for up to eight 2-position actuators
- 1 Universal relay output, e.g. for control of the room group pump and DHW heating
- 1 Universal input, e.g. for connection of a DHW temperature sensor or an alarm
- RF communication based on KNX standard (868 MHz, bidirectional)

Data sheet	N2706
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	7 VA
Control algorithm	2-position PID
Communication	KNX RF-compatible, 868.3 MHz bidirectional (RF)
Universal inputs, number	1
Universal input, signal	Digital 0/1
	LG-Ni1000
Measuring range, temperature	0...120 °C
Universal outputs, number	1
Relay outputs, number	1
Relay output, switching voltage	AC 24...230 V
	NO - contact
Relay output, switching current	AC 0.02...2 (2) A
Triac outputs, number	8
Triac output, switching voltage	AC 230 V
Triac output, switching current	30 mA
Mounting	On DIN rail
	With screws
Degree of protection	IP30
Dimensions (W x H x D)	245 x 98 x 50 mm

	Stock No.	Product No.	DT
	BPZ:RRV918	RRV918	A

Home automation system

Synco™ living

Multi controller RRV93..

RRV934



Multicontroller

RF-based multicontroller for precontrol of up to 2 room groups or control of ventilation plant with up to 3 stages. All inputs and outputs are also suited for universal use. The relevant data are forwarded wirelessly by the central apartment unit QAX9...

- Suited for use in heating and cooling plants for precontrol of up to 2 room groups
- 2 primary controllers each with a DC 0...10 V actuator
- 1 primary controller with a DC 0...10 V actuator and 1 primary controller with a 3-position actuator
- Flow and return temperature limitation, optional control of room group pumps and DHW heating
- Suited for control of 3-stage ventilation plant incl. HR bypass, with impact from humidity, indoor air quality or CO₂- level, incl. fault monitoring
- Forwarding the heat / cooling demand signal to primary energy plant
- RF communication based on KNX standard (868 MHz, bidirectional)

Data sheet	N2709
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	7 VA
Control algorithm	Precontroller: PI
Communication	KNX RF-compatible, 868.3 MHz bidirectional (RF)
Indoor wireless range	30 m
Universal inputs, number	4
Universal input, signal	Digital 0/1
	LG-Ni1000
	DC 0...10 V
Measuring range, temperature	0...120 °C
Universal outputs, number	2
Universal output, signal	DC 0...10 V
Universal output, current	max. DC 1 mA
Relay outputs, number	4
Relay output, switching voltage	AC 24...230 V
	NO - contact
Relay output, switching current	AC 0,02...2 (2) A
Mounting	On DIN rail
	With screws
Degree of protection	IP30
Dimensions (W x H x D)	245 x 98 x 50 mm

	Stock No.	Product No.	DT
	BPZ:RRV934	RRV934	A

Consumption data interface

WRI982

The consumption data interface collects consumption (meter) data and communicates these data using KNX RF directly to the central apartment unit (QAX913 or QAX903). Meters may be connected either via Impulse inputs or via M-Bus (wired). There is an additional interface for communication with the Synergy central communication device, OZW30, for the purpose system migration.

- M-Bus MiniMaster for up to 3 M-Bus meters
- 2 Impulse inputs for impulse meters
- BatiBus communication to Synergy OZW30
- KNX RF communication to QAX913 or QAX903

Data sheet	N2735
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	7 VA
Communication	KNX RF-compatible, 868.3 MHz bidirectional (RF) BatiBus communication to Synergy OZW30
Indoor wireless range	30 m
Mounting	On DIN rail or with screws
Degree of protection	IP30
Dimensions (W x H x D)	120 x 90 x 50 mm



	Stock No.	Product No.	DT
	S55621-H112	WRI982	A

Home automation system
Synco™ living
Meteo sensor QAC910

QAC910



Meteo sensor

Wireless sensor for acquiring outside temperature and atmospheric pressure.
In operation, the QAC910 forwards the acquired outside temperature and atmospheric pressure to the central apartment unit QAX9.., either periodically or when changes occur.

- Battery-powered by commercially available 1.5 V batteries (contained in the scope of delivery)
- Especially suited for:
 - Renovation projects (old buildings, museums, churches, historical buildings, etc.)
 - Difficult wall-mounting situations (sandstone, glass, etc.)
 - Variable floor plans (different décors, other furniture)
 - New houses or buildings
- RF communication based on KNX standard (868 MHz, unidirectional)
 - 2-Wire cable between meteo sensor and transmitter required
- Dimensions (W x H x D):
 - Outside sensor: 80 x 92 x 50 mm
 - RF transmitter: 84 x 84 x 23 mm

Data sheet	N2702
Voltage supply	Mignon (2xAA) LR6
Battery capacity	2.5 Ah
Battery life	3 years
Measuring range, temperature	-50...50 °C
Communication	KNX RF-compatible, 868.3 MHz unidirectional (RF)
Indoor wireless range	30 m
Degree of protection	IP40

	Stock No.	Product No.	DT
	BPZ:QAC910	QAC910	A

RF repeater

ERF910

Wireless RF repeater for extending plant.
In operation, the ERF910 repeats the RF telegrams from the devices attuned to it.

- Extending and ensuring RF coverage in the Siemens Synco living system
- Especially suited for:
 - Renovation projects (old buildings, museums, churches, historical buildings, etc.)
 - Difficult wall-mounting situations (sandstone, glass, etc.)
 - Variable floor plans (different décors, furniture changes)
 - New houses and buildings
- External power pack
- RF communication based on KNX standard (868 MHz, bidirectional)



Data sheet	N2704
Operating voltage	AC 230 V
Power consumption	0.2 VA
Communication	KNX RF-compatible, 868.3 MHz bidirectional (RF)
Indoor wireless range	30 m
Degree of protection	IP40
Dimensions (W x H x D)	84 x 84 x 23 mm

	Stock No.	Product No.	DT
	BPZ:ERF910	ERF910	A

Home automation system
Synco™ living
Door/window contact AP 260

AP 260/11



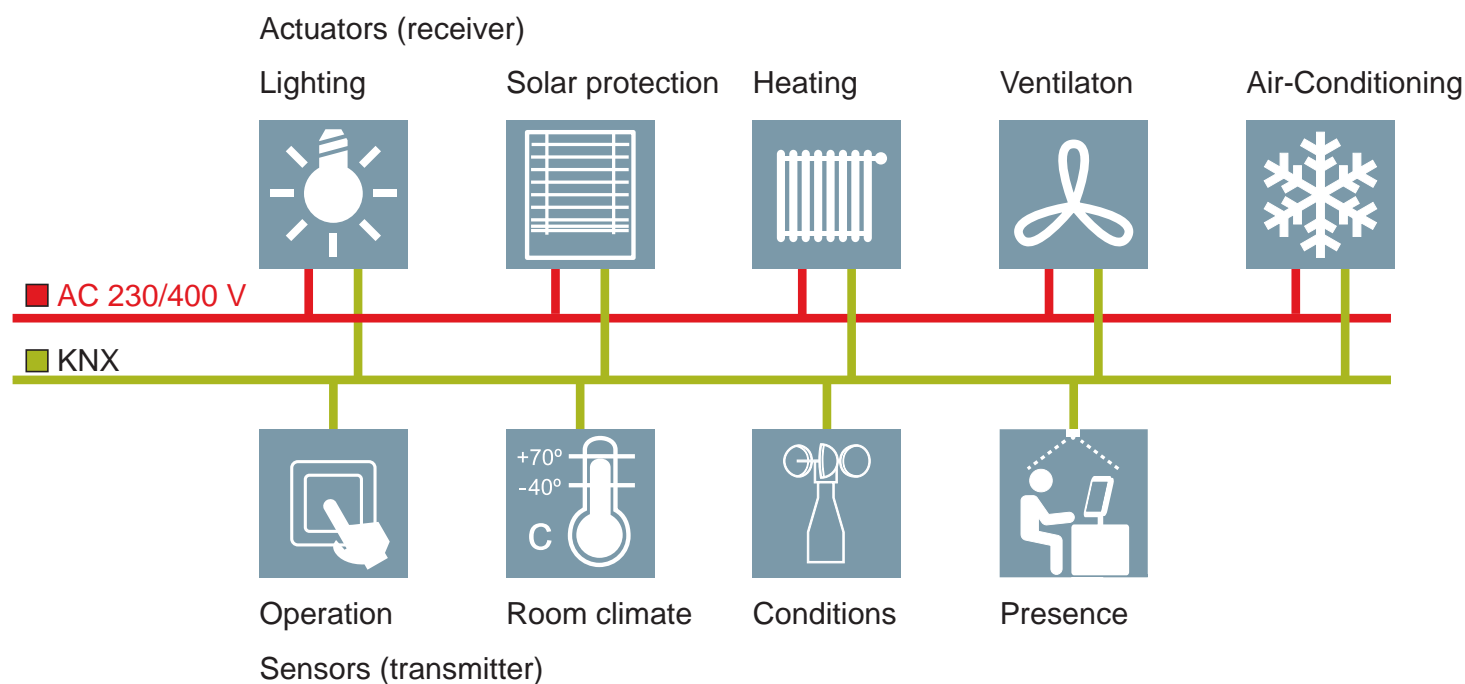
Door/window contact with battery, titanium white

- For detecting the state (closed/open) of a door or window via the reed contact integrated in the device, with actuation of the reed contact through the supplied magnet for attachment to the moving part of the door or window
- Connection for an external floating contact
- 4 plug-in terminals for wire cross-sections (solid or finely stranded) of 0.14...0.5 mm² for connection of the external contact and to allow setting via a wire jumper, whether monitoring is to cover internal contact only, external contact only, or both contacts
- KNX-RF transmitter for 868.3 MHz
- Electronics powered by a lithium battery (1/2 AA 3.6 V), with a battery service life of approx. 5 years, with signaling of battery status every 24 hours, and with an LED that flashes every 10 seconds to indicate that the battery needs replacing
- Commissioning using a pushbutton located on the front of the sensor – no additional aids required
- Surface mounting
- Comprising one mounting plate for screw or adhesive fastening, clip-on radio sensor with integrated reed contact and trigger solenoid. Battery included in delivery.

Dimensions (W x H x D) 87 x 36 x 27 mm

Stock No.	Product No.	DT
5WG3260-3AB11	AP 260/11	A

Technical Informations and Application Examples

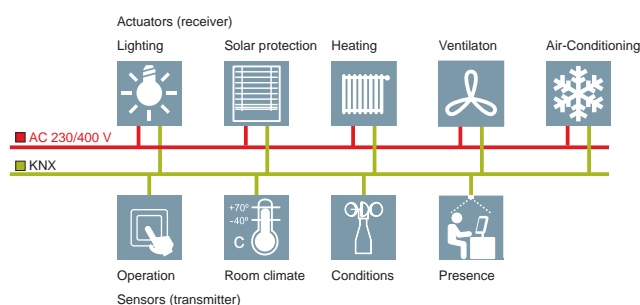


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Building Control GAMMA instabus – future proof installation system based on KNX

GAMMA instabus is an event-oriented, distributed control installation system based on KNX, the worldwide standard for home and building control. KNX is approved as an International Standard (ISO/IEC 14543-3), as a European Standard (CENELEC EN 50090 and CEN EN 13321-1) and as a Chinese Standard (GB/T 20965). Hence, KNX is future-proof. KNX products of different vendors can be combined - the KNX logo guarantees networking and interworking. KNX is the only world-wide open standard for control of residential and non-residential including industrial buildings. With the consistent bus system KNX control information (from command senders) is sent to all building control components. The actuators (command recipients) receive these commands via the KNX bus line and act accordingly.

Installation system with KNX



Examples of application with KNX:

- Lighting
- Solar protection
- Heating, including demand driven control of primary system
- Ventilation
- Air conditioning
- Display and operation
- Room climate to measure CO₂, air quality and air humidity
- Evaluation of weather data such as wind force, solar radiation, day and night time
- Presence in a room

In residential and non-residential buildings, KNX integrates many building functions which used to be realized with separated systems until now. The demand for comfort in rooms increases and can be realized with daytime and presence dependent air conditioning and lighting. Furthermore, the efficient use of energy is getting more and more important. An intelligent monitoring and control of all products implies the wiring of all sensors and actuators with the central supervisory monitoring and control system. The conventional wiring leads to cable loads and to higher planning and installation efforts, fire risk and rapidly increasing costs. Using the intelligent networking of all bus devices via KNX bus wiring, the wiring and thus the fire load is reduced. The mains power is directly wired to the loads and with the decentralized actuators being close to the load the power wiring can be run from one load to another load. The sensors are connected via the bus line. The KNX system is designed for integrating several disciplines i.e., using a multi pushbutton user control the lighting can be controlled, the solar protection moved and the ventilation can be turned on and off.

An installation on basis KNX offers the following advantages:

- Installation of a future-proof system technology
- Reduction of wiring
- Fast and easy retrofitting of additional functions
- Cross-discipline usage of products from several different vendors is possible
- Reduction of power demand and operating costs
- Reduced costs for later changes in room usage and changes of the original room setup (change of configuration versus change of installation)
- Remote maintenance and surveillance via IP network connection for distributed facilities

System design

KNX is an upwards-compatible, flexible, and innovative system for various residential and non-residential building applications. The bus wiring KNX TP (Twisted Pair), but also Ethernet KNXnet/IP, Radio System KNX RF (Radio frequency) and Infrared can be used as transmission medium. Thus KNX helps to implement specific customer requests and perform a fast and easy change in use of rooms and buildings.

KNX TP (Twisted Pair)

The signal transmission of KNX TP (Twisted Pair) happens via the certified bus wire. Using this wiring as the transfer medium assures a high resistance to interference.

KNXnet/IP (Ethernet)

Information transmission with KNXnet/IP is done using the Internet Protocol (IP). It allows using the existing network infrastructure (LAN). Coupling between KNX and the local area network (LAN) is done via KNXnet/IP interfaces. This allows for coupling of complete KNX installations between buildings and the remote access via Internet/Intranet. Secure transmission of data is ensured using standard security mechanisms of the network components.

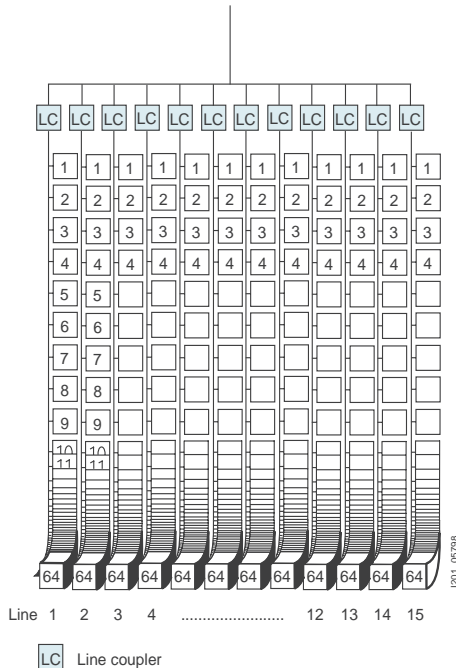
KNX RF (radio frequency)

KNX device supporting this communication medium uses radio frequency (RF) to transmit KNX telegrams. These are transmitted on the 868 MHz frequency band.

Topology

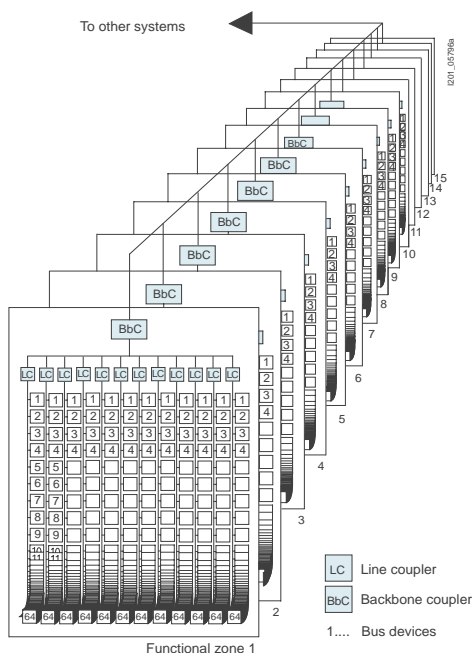
KNX is hierarchically structured and can be adjusted individually to the size of the installation. The smallest part in a KNX installation is a line. Each line, also the main line, includes up to 64 bus devices. Via the line coupler (LC) a maximum of 15 lines can be combined to a functional zone.

Installation system with KNX - one functional zone with 15 lines



Via the backbone coupler (BbC) the 15 functional zones can be combined once again. Thus, more than 14.400 KNX devices can be controlled and such a KNX installation can be further expanded via repeaters.

Installation system with KNX - 15 functional zones combined



If more than 64 devices are necessary in one line, up to 4 line segments can be combined via a line amplifier. This line amplifier can also be used to extend the line length beyond the maximum line length. One line segment needs one KNX power supply.

For each line segment there are the same rules about the maximum amount of devices to connect and the distances to each other as well as the length of the lines. In one line a maximum amount of further 3 line couplers is allowed, leading to a maximum amount of 4 times 64, i.e. 256, bus devices allowed to be installed in one line. At the main line and the functional zone there are no line amplifiers allowed. With each line having its own power supply, each line needs to galvanically isolated using line/backbone couplers. This guarantees that a failure of a line does not impact the remainder of the system.

Another advantage of separating a system in lines and functional zones is to limit the transmission of such data to the functions within one line. The line and backbone couplers transfer only those telegrams which are relevant for these lines or zones. This also enables a parallel communication in several lines and functional zones at the same time. Due to the hierarchical organization of a KNX system, a clear commissioning, diagnose and maintenance is possible any time. In case the disciplines shall be structured independently, the topology or the system design with lines and functional zones provides suitable solutions. The system can be structured like this: line structure, star structure, tree structure and a mixed structure out of these three designs. Within a line there are the following wire installation rules to note:

- Maximum length of wire in one line: 1000 m
- Maximum distance between two participants: 700 m
- Maximum distance between participant and power supply: 350 m

Transmission Technology

The individual bus participants exchange information via telegrams. The telegram contains for example switching commands or status messages. As the bus wire is symmetrically structured and the wiring is installed floating potential free to Earth ground, a potential difference between the two wire cores does not cause disturbances with reference to the earth potential. Regarding transmission speed, pulse generation and pulse reception the transmission technology is designed that no termination resistor is necessary and any wiring topology is possible. The transmission rate of KNX TP is 9600 bit/s, which are about 40 to 50 telegrams per second.

The bus access of each KNX product secures a well ordered information exchange. This is guaranteed by a serial and asynchronous transmission on the bus line. For increasing the reliability and targeting highest transmission rate, KNX applies the CSMA/CA- bus access procedures (Carrier Sense Multiple Access with Collision Avoidance). With the help of this procedure no telegram gets lost when several KNX users are sending telegrams and the higher prioritized telegram gets through the line first.

All KNX participants are always listening to the bus. The participant decides on its own when the telegram is sent to the bus as long as the bus is not busy with transmitting information. The transmission of KNX is event-driven, that means, the telegrams are only sent to the bus when the event actually happens and the transmission of information is necessary.

Telegram structure

A telegram consists of a sequence of characters. Each character has 11 Bit, which contains a Start Bit, followed by eight data bits, a parity Bit and a stop Bit. The telegram is a sequence of information, the bus specific information and the user specific information. To begin transmission of the information, the KNX needs to be free for a certain time in order to start the sending procedure.

First, a control field is sent, which contains information about the system e.g. the priority of the transmission or whether it is the first or a repeated telegram. The control field is followed by the address field. This consists of the source address and the target address of the telegram. The source address is the physical address of the sender and the target address of the receiving participant. The target address can be a physical or group address. After the address field is sent out, the data field with the user data information follows. The security field serves to check and secure the telegram (vertical parity). After the security field, the bus is silent for a certain time (break). After that all the addressed participants confirm the error-free receipt of the telegram.

If the telegram is not understood right, the participant who received that signal sends out in the confirm field NAK (Not Acknowledge) and repeats the whole telegram. If no participant confirms the telegram, the sender repeats the telegram.

A KNX participant sends out up to three repetitions. A telegram signed NAK is higher prioritized than an understood telegram (ACK = Acknowledge) which leads to a repetition of the telegram.

Addressing

Communication among KNX participants can be distinguished between two kinds of addressing:

Physical address

The address of the product is also called „physical address“. It serves for a unique naming for the sending KNX participant (name). Due to this rule, the sender can be tracked. When a certain participant is addressed, i.e. the telegram is sent to a specific device, then, the target address is the unique physical address. This is the case when an application program of the ETS (Engineering Tool Software) is loaded to a KNX participant via the KNX interface. Normally, the target address is a group address.

Group address

A group address is associated with a specific function e.g. switching, dimming or heating. In this case, information is sent from a sensor to an actuator function using a group address. As all KNX participants are informed via the KNX bus they check each telegram whether the telegram contains a group address determined for them. If the target address is identical with a group address registered in the participant, the telegram initiates the pre-defined function. If different push-buttons control the same actuators, the same function can be triggered by several sensors.

A participant sends a telegram with a group address and any number of participant listen to this (multicast). Thus, one pushbutton can control different actuators and cause an execution of a function. Central functions e.g. turn off the window-side luminaries on the South-facing façade can be implemented in a building.

Sensors are for example pushbuttons, motion detectors, room temperature controllers, brightness sensors, and combined meters for wind speed and wind direction, binary input (e.g. window contact for window surveillance/switching status)

Actuators are for example load switches, dimmers, binary outputs, solar protection actuators, valve actuator for heating

Engineering Tool Software (ETS)

The ETS (Engineering Tool Software) is a vendor-neutral software, which supports planning, project configuration, commissioning up to failure diagnosis of KNX systems. It is easy and clearly structured and thus optimally suitable for all user groups.

With the ETS, consultant engineers, planners and electrical installers can plan the whole plant, set the device configuration as well as establish the function assignment of the sensors and actuators. After project planning it is possible to export the single work steps and to give them to the installer.

In principle, members of the KNX Association provide their KNX product data base to the ETS users. The current KNX product data base can be downloaded from the Internet, in order for the user to quickly receive the latest data of the KNX products.

In addition to the ETS, several manufacturers offer ETSApps, which are additional software providing specific or advanced functions for project planning, commissioning or data transfer.

Link: www.knx.org



System data

Bus cable		
• Cable type	mm ²	YCYM 2 x 2 x 0.8 One core pair (red, black) for signal transmission and power supply, one core pair (yellow, white) for additional applications (SELV or voice)
Cable length		
• Cable lengths of one line in total (core diameter: 0.8 mm)	m	max. 1000 (including all junctions)
• Length between two bus devices	m	Max. 700
• Length between bus device and power supply unit (320 mA)/choke	m	Max. 350
• Length between power supply unit (320 mA) and choke		Side-by-side mounting necessary (on standard mounting rail with integrated data rail)
Bus devices		
• Number of areas		Max. 15
• Number of lines per area		Max. 15
• Number of bus devices per line		Max. 64
Topology		
• Topology structure		Line, star or tree structure
Power supply		
• Power supply	V DC	24 (SELV safety extra-low voltage)
• Power supply units per line		Minimum one power supply unit (160, 320 or 640 mA or 2 x 640 mA)
Transmission		
• Transmission technology		Distributed, event-controlled, serial, symmetric
• Baud rate	bit/s	9600

Device characteristics (unless otherwise specified)

Device properties		
Degree of protection according to EN 60529		IP20
Protective measure		Bus: safety extra-low voltage SELV 24 V DC
Overvoltage category		III
Rated insulation voltage Ui	V	250
Degree of pollution		2
EMC requirements		complies with EN 50428
Resistance to climate		EN50491-2
Operating conditions		
Application		For fixed installation indoors, for dry rooms and installation in heavy-current distribution boards
Ambient operating temperature	°C	-5 to +45
Humidity in operation	%	Max. 93
Storage temperature	°C	-25 to +70
Humidity in storage	%	Max. 93
Certification		KNX/EIB certified
CE marking		Compliant with EMC Directive (residential and non-residential buildings), Low Voltage Directive

Fitting power supplies for every KNX system

Each bus line needs its own power supply unit. The power supply unit provides the system power necessary for the instabus KNX.

The KNX system provides for decentralized and central power supply units. Central power supply units are installed as DIN rail mounted devices in distribution boards and control cabinets, while decentralized power supply units are designed for installation in junction boxes, in parapet channels or in room control boxes.

Central power supply units provide 160 mA, 320 mA or 640 mA bus current. Maximum up to two central power supply units may be attached to a single bus line. A second unit is not required unless the supply voltage at a bus device is less than 21 V.

When more than 30 bus devices are installed in short bus cable distance (e.g. 10 m), e.g. in distribution boards, the power supply unit should be arranged near these bus devices. The distance between power supply unit and any of its bus devices must not exceed 350 m.

A decentralized power supply provides 80 mA bus current. This allows for decentralized solutions for self-sufficient control of a single room or, by integration of several room control islands, of a floor or even a complete building. Up to eight decentralized power supply units may be operated in parallel, such that a complete KNX bus line can be setup with e.g. eight room control boxes.

When several bus devices are installed in short bus cable distance (e.g. 10 m), e.g. in distribution boards, or in a room control box AP 641, the power supply units shall be arranged near these bus devices. The distance along the bus wire between any bus device and the closest power supply unit must not exceed 350 m. If only the decentralized power supply RL 125/23 is used, then the maximum KNX cable length in a bus line is 350 m for one, 700 m for two, and 1000 m for 3 or more decentralized power supplies RL 125/23.

In principle, central and decentralized power supply units can be operated in parallel with each other. Consideration must be taken regarding the sum of the short circuit currents of the power supply units, which must be lower than 3 amperes.

The following table shows the respective short circuit current:

Material number	Type	Short circuit current	Bus current
5WG1125-4AB23	RL 125/23	< 0.2 A	80 mA
5WG1125-1AB02	N 125/02	< 1.0 A	160 mA
5WG1125-1AB12	N 125/12	< 1.0 A	320 mA
5WG1125-1AB22	N 125/22	< 1.5 A	640 mA

With eight decentralized power supply units RL 125/23 operated in parallel the maximum short circuit current is 1.6 A.

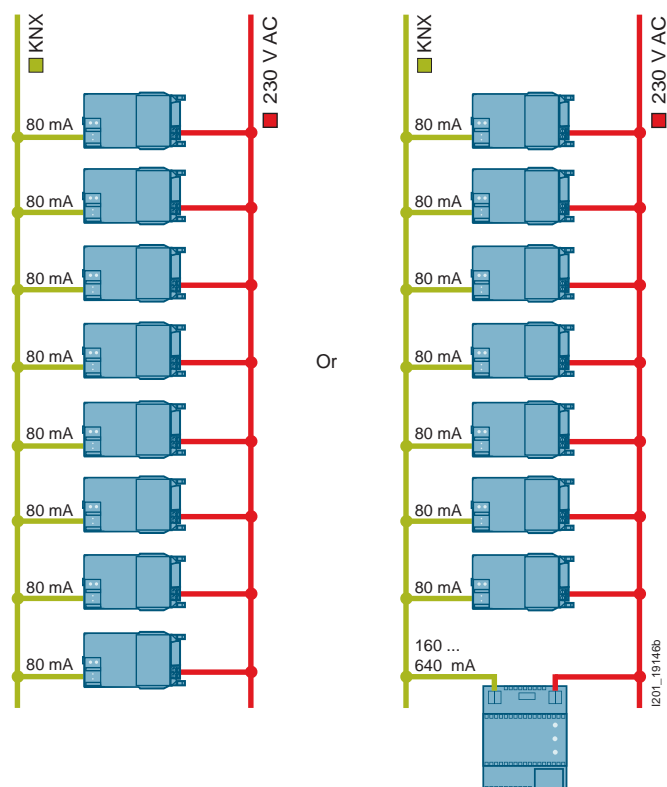
Additionally, it is possible to operate a power supply unit N 125/02 or N 125/12 in parallel to eight RL 125/23. Only with the power supply unit N 125/22 observe that it has a short circuit current of 1.5 A, which is why only seven decentralized power supply units can be operated in parallel.

To ensure an uninterrupted power supply a separate circuit with safety separation should be used for the power supply unit N 125/x2 power supply line.

The power supply units N 125/x2 can supply DC 24 V power from an additional pair of terminals (yellow-white). This DC 24 V output voltage can be used to power e.g. an additional line via a separate choke N 120.

All power supply units N 125/x2, RL 125/23 and JB 125C23 can be powered by AC 120...230 V or by DC 220 V.

A minimum cable length is not required between these power supply units from Siemens.



GAMMA instabus devices and fast download with ETS

Starting with ETS5, in addition to KNX Standard Telegrams ETS supports Telegrams with „Long Frames“, which allow sending longer telegrams on the KNX bus.

For devices supporting the reception of these „Long Frames“ more user data can be packed into a telegram. This leads to shorter download times of downloads with ETS5.

Following GAMMA KNX products support the „Long Frame“ Download with ETS5

Product Title	Stock No.
Line/backbone coupler N 140/03	5WG1140-1AB03
Line/backbone coupler N 140/13	5WG1140-1AB13
IP Router 146/02	5WG1146-1AB02
Interface N 148/12 USB	5WG1148-1AB12
IP Interface N 148/22	5WG1148-1AB22
Touch sensor unit, single, UP 211/01	5WG1211-2DB01
Touch sensor unit, double, UP 212/01	5WG1212-2DB01
Touch sensor unit, quadruple, UP 213/01	5WG1213-2DB01
Push button interface 4x potential-free contact UP 220/31	5WG1220-2DB31
Push button single i-system UP 221/2	5WG1221-2DB12
Push button single i-system UP 221/3	5WG1221-2DB13
Push button single i-system UP 221/2	5WG1221-2DB32
Push button single i-system UP 221/3	5WG1221-2DB33
Push button double i-system UP 222/2	5WG1222-2DB12
Push button double i-system UP 222/3	5WG1222-2DB13
Push button double i-system UP 222/2	5WG1222-2DB32
Push button double i-system UP 222/3	5WG1222-2DB33
Push button triple i-system UP 223/2	5WG1223-2DB12
Push button triple i-system UP 223/3	5WG1223-2DB13
Push button triple i-system, temperature sensor UP 223/4	5WG1223-2AB14
Push button triple i-system, IR Receiver-Decoder UP 223/5	5WG1223-2DB15
Push button triple i-system UP 223/2	5WG1223-2DB32
Push button triple i-system UP 223/3	5WG1223-2DB33
Push button triple i-system, temperature sensor UP 223/4	5WG1223-2AB34
Push button triple i-system, IR Receiver-Decoder UP 223/5	5WG1223-2DB35
UP 255D21 Brightness sensor with constant light level control	5WG1255-2DB21
UP 258D11 OPTIsens Office	5WG1258-2DB11
UP 258D12 Presence detector DESK	5WG1258-2DB12
Binary input RL 260/23	5WG1260-4AB23
Binary input JB 260C23	5WG1260-4CB23
Push button single style UP 285/2	5WG1285-2DB12
Push button single style UP 285/3	5WG1285-2DB13
Push button single style UP 285/2	5WG1285-2DB42
Push button single style UP 285/3	5WG1285-2DB43

Technical Information and Application Examples

Technical Information

Fast Download using ETS5 with KNX “Long Frames”

Following GAMMA KNX products support the „Long Frame“ Download with ETS5

Product Title	Stock No.
Push button double style UP 286/2	5WG1286-2DB12
Push button double style UP 286/3	5WG1286-2DB13
Push button double style UP 286/2	5WG1286-2DB42
Push button double style UP 286/3	5WG1286-2DB43
Push button quadruple style UP 287/2	5WG1287-2DB12
Push button quadruple style UP 287/3	5WG1287-2DB13
Push button quadruple style, temperature sensor UP 287/4	5WG1287-2AB14
Push button quadruple style, IR Receiver-Decoder UP 287/5	5WG1287-2DB15
Push button quadruple style UP 287/2	5WG1287-2DB42
Push button quadruple style UP 287/3	5WG1287-2DB43
Push button quadruple style, temperature sensor UP 287/4	5WG1287-2AB44
Push button quadruple style, IR Receiver-Decoder UP 287/5	5WG1287-2DB45
Binary output device UP 510/03	5WG1510-2AB03
Binary output device UP 510/13	5WG1510-2AB13
Binary output device RS 510/23	5WG1510-2AB23
Binary output device JB 510C23	5WG1510-4CB23
Thermo drive actuator RS 510K23	5WG1510-2KB23
Switching actuator RL 512/23	5WG1512-4AB23
Switching actuator JB 512C23	5WG1512-4CB23
Binary output 3x6A RL 513D23	5WG1513-4DB23
Binary output JB 513C23	5WG1513-4CB23
Solar protection actuator UP 520/03	5WG1520-2AB03
Solar protection actuator UP 520/13	5WG1520-2AB13
Solar protection actuator RS 520/23	5WG1520-2AB23
Solar protection actuator JB 520C23	5WG1520-4CB23
Solar protection actuator RL 521/23	5WG1521-4AB23
Solar protection actuator JB 521C23	5WG1521-4CB23
Universal dimmer UP 525/03	5WG1525-2AB03
Universal dimmer UP 525/13	5WG1525-2AB13
Universal dimmer RS 525/23	5WG1525-2AB23
Universal dimmer JB 525C23	5WG1525-4CB23
Switch-/Dimming actuator JB 526C23	5WG1526-4CB23
Switch-/Dimming actuator JB 527C23	5WG1527-4CB23
Universal dimmer N 528D01, 2 x 300VA, AC 230V	5WG1528-1DB01
Switching actuator N 530D31 4x AC 230V 6AX	5WG1530-1DB31
Switching actuator N 530D51 8x AC 230V 6AX	5WG1530-1DB51
Switching actuator N 530D61 12x AC 230V 6AX	5WG1530-1DB61
Switching actuator N 532D31 4x AC 230V 10AX	5WG1532-1DB31
Switching actuator N 532D51 8x AC 230V 10AX	5WG1532-1DB51
Switching actuator N 532D61 12x AC 230V 10AX	5WG1532-1DB61
Switching actuator N 534D31 4x AC 230V 16/20AX	5WG1534-1DB31
Switching actuator N 534D51 8x AC 230V 16/20AX	5WG1534-1DB51
Switching actuator N 534D61 12x AC 230V 16/20AX	5WG1534-1DB61

GAMMA instabus Devices comply with UL standard

Broad spectrum

UL standards are used in North America, but also in several other countries. The mark UL (Underwriters Laboratories) is allowed to print on the product when the security check was successfully done according to the UL guidelines. This is of particular importance to European exporters of electrical switchgear equipment for machines who export to the USA, as their products will only be accepted if they meet the relevant UL standards. UL 508A describes the design of control cabinets and implementation of integral components with reference to other pertinent UL standards where applicable. It therefore represents the basic standard for all electrical systems used in North America. A wide range of GAMMA instabus devices comply with UL standards and are therefore suitable for implementation worldwide in both IEC/EN and UL applications within the framework of their specified use.

Further links:

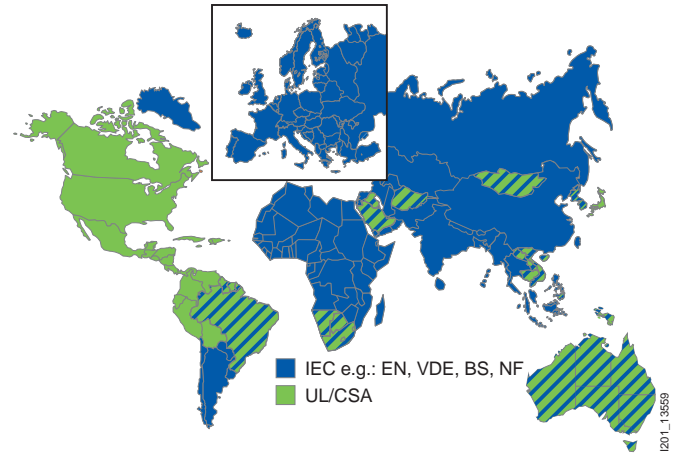
For general information about the UL standard: www.ul.com

Online database for UL products: www.ul.com/database

For information about UL certification: www.ul-certification.com

For information about GAMMA products: www.siemens.com/gamma

Worldwide application of EN/IEC or UL standards









Low-voltage systems in the USA

While a variety of different systems are used in the USA, three-phase systems with 240 V as well 480 V and 3- and 4-wire systems are the most common, with 208 V and 600 V playing a considerably smaller role. Residential buildings are primarily fitted with 120 V to 240 V single-phase systems. A frequency of 60 Hz is standard in North America.


Industry and commercial		Residential
Three-phase, 4 wires	Three-phase, 3 wires	Single-phase, 3 wires
Three-phase wye, 4 wires	Three-phase delta, 3 wires, grounded corner	Single phase, 120 V/240 V, grounded midpoint
Caution: The PE must not be used for electricity. There is no PEN conductor => N = „Grounded Conductor“ (white or gray), separate wires must be used for PE and N.		
480 V Y/277 V ¹⁾	240 V	240 V, phase conductor
600 V Y/347 V ¹⁾	480 V	120 V to ground
240 V Y/131 V ¹⁾	600 V	
208 V Y/120 V ¹⁾		

¹⁾ "Y" describes the „Solidly grounded circuit“. The „Y" value specifies the voltage between the phases (e. g. 480 V), the value after the slash specifies the voltage between the phase and the grounding (e.g. 277 V at 480 V voltage between the phases).

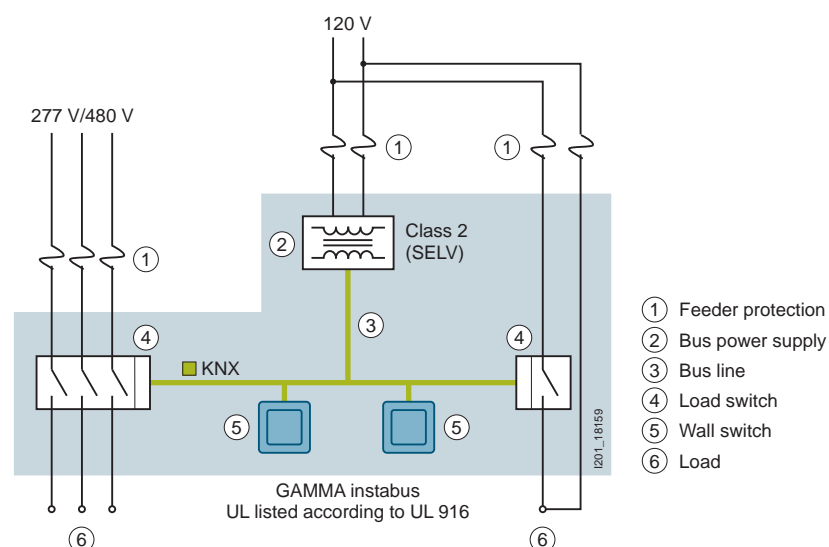
Explanation of UL symbols

Symbol	Application
	UL symbol This is the most used UL symbol. This UL mark lines out that the products fulfill the security check. The security check follows guidelines published by UL (UL standard).
	c-UL symbol This mark applies to products for the Canadian market. Products with this mark have been examined by UL in accordance with Canadian safety directives, which differ in some points from the US directives.
	c-UL US symbol This symbol was introduced at the beginning of 1998. It means that the device bearing this mark complies with both UL and Canadian regulations.
	UR, c-UR and c-UR us symbol These symbols are seldom seen by consumers as they are affixed to special components that are part of a larger system or product. These components may have technical or design restrictions.
	The Component Recognition symbol can be on a large number of products, such as switches, power supplies, printed boards, switching devices and many other products. Products for Canada have an additional „C“.
	The c UR us symbol was introduced in 1998 and means that the marked components meet both the UL and CSA regulations.

The „UL listed“ symbol ® is applied to devices that can be installed universally and without further instructions or any restriction of their respective applicability, e. g. contactors to UL 508, miniature circuit breakers to UL 489, energy management devices according to UL 916 ...

The „UL Recognized“ symbol  is intended for devices that may only be installed by experts as components, e. g. miniature circuit breakers to UL 1077, time switches to UL 917, SITOR fuses and so on.

KNX installation system in a UL standard installation system



5WG1 energy management devices . . . according to UL 916

The UL 916 requirements cover energy management equipment rated 600 V or less intended for installation in accordance with the National Electrical Code NFPA 70. This primarily applies to devices for the control of electrical loads to achieve the desired use of electrical power. Such equipment controls electrical loads by responding to sensors and actuators.

All devices that are powered by the bus voltage or by an external fewer 30 V DC and fewer 1.5 A power supply, and that are not connected to voltages greater than 30 V AC/DC, meet the conditions the UL standard. These devices can be used as energy management equipment according to UL 916 (energy management equipment accessories).

The following KNX products of the GAMMA portfolio have a UL mark

	Product title	Article No.	Type
	Power supply unit [®] Integrated choke, 640 mA additional unchoked output, 29 V DC	5WG1125-1AB22	N 125/22
	Power supply units [®] Integrated choke, 340 mA additional unchoked output, 29 V DC	5WG1125-1AB12	N 125/12
	Power supply unit [®] Integrated choke, 160 mA additional unchoked output, 29 V DC	5WG1125-1AB02	N 125/02
	KNX/DALI Gateway plus, 1 channel [®]	5WG1141-1AB03	N 141/03
	KNX/DALI Gateway Twin plus, 2 channels [®]	5WG1141-1AB21	N 141/21
	KNX/DALI Gateway Twin [®]	5WG1141-1AB31	N 141/31
	Load switch [®] 8 x 120 V/277 V AC, 20 A; 347 V AC, 15 A	5WG1512-1CB01	N 512
	Switch/dimming actuator [®] 8 x 120 V/277 V AC, 20 A; 347 V AC, 15 A	5WG1526-1EB02	N 526E02
	Shutter/blind actuator [®] 4 x 120 V AC, 6 A	5WG1523-1CB04	N 523C04
	Universal Dimmer [®] 2 x 150 VA, AC 120 V	5WG1528-1CB01	N 528C01

Technical Information and Application Examples

Technical Information

UL standard

The following KNX products of the GAMMA portfolio have a UL mark

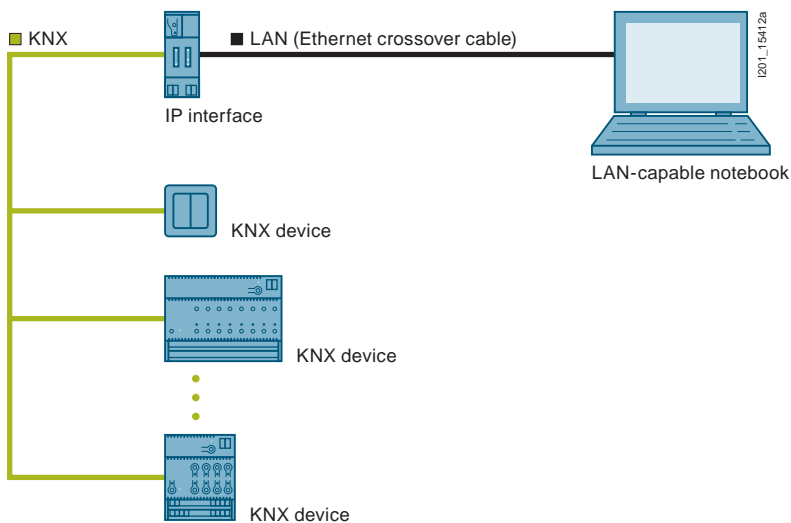
	Product title	Article No.	Type
	Decentralized Power Supply [®] 80 mA, AC 120 V	5WG1125-4CB23	JB 125C23
	Binary Input [®] 4 x AC/DC 12-230 V	5WG1260-4CB23	JB 260C23
	Binary Output [®] 2 x AC 120-277 V, 10 A (resistive load)	5WG1510-4CB23	JB 510C23
	Switching Actuator [®] 1 x AC 120-277 V, 20 A or 1 x AC 347 V, 15 AX (resistive load)	5WG1512-4CB23	JB 512C23
	Binary Output [®] 3 x AC 120-277 V, 6 A	5WG1513-4CB23	JB 513C23
	Solar Protection Actuator [®] 1 x AC 120 V, 6 A	5WG1520-4CB23	JB 520C23
	Solar Protection Actuator [®] 2 x AC 120 V, 6 A	5WG1521-4CB23	JB 521C23
	Universal Dimmer [®] 1 x AC 120 V, 10...125 VA	5WG1525-4CB23	JB 525C23
	Switching/dimming actuators [®] 2 x 20 A, AC 277 V / AC 347 V, 0/1...10 V	5WG1526-4CB23	JB 526C23
	Switching/dimming actuators [®] 1x 20 A, AC 277 V / AC 347 V, 0/1...10 V	5WG1527-4CB23	JB 527C23

Faster downloads save time

In every GAMMA instabus project, the devices are commissioned after their installation. Once the physical addresses have been assigned, application programs, parameters and addresses are loaded to the devices. This can take some time in large-scope projects with many devices.

The LAN connection from Siemens makes it all go much faster, saving you time and money. Simply connect your notebook to the GAMMA instabus via an IP interface and start the download. With a LAN connection, the download takes only half as long as it does with USB.

The solution



Benefits

- Plan, configure, commission and diagnose with ETS, the KNX commissioning software
- Simply connect your notebook and start the download
- Downloading takes only half as long, thereby halving commissioning times and significantly reducing time at the project site

Follow these steps

- Connect the IP interface to the KNX bus line
- Connect the notebook to the IP interface using the Ethernet crossover cable – and start the download.

You will need

- An IP interface N 148/22, for example
- 24-V power supply for IP interface N 148/22, e.g. Power over Ethernet, unchoked bus voltage
- Crossover cable
- LAN-enabled notebook
- ETS; see knx.org for the latest version

Note:

LAN stands for Local Area Network. In LANs, data transport is organized using the IP (Internet Protocol) – the standard network protocol on the Internet.

Technical Information and Application Examples

Application Examples

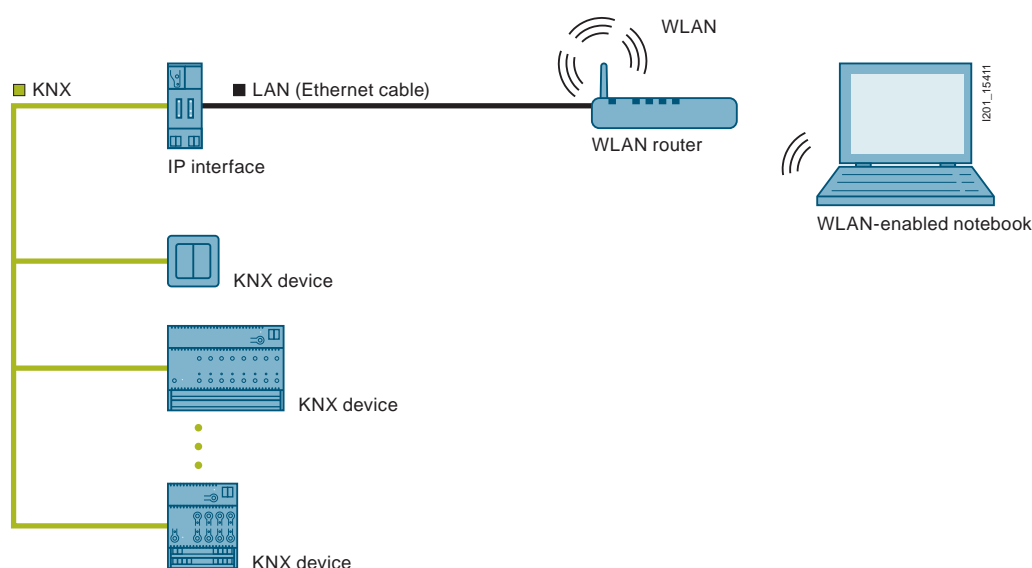
Commissioning a KNX system via Ethernet (WLAN)

Commissioning – Easy access via WLAN

In every GAMMA instabus project, the devices are commissioned after their installation. First, the physical addresses must be assigned. To do this, select the device in ETS on the notebook and press the programming key on the device. If you have various devices at different places such as flush-mounted bus coupling units, this can result in intensive walkways. That's the reason why two people usually perform the commissioning.

You can save yourself this considerable extra work by connecting your notebook wirelessly to the KNX via WLAN. This lets you move about freely during commissioning – just take your notebook with you to each room. Any errors such as mixup of devices due to misunderstandings are ruled out.

The solution



Benefits

- Wireless GAMMA instabus commissioning via WLAN
- Possible to move freely throughout the building
- Only one person needed for commissioning

Follow these steps

- Connect the IP interface with the KNX, and connect the WLAN router to the IP interface using the Ethernet cable – and you can go to each individual room with your notebook and the ETS
- The related safety and security requirements governing the LAN and WLAN have to be observed

You will need

- An IP interface N 148/22, for example
- 24-V power supply for IP interface N 148/22, e.g. Power over Ethernet, unchoked bus voltage
- Ethernet
- WLAN router
- WLAN-enabled notebook
- ETS; see knx.org for the latest version

Note:

WLAN stands for Wireless Local Area Network and describes a „wireless“ local radio network for data transmission.

WLANs are quick and easy to install, cover large areas and operate cost-effectively.

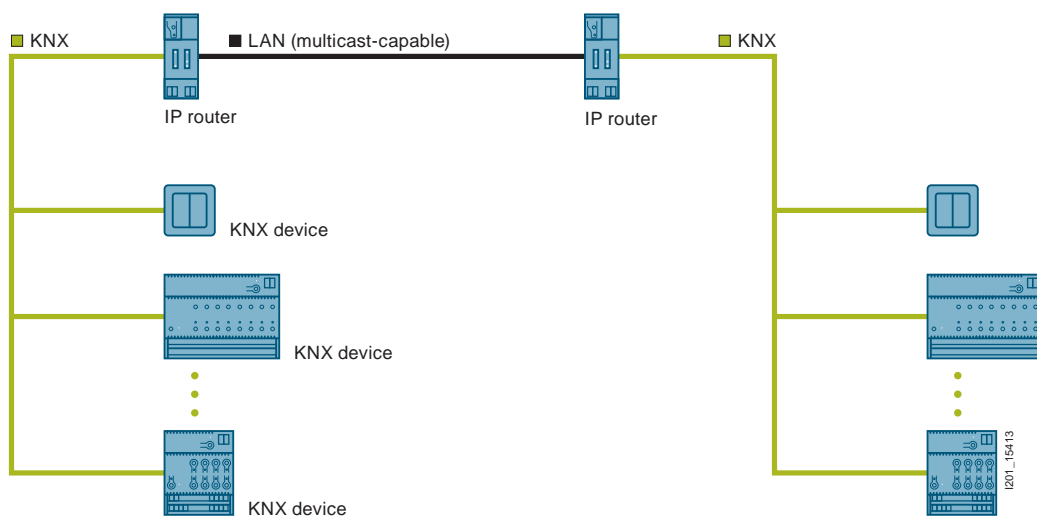
Connect main and backbone lines via KNXnet/IP

The new KNXnet/IP standard enables KNX telegrams to be transmitted via Ethernet (LAN), which leads to new applications and solutions.

Connections between buildings or floors can be clearly and easily implemented with KNXnet/IP.

Existing network infrastructure and technologies are used to transmit KNX data over longer distances.

The solution



Benefits

- LAN as the main and backbone line
- Data can be transmitted over longer distances
- Existing data network and components (LAN) can be used

Follow these steps

- Connect an IP router N 146/02 to every KNX line (instead of a line coupler N 140/03)
- Connect the IP router N 146/02 via a multicaster-enabled LAN
- Commission each IP router N 146/02 just like a "conventional" line/backbone coupler using ETS
- Observe the related safety and security requirements governing the LAN

You will need

- One IP router N 146/02 per line
- 24-V power supply for IP router N 146/02, e.g. Power over Ethernet, unchoked bus voltage
- Ethernet patch cable or LAN, depending on the size
- ETS; see knx.org for the latest version

Note:

LAN stands for Local Area Network. In LANs, data transport is organized using the IP (Internet Protocol) – the standard network protocol on the Internet.

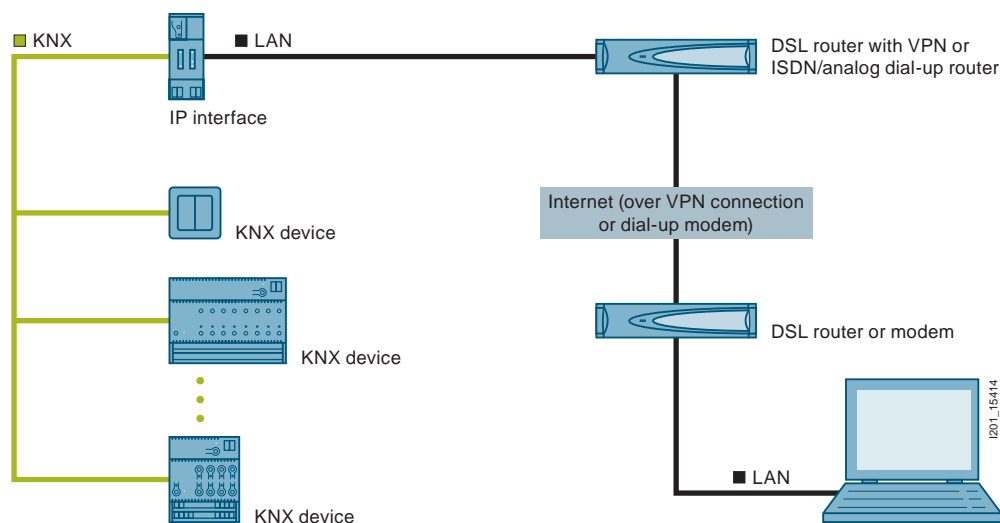
Multicast-capable: multicast telegrams can simultaneously operate several IP devices in the LAN. In the case of network components (network switches, routers) this requires the appropriate configuration.

Easy remote access

In almost every project, changes are often requested during building completion or after the building goes into operation, for example if the set lighting times are too long. Up to now this meant making an appointment with the customer, driving to the property, changing the parameter settings, driving back again.

Now you can cut time and costs by making these changes remotely from your office via Internet, LAN or a wired broadband connection (fiber optics or DSL). Most buildings already have an Internet and LAN connection – thus providing global connectivity. This is why data security must be ensured using a VPN DSL router or dial-up router respectively.

The solution



Benefits

- Parameters can be quickly changed by remote access
- Remote access saves driving time and costs
- Data security is ensured

Follow these steps

- Connect IP interface N 148/22 to the KNX and LAN
- Configure the VPN DSL router or dial-up router

You will need

- An IP interface N 148/22, for example
- 24-V power supply for IP interface N 148/22, e.g. Power over Ethernet, unchoked bus voltage
- VPN DSL router or ISDN/analog dial-up router
- ETS; see knx.org for the latest version

Note:

LAN stands for Local Area Network. In LANs, data transport is organized using the IP (Internet Protocol) – the standard network protocol on the Internet.

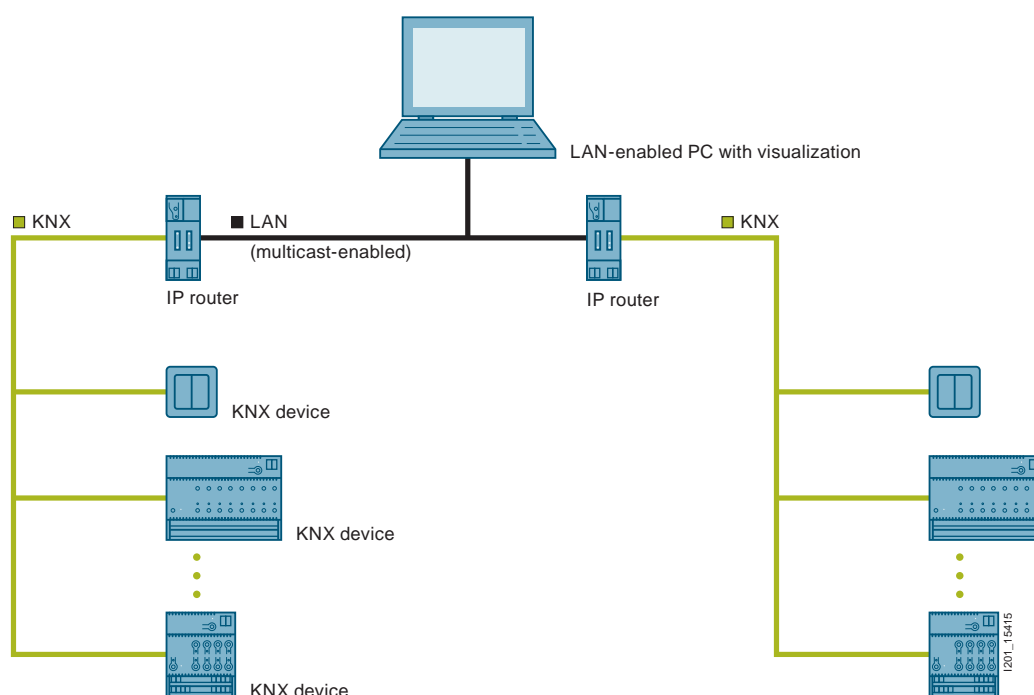
VPN (Virtual Private Network) lets you set up a secure subnetwork via an open, unsecured network (Internet, wireless network) by protecting all communication against access or being tapped into by unauthorized third parties. This is achieved by means of „tunneling“ the data traffic via a VPN server, which means that any connections must be authenticated and that all data is also encoded.

Visualization – up to 200 times faster with KNXnet/IP

When retrieving large numbers of data points cyclically for visualization in large projects, waiting periods can sometimes occur while data is being updated.

Use your LAN as the main and backbone line and connect your PC for visualization to the LAN. This makes visualization up to 200 times faster: you can monitor larger numbers of data points and the data volume is no longer important.

The solution



Benefits

- LAN as the main and backbone line
- Visualization up to 200 times faster than previously
- High data volume possible
- No data concentrators needed

Follow these steps

- Commission the KNX devices, including the IP router N 146/02
- Install the visualization software
- Find and connect the IP router N 146/02 as the visualization interface
- Configure the visualization
- Observe the related safety and security requirements governing the LAN

You will need

- One IP router N 146/02 per line
- IP Control Center N 152
- 24-V power supply for IP interface N 146/02, e.g. Power over Ethernet, unchoked bus voltage
- Ethernet network (LAN)
- ETS; see knx.org for the latest version

Note:

LAN stands for Local Area Network. In LANs, data transport is organized using the IP (Internet Protocol) – the standard network protocol on the Internet.

Multicast-capable: multicast telegrams can simultaneously operate several IP devices in the LAN. In the case of network components (network switches, routers) this requires the appropriate configuration.

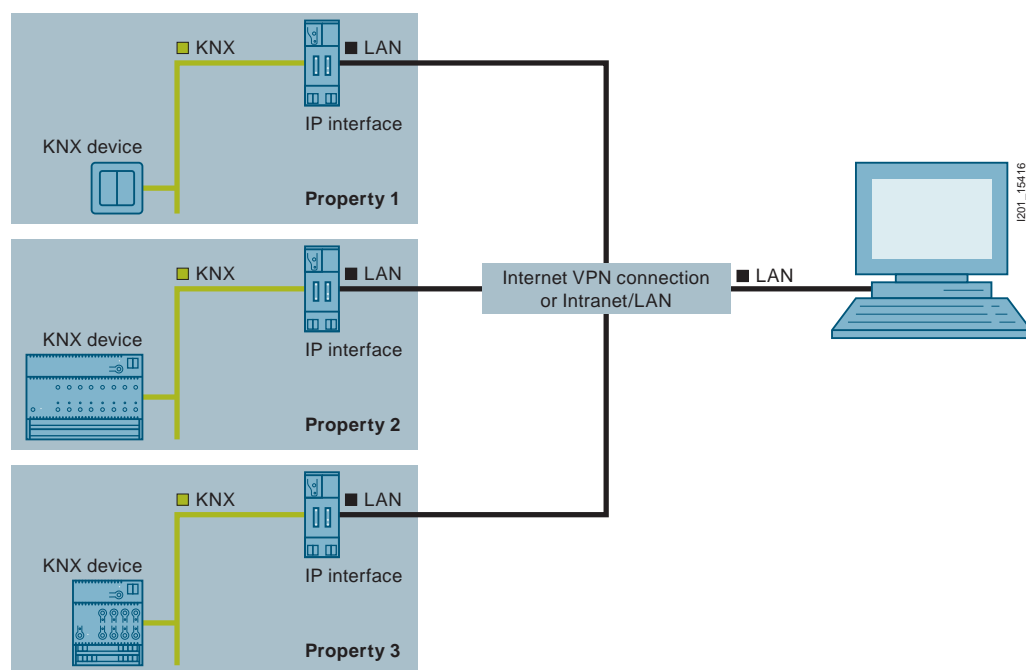
Remote operation and remote visualization

In many cases, several locations need to be managed simultaneously. There are many such examples:

- Monitoring of cooling temperatures in several supermarkets or warehouses
- Monitoring of fans for failure
- Monitoring of temperature and humidity in several greenhouses

It is now possible to carry out these monitoring tasks centrally via the Internet/Intranet from absolutely anywhere. This saves you human resources, time and money. And the Internet/Intranet is available everywhere. Commissioning is further facilitated by the fact that distributed locations can be configured identically.

The solution



Benefits

- Plants and locations can be remotely visualized, controlled and monitored via existing networks
- Simple commissioning thanks to options for identical configuration of different locations

Follow these steps

- Connect one N 148/22 IP interface per location to the KNX
- Connect the N 148/22 IP interface to the LAN
- Configure the N 148/22 IP interface via the Intranet/Internet
- Define the N 148/22 IP interface

You will need

- One IP interface N 148/22 for each property, for example
- 24-V power supply for IP interface N 148/22, e.g. Power over Ethernet, unchoked bus voltage
- Visualization software
- ETS; see knx.org for the latest version

Note:

LAN stands for Local Area Network. In LANs, data transport is organized using the IP (Internet Protocol) – the standard network protocol on the Internet.

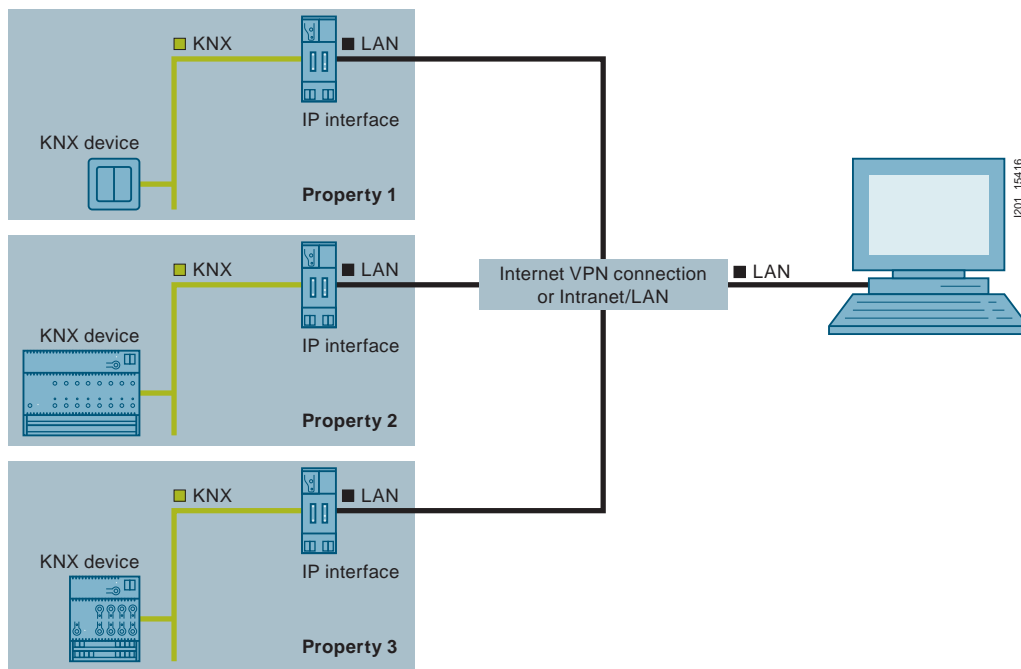
VPN (Virtual Private Network) lets you set up a secure subnetwork via an open, unsecured network (Internet, wireless network) by protecting all communication against access or being tapped into by unauthorized third parties. This is achieved by means of „tunneling“ the data traffic via a VPN server, which means that any connections must be authenticated and that all data is also encoded.

Demand-oriented maintenance through remote signaling

Some distributed properties need to be checked regularly for certain conditions and maintained accordingly, for example the fill levels of oil tanks in distributed apartment buildings or the operating hours of consumers.

These states can now be reported centrally to any location. This can eliminate the need for cyclical inspection walkthroughs and appropriate maintenance can be carried out when needed, such as refilling the oil tanks in distributed properties. You can even select the best time to do this, such as when oil prices are lowest.

The solution



Benefits

- Central status messages for distributed properties
- Less maintenance required
- Optimization of maintenance costs

Follow these steps

- Connect one IP interface N 148/22 to the KNX for each property
- Connect the IP interface N 148/22 to the LAN
- Configure the IP interface N 148/22 via the Internet/intranet for accessibility
- Define the IP interface N 148/22 in the visualization software or ETS respectively
- Observe the related safety and security requirements governing the LAN

You will need

- One IP interface N 148/22 for each property, for example
- 24-V power supply for IP interface N 148/22, e.g. Power over Ethernet, unchoked bus voltage
- Visualization software
- ETS; see knx.org for the latest version

Note:

LAN stands for Local Area Network. In LANs, data transport is organized using the IP (Internet Protocol) – the standard network protocol on the Internet.

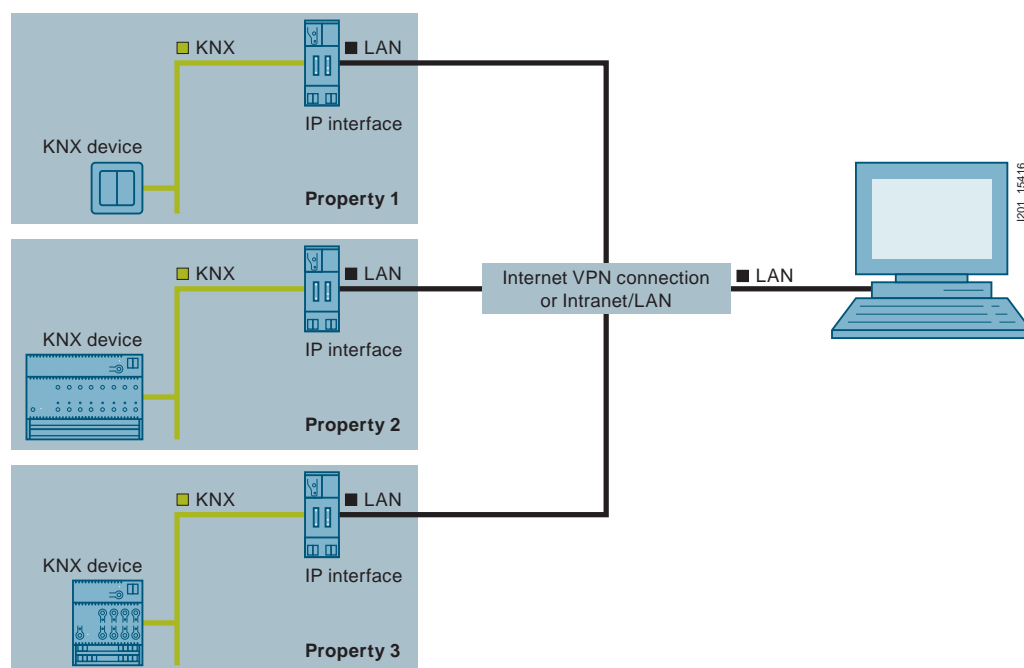
VPN (Virtual Private Network) lets you set up a secure subnetwork via an open, unsecured network (Internet, wireless network) by protecting all communication against access or being tapped into by unauthorized third parties. This is achieved by means of „tunneling“ the data traffic via a VPN server, which means that any connections must be authenticated and that all data is also encoded.

Enhanced plant availability due to early fault detection

Whether dealing with a lamp failure in depots or offices, a drop in pressure in filters, or pump failure - automated plants in distributed locations are constantly subject to possible faults/malfunctions. The earlier such faults are detected, the less costly they are to remedy.

If such plants are being controlled with GAMMA instabus and are connected over LAN/IP, these types of fault indications can be forwarded over the Internet. A fast response means that the functionality of the plant is quickly restored and costs are kept to a minimum.

The solution



Benefits

- Central solution for distributed locations
- Fast forwarding of fault indications
- Fast responses mean less damage

Follow these steps

- Connect one N 148/22 IP interface per location to the KNX
- Connect the N 148/22 IP interface to the LAN
- Configure the N 148/22 IP interface over the Intranet/Internet
- Define the N 148/22 IP interface in your visualization program/ETS

You will need

- One IP interface N 148/22 for each property, for example
- 24-V power supply for IP interface N 148/22, e.g. Power over Ethernet, unchoked bus voltage
- Visualization software
- ETS; see knx.org for the latest version

Note:

LAN stands for Local Area Network. In LANs, data transport is organized using the IP (Internet Protocol) – the standard network protocol on the Internet.

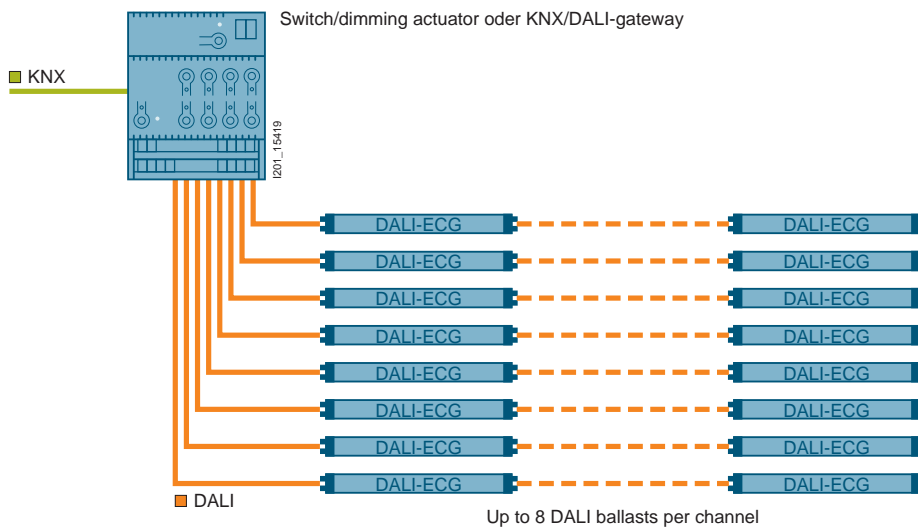
VPN (Virtual Private Network) lets you set up a secure subnetwork via an open, unsecured network (Internet, wireless network) by protecting all communication against access or being tapped into by unauthorized third parties. This is achieved by means of „tunneling“ the data traffic via a VPN server, which means that any connections must be authenticated and that all data is also encoded.

Using DALI lighting without complicated DALI commissioning

Ballasts with a DALI interface are used in lighting controls, e.g. to report lamp failure. The N 525E switch/dimmer actuator now makes it possible to completely replace DALI devices with GAMMA instabus without any knowledge of DALI or DALI commissioning procedures.

The N 525E switch/dimmer actuator switches and dims eight independent groups of fluorescent lamps with dimmable ballasts and DALI interfaces. Up to eight DALI ballasts can be connected to each of the eight channels.

The solution



Benefits

- True 0 to 100% light value control
- High operating safety due to targeted shutdown in the event of an error
- Error messages for luminaire groups
- For individual room lighting control

Follow these steps

- Connect the switch/dimmer actuator N 525E to the KNX
- Connect each group of DALI ballasts to be controlled jointly to one output of the switch/dimmer actuator N 525E
- Configure each channel in ETS just as you would a conventional actuator and program the device

You will need

- Switch/dimmer actuator N 525E
- Dimmable ballasts with DALI interfaces
- ETS; see knx.org for the latest version

Note:

DALI stands for Digital Addressable Lighting Interface. DALI is a digital interface that is integrated in the controlgear of lights and enables flexible wiring and commissioning. As well as switching and dimming functions, they are also able to detect and signal lighting failures.

Technical Information and Application Examples

Application Examples

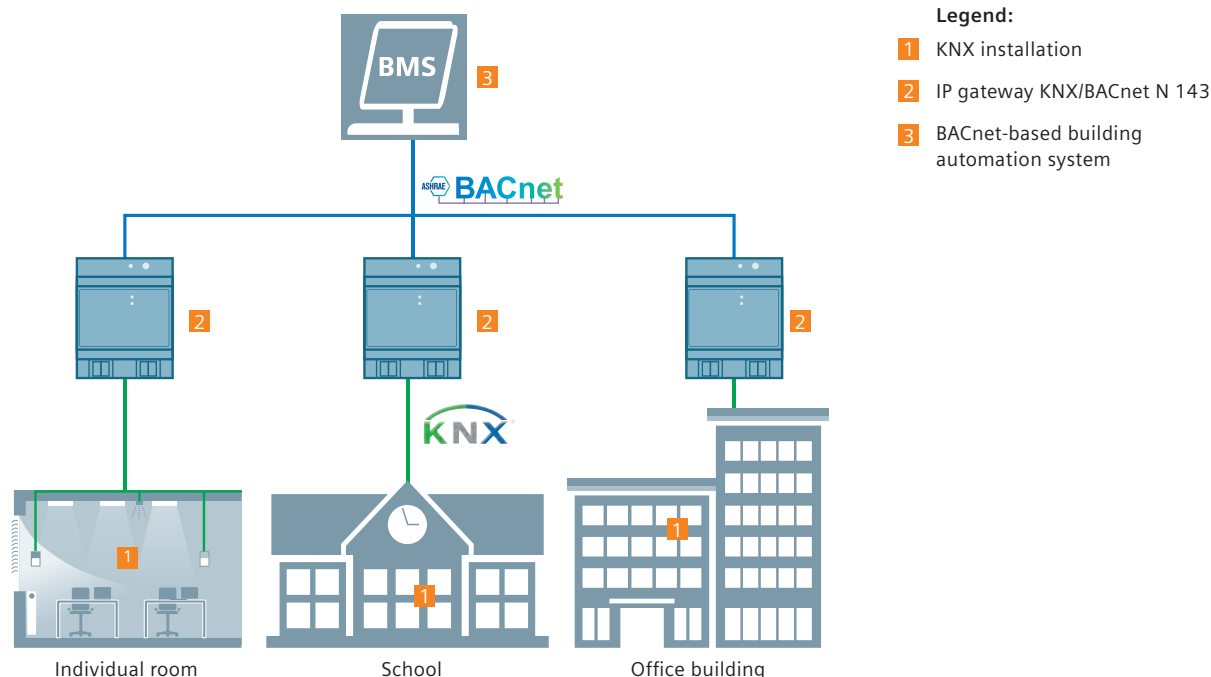
Integrating KNX into BACnet

Easy combination of a KNX installation into a BACnet installation system

The IP gateway KNX/BACnet enables KNX installations to be integrated into BACnet-based networks and building automation systems quickly, simply and efficiently. No separate commissioning interface is needed owing to the KNXnet/IP interface integrated into the gateway. This facilitates for example the integration of new KNX installations into already existing building management systems that use BACnet as their system protocol.

It enables building automation systems to be expanded simply and costefficiently. Thanks to its KNXnet/IP interface, the KNX installation technician can commission the gateway using the ETS. The system integrator that recognizes the IP gateway KNX/BACnet as controller (B-ASC) is responsible for the integration into the BACnet system.

The solution



Benefits

- Commissioning of the IP gateway KNX/BACnet N 143 by the KNX installation technician only using the ETS
- Integration of a KNX installation into a BACnet system without KNX knowledge by the BACnet system integrator
- Clear separation of responsibility for KNX installation and BACnet system integration/building management
- Simple, flexible integration of a KNX installation
- Integrated Web server for documentation of the configuration and export of an EDE file
- Configuration of a KNX installation via IP gateway KNX/BACnet N 143

Follow these steps

- Connect the IP gateway KNX/BACnet N 143 to the KNX, configure and program it in ETS
- 250 BACnet objects can be created, for which up to 455 BACnet entries for automatic forwarding of BACnet object values can be stored

You will need

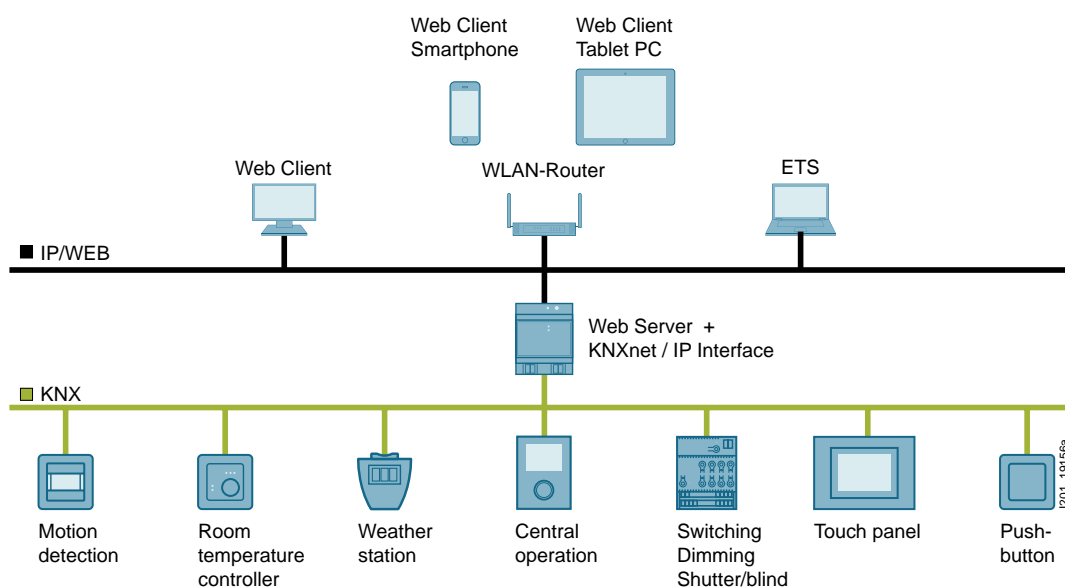
- IP gateway KNX/BACnet N 143
- ETS; see knx.org for the latest version

WEB Visualization of a KNX installation with an IP Control Center

The Control Center N 152 is a compact visualization controller. It enables the entire room and building automation to be conveniently operated and visualized via Web-enabled PCs, tablets and smartphones – also in a wireless configuration via WLAN. Up to 1250 KNX objects and group addresses are available for this purpose.

In the event of a fault, an alarm message is sent via e-mail. The integrated KNX interface allows commissioning of the KNX installation. With an additional router, the KNX installation can be serviced via remote maintenance.

The solution



Benefits

- IP Control Center N 152
- An integrated Web editor
- For all Web-enabled operating devices such as PCs, notebooks, tablets and smartphones
- Create customized visualization of operating and display interfaces

Follow these steps

- Connect the IP Control Center N 152 to the KNX, configure and program it in ETS
- Create the visualization of the operating and display interfaces via the Web editor
- The related safety and security requirements governing the WLAN shall be observed

You will need

- IP Control Center N 152
- ETS; see knx.org for the latest version

Note:

To handle comprehensive building and room functions, up to 1250 KNX objects are available with the IP Control Center. In addition, there are powerful application modules for scene control, scheduler programs, chart modules, data logging, alarm reporting and logic functions for use in connection with central control. A clear model project is available via download for the IP Control Center.

Appendix



Catalog notes	16-2
Ordering information	16-3
Quality management	16-9
Order number index	16-10

Trademarks

All product designations may be registered trademarks or product names of Siemens AG or supplier companies whose use by third parties for their own purposes may violate the rights of the owner.

Amendments

All technical data, dimensions and weights are subject to change without notice unless otherwise specified on the pages of this catalog.

Dimensions

All dimensions are in millimeter (mm).

Images

The illustrations are not binding.

Technical data

The technical data are for general information purposes only. Always read the operating instructions and notices on individual products during assembly, operation and maintenance.

Further technical information is available at:

www.siemens.com/GAMMA-TD

and

www.siemens.com/sios

under „Product-Support“ -> „Entry type“:

- Application examples
- Certificates
- Characteristics
- Downloads
- FAQs
- Manual
- Product notes
- Software archive
- Technical Data

Assembly, operation and maintenance

The instruction manuals and the operating instructions on the products must be observed during assembly, operation and maintenance.

General ordering information

Unless stated otherwise in the „Selection and ordering data“ of this catalog, our products are supplied individually packed. It is essential that whole number multiples of these quantities be ordered to ensure satisfactory quality of the products and problem-free order processing. The products are delivered in a neutral carton. The label includes warning notices, the CE marking, and device descriptions in English and German. In addition to the Article No. (MLFB) and the number of items in the packaging, the operating instructions order number (Instr.-Order-No.) is also specified. Most device Article No.'s can be obtained by means of the EAN barcode to simplify ordering and storage logistics. The associated master data is available from your local Siemens representative, too.

Ordering very small quantities

When very small quantities are ordered, the cost of order processing often exceeds the order value. We therefore recommend that you combine several small orders. Where this is not possible, we regret that we are obliged to make a small processing charge: for orders with a net goods value of less than € 200 we charge a € 25 supplement to cover our order processing and invoicing costs.

Explanations on the selection and ordering data

Delivery time class (DT=LK)

The delivery time class (DT) lines out the delivery time starting from the shipping point from Siemens AG (products ready for dispatch). If ordered in normal quantities, the products are usually delivered within the specified delivery times, calculated from the date we receive your order. In exceptional cases, delivery times may vary from those specified. The delivery times are valid ex works from Siemens AG (products ready for dispatch). The goods shipping time depends on the destination and the method of shipping.

In this catalog, the following delivery time classes are mentioned:

- A = 1 – 2 days
- B = 3 – 7 days
- C = 8 – 21 days
- D = 22 – 30 days
- X = more than 30 days

Price

The price refers to the price unit (PU).

Price unit (PU)

The price unit defines the number of units, sets or meters to which the specified price and weight apply.

Price group (PG)

Each product is allocated to a price group.

Weight

The defined weight is the net weight in kg and refers to the price unit (PU).

Example

DT	Article-No.	Price per PU	PU	PG
A	5WG1125-1AB02		1 ST	A21

DT:	Delivery time class A = two workdays
Price:	Price per Price Unit (PU)
PU:	One unit (on which price is based)
PG:	Price group A21

International Terms & Conditions for Products

1. General

- 1.1 The scope, quantity, quality, functionality and technical specifications of any goods, equipment, documentation, software, work or services to be provided by Siemens (collectively referred to as „**Supplies**“) are exclusively defined as the case may be either in the order confirmation of Siemens or the Contract signed by the Customer and Siemens.
- 1.2 The offer letter from Siemens together with these terms and conditions and those other documents expressly identified in the offer letter as forming part of the contract shall together constitute the entire agreement between the parties (the „**Contract**“). Any terms and conditions of the Customer shall apply only where expressly accepted in writing by Siemens.
- 1.3 References in the Contract to „**Siemens**“ are to the Siemens legal entity which signs the Contract, unless the context otherwise requires. References to the „**Customer**“ are to the legal entity to whom the offer letter is addressed.

2. Right of Use

- 2.1 Except as expressly otherwise agreed in this Contract, as between the parties all intellectual and industrial property rights in the Supplies, in all documents provided by Siemens in connection with this Contract (the „**Documents**“) and in all intellectual and industrial property rights (including software) and know how („**IPRs**“) in the Supplies and other things provided with or as part of the Supplies and the Documents shall be exclusively property of and vest in Siemens. The Customer shall not be entitled to reverse engineer, to decompile, or to reproduce (or have reverse engineered, decompiled, or reproduced) the Supplies or parts thereof except to the extent that such restrictions are unenforceable under the applicable law.
- 2.2 The Customer may use the Documents unmodified and to the extent necessary for operation and routine maintenance of the Supplies by the Customer's own personnel, unless explicitly agreed otherwise in writing by Siemens.
- 2.3 If the Supplies include Siemens software, such software is licensed under the license terms contained in the software documentation, the software itself or in the attached license terms (in each case the „**applicable license conditions**“), which shall prevail over this Clause 2. The software is issued in object code without source codes. The license hereunder only grants the non-exclusive right to use the software as described in the applicable license conditions or, if there are no applicable license terms, for the purpose of operation and routine maintenance of the Supplies.
- 2.4 The Supplies may include third party standard software. Insofar as specific license conditions of the third party licensor apply, Siemens will provide such license conditions together with the Supplies. The Customer shall comply with such third party license terms.
- 2.5 Insofar as the software contains Open Source Software („**OSS**“), Siemens will provide the applicable OSS license conditions together with the Supplies. The OSS license conditions shall prevail over this Contract. Details regarding any third-party software and OSS contained in the Supplies are available in the software documentation (e.g. README_OSS).
- 2.6 The rights granted in Clause 2 shall be transferable to a third party only in case of transfer of the Supplies to that third party.

- 2.7 Without prejudice to the Customer's intellectual property rights and subject to compliance with applicable law, Siemens and its Affiliates may for its own business purposes collect, use, modify, and copy any data received under this Contract. Any legal obligations regarding personal data shall remain unaffected.

3. Prices and Terms of Payment

- 3.1 Unless agreed otherwise in writing, prices exclude packing, freight, insurance and any other additional charges (such as storage, inspections by third parties). The price payable by the Customer under this Contract shall be referred to in this Contract as the „**Contract Price**“.
- 3.2 The Contract Price is exclusive of any indirect taxes (such as property, license, sales, use, value added or similar tax) and/or any duties, customs or public charges related to the Contract. The Customer agrees to pay to or reimburse Siemens for any taxes, customs, duties or other public charges levied on Siemens in relation to the Supplies. All payments shall be made to Siemens' bank account without deduction (e.g. deduction of withholding tax) within 30 days after issuance of the invoice. If the Customer is required to make a deduction by law, the sum payable shall be increased so that Siemens receives a net amount equal to the amount it would have received without such deduction. The Customer shall provide to Siemens tax receipts from the relevant tax authorities in connection with the payments in due course.
- 3.3 Without prejudice to any other rights it may have, Siemens may charge interest at 9 percentage points above the current base lending rate of the European Central Bank on any overdue payments.
- 3.4 Each party must pay all sums that it owes to the other party under this Contract free and clear without any set-off, counterclaim, deduction or withholding of any kind, save as agreed otherwise in writing or as may be required by law.

4. Delivery Times and Delay

- 4.1 Any agreed dates in respect of the Supplies or any part of them shall be extended by a reasonable period of time if and to the extent that Siemens is delayed or impeded in the performance of its obligations by any third party or by the failure of the Customer to perform its obligations. This includes without limitation the delivery of required documents (such as necessary permits and approvals), timely performance of any work to be undertaken by the Customer or any third party appointed by the Customer, and compliance with the terms of payment.
- 4.2 Siemens may, if it is reasonable to do so, deliver the Supplies in stages or instalments and shall be entitled to invoice for the Supplies on a corresponding basis.
- 4.3 If Siemens does not meet the agreed final delivery date solely due to the fault of Siemens, the Customer shall be entitled to liquidated damages amounting to 0.5% of the price of the delayed part of the Supplies per each completed week of delay, in which the Customer suffered loss as a result of such delay. Liquidated damages payable in case of delay shall be limited to 5% of the price of the delayed part of the Supplies but in any case shall not exceed 5% of the total Contract Price.
- 4.4 Any rights and remedies of the Customer in case of delay other than those expressly stipulated in this Clause 4 and in Clause 15.2a) below shall be excluded, to the extent permissible by law.
- 4.5 If the Customer, the Customer's contractors, or any other third party appointed by the Customer causes a delay to the provision of the Supplies, the Customer shall reimburse Siemens all reasonable additional costs and expenses incurred due to such delay.

5. Transfer of Risk and Title

- 5.1 Risk of damage to or loss of any part of the Supplies shall pass to the Customer upon delivery.
- 5.2 The Supplies shall be deemed delivered if and when the Customer fails to take over the delivery without cause. In such case, the Supplies can be stored and insured at the risk and expense of the Customer, any payment shall become due, and all other consequences of the delivery shall apply accordingly. The same consequences shall apply on the scheduled date of delivery if the dispatch is postponed for reasons attributable to the Customer.
- 5.3 Title in any part of the Supplies shall remain with Siemens until Siemens has received full payment for that part of the Supplies. Upon conclusion of the Contract the Customer authorises Siemens to notify or enter this retention of title into public registers, books or similar records kept for this purpose by the competent authorities of the relevant countries and to fulfil all required formalities at the Customer's expense.

6. Force Majeure

- 6.1 A **"Force Majeure Event"** means any event which is beyond the reasonable control of a party or its subcontractors, which could not have been prevented by good industry practice and which results in a party (the **"Affected Party"**) being unable to perform or being delayed in performing in whole or in part its obligations under this Contract. Force Majeure Events include, among others, acts of war, riot, civil commotion, terrorism, natural disaster, epidemic, strikes, lock-outs, attacks on Siemens' IT systems (such as virus attacks, hacker attacks), non-issuance of licenses, permits or approvals, or any other act or failure to act by any public authority, or embargos or any other trade sanctions.
- 6.2 If a Force Majeure Event occurs, the Affected Party will be deemed not to be in breach of its obligations under the Contract for so long as and to the extent necessary to overcome the effects of the Force Majeure Event.
- 6.3 The Affected Party shall notify the other party as soon as reasonably practicable of the Force Majeure Event and of its affected obligations.
- 6.4 If one or more Force Majeure Events and their effect lasts for a period of 180 days in aggregate either party may terminate the Contract by giving to the other a written notice of termination with regard to the part of the Supplies not yet delivered. With regard to the part of the Supplies not delivered, Siemens shall be entitled to reimbursement from the Customer of its unavoidable costs related to such termination.

7. Obligations of the Customer

- 7.1 The Customer shall on its own apply for and obtain all necessary licenses, permits and approvals required for the commissioning, acceptance, and use of the Supplies.
- 7.2 If Supplies are delayed due to circumstances for which Siemens is not responsible, the Customer shall pay Siemens all additional costs arising from such delay.

8. Changes

- 8.1 If applicable laws, rules and regulations, engineering and codes of practice, and decisions or guidance issued by courts or public authorities are amended or added to after the date of Contract signature, Siemens shall be entitled to an adjustment of the Contract, including inter alia an adjustment of the Contract Price to reflect any additional costs to be incurred by Siemens, the time schedules and scope of Supplies, as necessary in order to compensate for any adverse effects or additional requirements deriving from such changes.

9. Defects Liability

- 9.1 In this Contract, and subject to Clause 9.2, a defect shall mean any non-conformity of the Supplies with the express terms of this Contract resulting from circumstances existing in the Supplies at the time of the transfer of risk to the Customer (**"Defects"**).
- 9.2 In particular, the following shall not be Defects:
 - a) normal wear and tear, non-conformity resulting from excessive strain,
 - b) non-conformity resulting from faulty or negligent handling; non-compliance with instructions or recommendations in operation or maintenance manuals and other documents;
 - c) installation, erection, modification, commissioning, or pre-commissioning, in each case not carried out by Siemens,
 - d) non-reproducible software errors,
 - e) defects which do not significantly impair the use of the respective Supplies.
- 9.3 The Customer shall immediately inspect the Supplies upon delivery and shall notify Siemens in writing of any Defects without undue delay. The Customer's claims in respect of defects shall be excluded for any apparent defects, if the Customer has failed to do so.

Upon such written notification, Siemens shall, at its option, remedy a Defect by repair, replacement, or re-performance. Siemens shall be given a reasonable period of time and opportunity to remedy the Defect. For this purpose, the Customer shall grant Siemens working access to the nonconforming Supplies, shall undertake any necessary disassembly and re-assembly, and shall provide access to operation and maintenance data, all at no charge to Siemens. Upon Siemens' request, the Customer shall ensure that the title to the replaced parts/items shall pass to Siemens.

- 9.4 Unless otherwise agreed, the defects liability period for any part of the Supplies is 12 months. It starts at the date of transfer of risk.

For replaced or repaired parts of the Supplies, the defects liability period is 6 months from the date of replacement or repair, if the original defects liability period for the Supplies expires earlier. In any event, the defects liability period shall end no later than 24 months from the beginning of the original defects liability period.

- 9.5 If software is defective, Siemens shall only be obliged to provide the Customer with an updated version of the software in which the Defect has been remedied when such updated version is reasonably available from Siemens or, if Siemens is only licensee, from Siemens' licensor. If the software has been modified or individually developed by Siemens, Siemens shall in addition provide the Customer with a workaround or other interim corrective solution until the provision of an updated version of the software, if such workaround or interim solution is feasible at reasonable expense and if otherwise the Customer's business operations would be substantially impeded.

- 9.6 If Siemens carries out remedial work and it is ultimately not established that there was a Defect, the Customer shall pay Siemens for such remedial work including error diagnosis.
- 9.7 Any other liability of Siemens and rights and remedies of the Customer in case of defects of the Supplies, other than those expressly stipulated in this Clause 9 or , in case Siemens failed at least three times in remedying the defect, in Clause 15.2b) shall be excluded. All warranties, representations, conditions, and all other terms of any kind whatsoever implied by statute or law are, to the fullest extent permitted by applicable law, excluded from this Contract.

10. Intellectual Property Rights

- 10.1 If a third party asserts legitimate claims against the Customer that the Supplies infringe an IPR owned by such third party, then subject to the following provisions of this Clause 10, Siemens shall, at its option and expense, either
- obtain a right to use the relevant IPR in connection with the Supplies; or
 - modify the Supplies so as not to infringe the relevant IPR; or
 - replace the infringing part of the Supplies. If, in the opinion of Siemens, none of the foregoing is reasonably possible, Siemens shall take back the relevant part of the Supplies and reimburse the price for such part.

- 10.2 Siemens' obligations in Clause 10.1 are subject to the following conditions:
- The Customer has immediately notified Siemens in writing of the third party's claim and furnished Siemens with a copy of each communication, notice or other action relating to the alleged infringement,
 - the Customer does not acknowledge an infringement and provides Siemens with the authority, information and assistance reasonably required by Siemens to defend or settle such claim, and
 - Siemens is given sole control of the defence (including the right to select counsel), and the sole right to settle such claim.

If the Customer ceases to use the Supplies or any relevant portion thereof, it shall notify the third party in writing that its cessation to use is not an admission of IPR infringement.

- 10.3 Any claims of the Customer shall be excluded if the Customer (including its agents, employees or contractors) is responsible for the IPR infringement, which shall include without limitation if the IPR infringement was caused by specific demands of the Customer, by use of the Supplies for a purpose or in a manner not foreseeable by Siemens, by a modification of the Supplies by the Customer, or by use of the Supplies in connection with other equipment.

- 10.4 This Clause 10 sets forth Siemens' entire liability for infringement of third party IPRs. Any other rights and remedies of the Customer shall be excluded.

11. Liability

Unless explicitly stipulated in this Contract, this Clause 11 shall exclusively govern the liability of Siemens for damages, costs and expenditures, regardless of the legal theory upon which it is based, including, but not limited to liability in Contract, in tort (including negligence), misrepresentation, indemnity, under warranty or otherwise.

- 11.1 Siemens shall be liable for bodily injuries and for intentional acts or omissions pursuant to the applicable law.

- 11.2 Siemens shall in no event be liable, whether pursuant to any indemnity or in contract, tort (including negligence and statutory duty) or otherwise for loss of profit or revenue, loss of production, interruption of operations or loss of use, cost of capital, loss of interest, loss of information and/or data, for claims arising from Customer's contracts with third parties, or for any indirect or consequential damage.

- 11.3 Siemens' total liability, whether pursuant to any indemnity or in contract, tort (including negligence and breach of statutory duty) or otherwise arising by reason of or in connection with the Contract shall not exceed 20% of the Contract Price per event and shall, under any circumstances, be limited in aggregate to 100% of the Contract Price.

- 11.4 Any limitations of liability set forth in this Contract shall also apply for the benefit of Siemens' subcontractors, employees, agents or any other person acting for Siemens.

- 11.5 Any and all liability of Siemens under this Contract shall cease with the expiry of the defects liability period of the Supplies.

- 11.6 Any rights and remedies of the Customer against Siemens that are not expressly stipulated in the Contract shall be excluded.

12. Assignment

- 12.1 The Customer may not assign this Contract or any part thereof without Siemens' prior written approval.
- 12.2 Siemens may assign the Contract or any part of it to an affiliated company ("Affiliate"), being any legal entity ("Company") which directly or indirectly is controlled by Siemens, controls Siemens or is controlled by a Company which directly or indirectly controls Siemens.
- 12.3 Siemens shall further be entitled to assign the whole Contract or a part of it to any third party, in the event of a sale or other transfer of the business or a part of the business of Siemens to a third party.

13. Confidentiality

- 13.1 The parties shall use any documents, know-how, data or other information provided by the other party („Information") exclusively for the purpose of this Contract and keep the same confidential subject to the following. The parties may disclose Information to employees of the receiving party and to third parties who reasonably need to know such Information for the purpose of the Contract provided such employees and third parties are bound by equivalent confidentiality obligations. The party disclosing Information shall be held liable for a breach of such obligations by its employees or a third party.

- 13.2 This confidentiality obligation shall not apply to Information which
- is or becomes part of the public domain other than by fault of the receiving party;
 - is disclosed to the receiving party in good faith by a third party who is entitled to make such disclosure;
 - is developed independently by the receiving party without reliance on Information;
 - was known to the receiving party prior to its disclosure by the other party; or
 - is required to be disclosed by law (subject to the receiving party's obligation to notify the disclosing party in a timely manner of such requirement).

- 13.3 This confidentiality obligation shall survive the expiration or termination of this Contract.

14. Suspension

- 14.1 Siemens may suspend performance of its obligations under the Contract, if (i) the Customer is in delay with any payment or providing payment security for more than 30 days, or (ii) the Customer fails to perform those of obligations necessary for Siemens to complete or deliver the Supplies, or (iii) the Customer has otherwise materially breached the Contract.
- 14.2 If Siemens suspends the Contract in accordance with Clause 14.1 or in the event the Customer suspends the Contract without the express written agreement with Siemens, the Customer shall become immediately liable to pay Siemens for all parts of the Supplies already provided. The Customer shall further reimburse Siemens all reasonable additional costs and expenses incurred as a result of such suspension (e.g. payments to subcontractors, cost of waiting time, demobilization and remobilization, etc.). Any contractual dates shall be extended for a reasonable period to overcome the effects of the suspension.

15. Termination

- 15.1 Either party may terminate this Contract with immediate effect by written notice, if the other party becomes bankrupt or insolvent, has a receiving order made against it or compounds with its creditors, or carries on business under a receiver, trustee or manager for the benefit of its creditors or goes into liquidation.
- 15.2 Save as provided under Clause 6.4 and Clause 15.1, the Customer may terminate the Contract only in the circumstances set out below and in each case upon 14 days written notice to Siemens:
- a) in the event of delay, if the maximum liquidated damages under Clause 4.3 are payable, a reasonable additional period of time for delivery has been granted to Siemens and has expired, and within that time Siemens has not provided a commitment to pay further liquidated damages exceeding the before-mentioned maximum liquidated damages in respect of continuing period of delay ; or
 - b) in the event Siemens has materially breached the Contract and has not remedied the breach within a reasonable period after receiving written notification of the breach from the Customer.
- 15.3 Any termination by the Customer shall not affect those parts of the Supplies already delivered or performed in accordance with the Contract prior to the termination. After termination of the Contract in accordance with Clause 15.2, the Customer shall remain liable to pay Siemens for all parts of the Supplies already delivered prior to termination. The Customer shall be entitled to compensation for the reasonable costs incurred in excess of the Contract Price if it had the Supplies delivered/remedied by a third party. For the avoidance of doubt, Clause 11 shall apply in case of termination. The right to rescind the Contract is excluded.
- 15.4 Notwithstanding any other rights it may have under this Contract, Siemens may terminate the Contract
- a) if the Customer comes under the direct or indirect control of any competitor of Siemens, or
 - b) if the Customer materially breached the Contract and has not remedied the breach within a reasonable period after a notification by Siemens or is in delay in making any payment or in providing any payment security required under this Contract for more than 60 days; or
 - c) if the Contract has been suspended for more than 60 days.
- 15.5 In the event of termination by Siemens, Siemens shall be entitled to recover from the Customer (i) the Contract Price less any saved or avoided expenditure and (ii) any additional cost and expenses incurred by Siemens due to such termination.

16. Dispute Resolution, Applicable Law

- 16.1 The Contract and any dispute or claim arising out of, or in connection with, it or its subject matter or formation (including non-contractual disputes or claims) shall be governed by and construed in accordance with the substantive laws of Switzerland. The UN Convention on Contracts for the International Sale of Goods (CISG) shall not apply.
- 16.2 All disputes arising out of or in connection with the Contract including any question regarding the termination or any subsequent amendment of the Contract shall be finally settled in accordance with the Rules of Arbitration of the International Chamber of Commerce ("ICC"). If the value of the total matter in dispute, including the value of any counterclaims, is less than € 1,000,000, the tribunal shall consist of one arbitrator and if the value of the total matter in dispute is € 1,000,000 or more the tribunal shall consist of three arbitrators. If the tribunal consists of three arbitrators, each party shall nominate one arbitrator for confirmation by the ICC. Both arbitrators shall agree on the third arbitrator, within 30 days after their appointment. Should the two arbitrators fail to reach agreement on the third arbitrator within the thirty-day period, the ICC shall select and appoint the third arbitrator.
- 16.3 The seat of arbitration shall be Zurich, Switzerland. The language to be used in the arbitration proceeding shall be English. Any order for the production or disclosure of documents shall be limited to the documents on which each party specifically relies in its submission(s).
- 16.4 Upon request of a party, the arbitral tribunal shall order any claiming or counterclaiming party to provide security for the legal and other costs of any other party related to that claim or counterclaim, by way of bank guarantee or in any other manner and upon such terms as the arbitral tribunal considers appropriate.

17. Export Regulations

- 17.1 If Customer transfers Supplies (hardware and/ or software and/ or technology as well as corresponding documentation and/ or works and services, regardless of the mode of provision, and/ or including all kinds of technical support) provided by Siemens to a third party worldwide, Customer shall comply with all applicable national and international (re-) export control regulations. In any event Customer shall comply with the (re-) export control regulations of the Federal Republic of Germany, of the European Union and of the United States of America.
- 17.2 If required to conduct export control checks, the Customer, upon request by Siemens, shall promptly provide Siemens with all information pertaining to a particular end customer, destination and intended use of the Supplies provided by Siemens, as well as any export control restrictions existing.
- 17.3 The Customer shall indemnify and hold harmless Siemens from and against any claim, proceeding, action, fine, loss, cost and damages arising out of or relating to any non-compliance with export control regulations by the Customer, and the Customer shall compensate Siemens for all losses and expenses resulting therefrom, unless such non-compliance was not caused by the fault of the Customer. This provision does not imply a change in the statutory burden of proof.

18. Miscellaneous

- 18.1 Siemens shall not be obliged to fulfill this Contract if such fulfillment is prevented by any impediments arising out of national or international foreign trade or customs requirements or any embargoes or other sanctions.

Appendix

Ordering information

- 18.2 If any provision of this Contract is prohibited or declared invalid or unenforceable by any court or tribunal of competent jurisdiction, this shall not affect the validity or enforceability of any other provision. The parties shall use their reasonable efforts to substitute such provision by a legal, valid or enforceable one with the same or a similar result.
- 18.3 Any amendments, changes or additions to this Contract must be made in writing in the form of a written agreement signed by authorised representatives of both parties.
- 18.4 No delay or omission by either party in exercising any right, power or remedy provided by law or under this Contract shall affect, impair or operate as a waiver of such right, power or remedy.
- 18.5 This Contract constitutes the entire agreement between the parties and supersedes and extinguishes all previous agreements, promises, assurances, warranties, representations and understandings between them, whether written or oral, relating to its subject matter. Each party acknowledges that in entering into this Contract it does not rely on, and shall have no remedies in respect of, any statement, representation, assurance or warranty (whether made innocently or negligently) that is not set out in this Contract. Each party agrees that it shall have no claim for innocent or negligent misrepresentation based on any statement in this Contract.
- 18.6 This Contract is drawn up in the English language. If this Contract is translated into another language, the English language text shall in any event prevail.

¹⁾ The text of the Terms and Conditions of Siemens AG can be downloaded at
www.siemens.com/automation/salesmaterial-as/catalog/en/terms_of_trade_en.pdf

The quality management system of our Business Unit complies with the international standard EN ISO 9001.

Certificates

Information on the certificates available (CE, UL, CSA, FM, shipping authorizations) for building control and electrical installation products can be found on the Internet at:

<https://support.industry.siemens.com/cs/products?lc=en>

In the filter criteria table you can choose the entry type „certificate“ to search for more information.

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5TG7141	5TG7141	Rocker, 1-fold, neutral, titanium white, DELTA style	B	1 ST	1-50
5TG7141-1	5TG7141-1	Rocker, 1-fold, neutral, platinum metallic, DELTA style	B	1 ST	1-50
5TG7142	5TG7142	Rocker, 1-fold, with I/O Symbols, titanium white, DELTA style	B	1 ST	1-51
5TG7142-1	5TG7142-1	Rocker, 1-fold, with I/O Symbols, platinum metallic, DELTA style	B	1 ST	1-51
5TG7143	5TG7143	Rocker, 2-fold, with Up/Down Symbols, titanium white, DELTA style	B	1 ST	1-51
5TG7143-1	5TG7143-1	Rocker, 2-fold, with Up/Down Symbols, platinum metallic, DELTA style	B	1 ST	1-51
5TG7145	5TG7145	Rocker, 2-fold, neutral, titanium white, DELTA style	B	1 ST	1-50
5TG7145-1	5TG7145-1	Rocker, 2-fold, neutral, platinum metallic, DELTA style	B	1 ST	1-50
5TG7156	5TG7156	Rocker, 1-fold, with Label plate, titanium white, DELTA style	B	1 ST	1-50
5TG7156-1	5TG7156-1	Rocker, 1-fold, with Label plate, platinum metallic, DELTA style	B	1 ST	1-50
5TG7157	5TG7157	Rocker, 2-fold, with Label plate and Window, titanium white, DELTA style	B	1 ST	1-51
5TG7157-1	5TG7157-1	Rocker, 2-fold, with Label plate and Window, platinum metallic, DELTA style	B	1 ST	1-51
5TG7158	5TG7158	Rocker, 2-fold, with Window, titanium white, DELTA style	B	1 ST	1-50
5TG7158-1	5TG7158-1	Rocker, 2-fold, with Window, platinum metallic, DELTA style	B	1 ST	1-50
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5WG1115-3AB31	AP 115/31	Pushbutton, double, pushbutton position, IP 44, gray	A	1 ST	1-27
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5WG1116-2AB21	UP 116/21	DELTA bus coupling unit, single, pushbutton position, with 2 LEDs	A	1 ST	1-25
5WG1116-2AB31	UP 116/31	DELTA bus coupling unit, double, pushbutton position, with 2 LEDs	A	1 ST	1-25
5WG1117-2AB12	UP 117/12	Bus transceiver modules, mounting depth 18 mm	A	1 ST	13-9
5WG1117-2BB12	UP 117B12	Bus Coupling Unit (BTM), modular	A	1 ST	13-9
5WG1117-2CB12	UP 117C12	Bus Coupling Unit (BTM), NEMA	A	1 ST	13-10
5WG1118-4AB01	AP 118/01	Control Module Box	A	1 ST	9-7
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5WG1203-2DB14	UP 203/14	Touch sensor, quadruple, with status LED, with scene controller and room temperature sensor, Gamma arina, white	A	1 ST	1-22
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New Product

Phase out

16-13

Appendix

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Published by
Siemens Switzerland Ltd, 2018

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Article no. E10003-C38-8B-A0100-7600 (Status 06/2018)

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