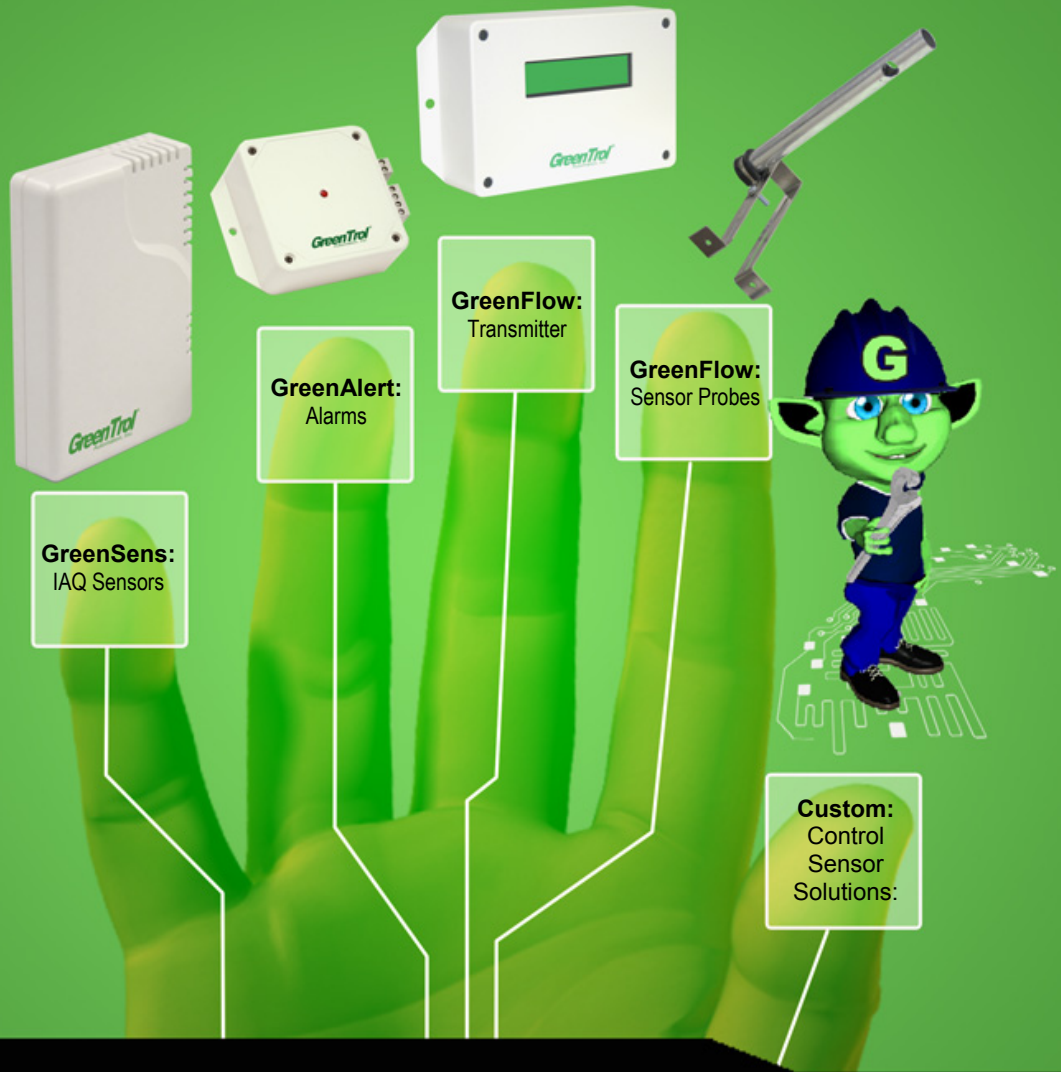


Standard Product Library

GreenTrol[®]
Automation, Inc.



GreenSens:
IAQ Sensors

GreenAlert:
Alarms

GreenFlow:
Transmitter

GreenFlow:
Sensor Probes

Custom:
Control
Sensor
Solutions:

- Ideal for HVAC Distributors and OEMs
- Economical Sensor Solutions
- Broad Range of Analog & Network Connectivity Options
- Private Label Available
- Customizable



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Build to suit

GreenTrol Automation, Inc. specializes in high quality standard off-the-shelf and custom designed HVAC air sensing and control solutions for the OEM market. The air sensing and control market is expanding rapidly as demands for improved indoor air quality and energy conservation converge with more stringent green building mandates and attractive government incentives. The **GreenTrol** Green-Flow[®], GreenAlert[®], and GreenSens[®] product lines offer OEMs innovative turn-key solutions, as well as custom designed application specific instrument/control packages to meet these challenges. The GreenTrol team of solution experts has teamed up with a leading designer/manufacturer of instruments and controls, providing an unparalleled resource for fast tracking your critical air sensor/control requirement from concept development through full production.

GreenTrol provides off the shelf high performance sensors to meet a wide variety of OEM application requirements. Devices can be integrated with sensor systems and embedded customized firmware to execute specified sequences of operation. High accuracy airflow, temperature, relative humidity and CO₂ sensors can be integrated into a complete, custom turn-key package for seamless integration with your product. GreenTrol design engineers are experienced with BACnet[®], Modbus[®] and Lon communication protocols as well as traditional analog I/O interfaces. Proprietary protocols can also be designed into your custom solution. Speak with a GreenTrol applications engineer today and explore the opportunities to enhance your product line using state of the art GreenTrol sensor and control technology.

Custom Products

GreenTrol's experienced design team can fast-track your "idea" to a solution in less time than traditional "off-the-shelf" companies. Customization can make your product stand out from the competition.



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GreenAlert Product Family

The GreenAlert family of general purpose alarms are an excellent choice for applications requiring a general purpose local visual alarm and remote alarm notification capabilities. These innovative products are also ideal for retrofitting existing applications not equipped with alarm features. GreenAlert devices are ideal for control systems requiring alarming capability outside of a Building Automation System (BAS), or for LEED[®] designs meeting the Outside Air Delivery Credit (EQC1) alarm requirements. GreenAlert devices monitor the analog output of another device and generate local visual and remote alarm indication when preset limits are exceeded. GreenAlert products are available with simple fixed alarm thresholds or with fully programmable alarms for Low/High Limit with hysteresis, or for dead band operation with upper/lower set points based on percentage of setpoint. GreenAlert devices are backed by a 12 month limited OEM warranty.



GA-100

The GA-100 is a basic general purpose alarm device with fixed threshold, local visual alarm and an integral relay for remote notification via dry contacts or direct drive to an external LED alarm. The GA-100 continuously monitors an analog output of another device and activates the alarm if the threshold value is exceeded. An LED provides local indication of the alarm and remote notification is provided by built-in relay or by direct LED drive.

Alarm Type: Local visual and remote alarm notification via dry relay contact closure (30VDC/24VAC 3 Amps max) or direct LED drive (15mA typical)

Alarm Input Range/Threshold: 0-5V, 0-10V or 4-20mA with fixed 3.25VDC/6.5mA threshold.

List Price: \$231.00

Contact GreenTrol @ 877-446-8765 for quantity pricing and product datasheets.



GA-200

The GA-200 is an advanced, fully programmable alarm device with LCD display. The GA-200 features selectable alarm type (Hi limit, Lo limit or Deadband with hysteresis), adjustable alarm setpoint and hysteresis and an advanced variable signal integration filter to minimize false triggering due to transient analog signal fluctuations. This feature is particularly useful in outside airflow applications affected by transient wind gusts. The GA-200 supports analog signals of 0-5V, 0-10V, 2-10V and 4-20mA. Local alarm notification, remote alarm relay contacts (N.O. or N.C.) and external alarm LED drive are all available from the GA-200.

Alarm Type: Local visual and remote alarm notification via dry relay contacts (N.O. or N.C., 30VDC/24VAC 3 Amps max) or direct LED drive (15mA typical)

Alarm Input Range/Threshold: 0-5V, 0-10V, 2-10V or 4-20mA with programmable threshold.

Communication Options: BACnet[®] Modbus MS/TP

List Price: \$463.00

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GreenFlow Product Family



T2000 Transmitter



S110 Sensor Probe and Universal Mounting Bracket

The GreenFlow GF series airflow stations feature high quality economical airflow measurement with integral programmable airflow set-point alarms and available PID control outputs. The GF series uses advanced Thermal Dispersion (TD) technology to ensure accurate, repeatable NIST traceable airflow and temperature measurement from zero flow (still air) to 2,000 FPM and from -20° to 160° F [-28.9° to 71.1° C]. The GF series's accurate airflow measurement and flexible alarm capabilities are key elements in the acquisition of LEED[®] credits for Energy and Atmosphere and Indoor Environmental Quality. Alarm outputs can be configured as dry relay contacts or as a direct driver for external LED alarm indication (15mA typical). Innovative features include a Field Calibration Wizard for simple, intuitive field adjustment to factory calibration where required and advanced, variable airflow signal filter integration to minimize airflow fluctuations (transient wind gusts) at low air flows. A versatile bracket design allows for application in a wide variety of OEM applications. Analog output versions are available with field-configurable 0-10VDC, 0-5VDC or 2-10VDC (20mA max) output for communication with virtually all modern building automation systems (BAS). Built-in PID control options and tunable PID algorithm, available for 0-10VDC, 0-5VDC, 2-10VDC or 4-20mA control of external VFD, Damper Actuators or similar control devices. Model GF-2100-A is a single probe airflow station with a single sensor and probe and a variety of analog output options. Model GF-2200 with dual probes allows for an additional airflow traverse point in single air stream applications; and the ability to measure two separate air streams with a single transmitter - ideal for continuous OA/EX flow monitoring and maintenance of system balance and efficiency in Energy Recovery Ventilators. The following GF standard models and options are available:

GF-2100-A



GF-2100 Airflow Measurement Station

Model GF-2100-A includes a single airflow/temperature probe and transmitter with dual selectable analog/PID control signal output options:

- Flow/Temp: Airflow Rate Output / Airflow Temperature Output
- Flow/PID: Airflow Rate Output / PID Signal Output
- N.O. or N.C. Relay Dry Contacts or Direct Alarm LED Drive (15mA typical)
- 10ft cable (other cable lengths available)

List Price: \$648

Contact GreenTrol @ 877-446-8765 for quantity pricing and product datasheets.

GF-2200-A



GF-2200 Airflow Measurement Station

Model GF-2200-A includes dual airflow/temperature probes and a transmitter with dual selectable analog/PID control signal output options:

- Flow/Flow: Probe 1 Airflow Rate Output / Probe 2 Airflow Rate Output
- Flow/Temp: Probe 1+2 Avg. Airflow Rate Output / Probe 1+2 Avg. Temperature
- Flow/PID: Probe 1+2 Avg. Airflow Rate Output / Corresponding PID Signal Output
- PID/PID: PID 1 Output for Probe 1 flow / PID 2 Output for Probe 2 flow
- N.O. or N.C. Relay Dry Contacts or Direct Alarm LED Drive (15mA typical)
- 10ft cable (other cable lengths available)

List Price: \$880

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GreenSens Product Family

The GreenSens family of IAQ sensors support measurements for CO₂, Relative Humidity (RH) and Temperature. GreenSens IAQ sensor products are key in the acquisition of LEED[®] credits as well as for true demand controlled ventilation in compliance with the Ventilation Rate Procedure (VRP) of ASHRAE[®] Standard 62.1-2007. GreenSens IAQ sensors support BACnet and Modbus RTU communication protocols. Our CO₂ sensors use a patented continuous self calibration feature that virtually eliminates routine maintenance. GreenSens IAQ sensors are microprocessor-based devices with industrial grade integrated circuits to ensure exceptional accuracy, stability and long term reliability. All devices require 24VAC/50-60Hz power and are available in standard low profile wall mount enclosures. All GreenSens products are backed by a 12 month OEM limited warranty

Three standard models are available in the GreenSens family of IAQ Sensors:

GS-100-N/CO2:

Single CO₂ sensor and integral BACnet and Modbus communication interface.

CO₂ sensor accuracy: ±75 ppm @ 1000 ppm, 77° F (25° C)

List Price: \$880.00

Contact GreenTrol @ 877-446-8765 for quantity pricing and product datasheets

GS-200-N/RH/T:

Combination Relative Humidity and Temperature sensors with integral BACnet and Modbus communication interface.

Relative Humidity sensor accuracy: ±2% @ 20-80% RH, 77° F (25° C)

Temperature sensor accuracy: ±1.08° F @ 77° F (±0.6° C at 25° C)

List Price: \$389.00

Contact GreenTrol @ 877-446-8765 for quantity pricing and product datasheets

GS-300-N/CO2/RH/T:

Triple CO₂/Relative Humidity/Temperature sensors with integral BACnet and Modbus communication interface.

CO₂ sensor accuracy: ±75 ppm @ 1000 ppm, 77° F (25° C)

Relative Humidity sensor accuracy: ±2% @ 20-80% RH, 77° F (25° C)

Temperature sensor accuracy: ±1.08° F @ 77° F (±0.6° C at 25° C)

List Price: \$972.00

Contact GreenTrol @ 877-446-8765 for quantity pricing and product datasheets



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