Rooster™ Sensor200

Applications

- HVAC Ducting
- Manifold Systems
- Process Control
- VAV Control
- Environmental Monitoring & Alarms
- Clean Toom Monitoring
- Building Management Systems
- Datacenter Monitoring & Alarms
- Particle Separation Equipment
- Downflow & Laminar Flow Equipment

Degree Controls, Inc.

is an ISO-9001 certified, world-class designer and manufacturer of airflow sensing, monitoring, and control solutions. With over 25 years of proven experience, we pride ourselves on delivering solutions which provide the value, differentiation, and service required by our customers, to meet the rapidly changing competitive landscape that they face.

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Overview

The Rooster™ Sensor200 is the first BACnet® airflow sensor with color touch screen display allowing building and facility managers to achieve local and remote alerts and communications simultaneously. Using an instrumentation-class sensing element, the Sensor200 comes calibrated and ready to deploy with a probe-style sensor to monitor ducted airflow. Sensor200 provides real-time audible and visual notification at the display module, and concurrent communication to a building controller over RS485 with the BACnet® MS/TP communication protocol. Users may configure Sensor200 using its own touch screen display, or remotely, through BACnet®. It is intuitive and easy to operate with color display and clear, on-screen instructions.

The Rooster™ Sensor200 is ideal for monitoring airflow in ducts as well as inlets and outlets of manifold systems. The probe sensor is 287mm (11.3") long to access larger ducts and is securely mounted using an included clamp fitting. Volumetric flow is easily enabled by entering the duct information, and ACH (air changes per hour) functionality measures the air volume added to, or removed from, a space within a building.

The Rooster™ Sensor200 is feature-rich, delivering a high level of flexibility and control to users. Alarm output behavior is fully configurable, and dual password protection allows users to personalize operational experience, without overriding safety limits set by facility managers. To future-proof airflow monitoring investments, Sensor200's built-in USB port allows for in-the-field firmware updates. The advanced control set includes I/O to drive fans, lighting, or a separate alarm in the event that redundancy is required. In addition, Sensor200's proportional integral (PI) feedback control loop may be applied for setpoint control.

Calibrated against a NIST traceable laser doppler velocimeter, the Sensor200 will provide years of service, and can also be recalibrated if desired.

Specifications

Alarm Module Size	82mm x 135mm x 19mm (3.2" x 5.3" x 0.7")
Probe Length	287mm (11.3") length with 3.7m (12') cable
LCD Display Area	57mm x 70mm (2.3" x 2.7")
Air Velocity Range	0.15 - 20.0 m/s (30-4,000 fpm)
Velocity Repeatability	1%
Response Time	< 1 second
Supply Voltage	24 VAC/VDC & Wall Adapter
Red LED Indicator	160° viewing angle
Alarm Volume	0 - 85dB (adjustable)
Relative Humidity	5 - 95% (non-condensing)
Operating Temperature	5°C - 60°C (40°F - 140°F)
Storage Temperature	-40°C - 85°C (-40°F - 185°F)
Compliance Standards	CE, RoHS
Rooster™ Package Size	14" x 12" x 4" (36cm x 30cm x 10cm)
Rooster™ Package Weight	3 lbs (1.4kg)

NOVA INSTRUMENTS

Features

- BACNet® MS/TP protocol for easy integration into any building management system.
- Remote monitoring of airflow alarms.
- Night setback operation for energy savings.
- Easy to use with glove-friendly, color touch panel display and intuitive interface.
- Whole-screen background colorization to convey current state, augmented by flashing red LED while in alarm state.
- On screen messaging alerts users to alarms and latching/mute conditions in real time.
- Calibrated against a NIST-traceable laser doppler velocimeter.
- Instrumentation-class probe sensor with conformal coated electronics and sealed enclosure.
- Extensive velocity range, for use in face velocity or duct velocity applications.
- Air temperature sensing included and displayed on screen.
- Full temperature compensation for accuracy across a wide operating temperature range.
- Volumetric flow and ACH (air changes per hour) functionality.
- Advanced mute, alarm delay, and ring-back implementations.
- Dual password protection for users to personalize preferences without overriding safety features set by facility managers.
- INFO button provides instant access to current system configuration and calibration date.
- USB port for data import/export and in-the-field firmware upgrades to future-proof airflow investments.
- Digital I/O to drive fans, lighting, or separate alarms.
- Proportional integral (PI) output may be used for setpoint control.
- Power fail protection retains settings in the event of a power mains failure.

Accuracy

Repeatability ±1% of reading (under identical conditions)

Air Velocity Range	Air Velocity Accuracy*
0.15 to 20 m/s (30 to 4,000 fpm)	±5% of reading or ± 0.05 m/s [10 fpm]
*within compensation range	

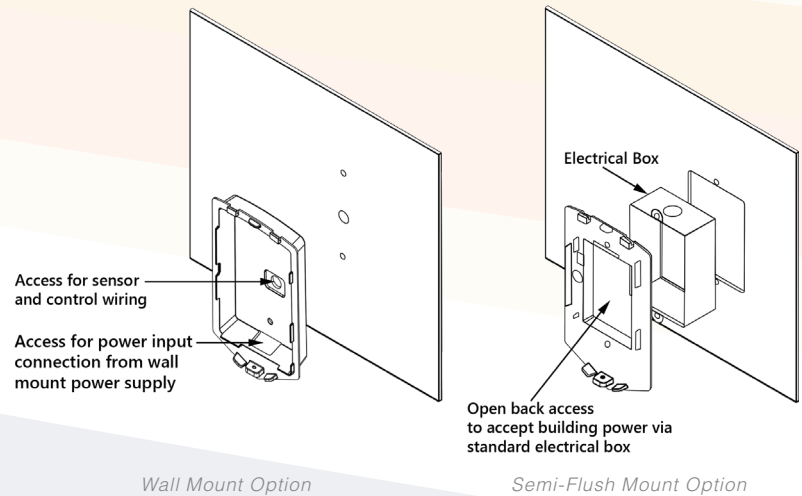# Compensation

Air Temperature Measurement Accuracy: ±2°C (3.6°F)
Resolution: 0.1°C

*Temperature Compensation Range: The Rooster™ Sensor200 is a thermal airflow sensor; it is sensitive to changes in air density and indicates velocity with reference to a set of standard conditions (21°C (70°F), 760mmHg (101.325kPa), and 0%RH).

The Rooster™ Sensor200 has been designed so that when used over the stated temperature compensation range, the sensor indicates very close to actual air velocity and minimal compensation is only required to account for changes in barometric pressure or altitude.

Mounting Options

The Sensor200 alarm module is mounted in two steps. First, the backplate is mounted to a cabinet or electrical box, and the wires are pulled through and connectorized. The connectors are then plugged into the Sensor200, and the front bezel assembly snaps onto the backplate.

Access for sensor and control wiring

Access for power input connection from wall mount power supply

Electrical Box

Open back access to accept building power via standard electrical box

Wall Mount Option   *Semi-Flush Mount Option*

Part Number Format

TC62360-P-B

P = Power Supply Option
1 = US Power Supply
2 = EU Power Supply

B = Mounting Plate Option
1 = Wall Mount Option
2 = Semi-Flush Mount Option

Call Degree Controls today to discuss private labeling, custom screens, and other available customizations.

The Rooster™ Sensor200 ships standard with probe sensor and °C Clamp fitting. A gland fitting is also available.