

Rooster Sensor100

Applications

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

DegreeC

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 Sensor100** from Degree Controls is an advanced air velocity and temperature sensor designed for airflow monitoring in chemical fume hoods, biosafety cabinets, exhaust ducts, and other critical containment applications. Combining precise airflow sensing with an intuitive user experience, the Sensor100 helps laboratories improve safety, consistency, and compliance.

Powered by **Degree Controls' instrumentation-class, temperature-compensated air velocity sensing technology**, the Sensor100 delivers fast, accurate, and reliable airflow monitoring. Factory calibrated and ready to deploy, it provides long-term performance and can be recalibrated when needed. The integrated 287 mm (11.3 in.) probe sensor supports monitoring in larger ducts and enables volumetric flow measurement.

A glove-friendly color touchscreen, intuitive graphical user interface, and on-screen messaging simplify setup and operation with minimal training. Users can configure alarm set points, customize system settings, and add laboratory-specific information such as safety contacts and asset tags.

Color-coded status displays, alarm notifications, and a flashing LED provide immediate indication of operating conditions and critical safety events. The INFO button offers quick access to calibration dates, alarm thresholds, and other key system information, while password protection helps prevent unauthorized changes to safety settings.

The built-in USB port supports firmware updates and event data logging for compliance recordkeeping. Powered by a wall adapter or 24 VAC/VDC source, the Sensor100 also includes advanced features such as night setback mode, remote signaling, alarm latching and ring-back control, configurable units of measure, velocity resolution adjustment, and screen brightness control.

The Rooster Sensor100 provides dependable airflow monitoring in a compact, user-friendly platform.



Specifications

Alarm Module Size	86mm x 139mm x 14mm (3.3" x 5.4" x 0.5")
LCD Display Area	67mm x 114mm (2.6" x 4.4")
Air Velocity Range	0.15 - 20.0 m/s (30-4,000 fpm)
Velocity Repeatability	1% (NSF/ANSI-49 Requirement)
Response Time	< 1 second
Supply Voltage	24 VAC/VDC & Wall Adapter
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	12.7" x 12.7" x 5" (32cm x 32cm x 12cm)
Rooster Package Weight	3 lbs (1.4kg)

Features

- Glove-friendly, color touch panel display, with complete user messaging and intuitive interface.
- Whole-screen background colorization to convey current state.
- Up to 1% velocity accuracy, 1% repeatability of reading.
- Full temperature compensation built-in for accuracy across wide operating temperature range.
- Air temperature sensing included and displayed on-screen.
- Wide velocity range capability, for use in face-velocity or duct-velocity applications.
- Fast and intuitive set-up, with no need to have manual on hand.
- Password protection to provide user preference selection, without affecting safety configuration.
- On screen messaging, to alert multiple simultaneous alarms, and real-time latching/mute conditions.
- Advanced mute, alarm delay, and ring-back implementations to configure user preferences without affecting facility manager's implementation requirements.
- INFO button for instant access to calibration date and current system configuration.
- Power fail protection to retain settings in case of power mains failure.
- Remote monitoring of airflow alarms, and remote night setback initiation for energy savings.
- USB-C keyboard compatible, for user based information, and alphanumeric asset tagging.
- USB-C port for firmware upgrades to future-proof your investment.

Input/Output Available

Inputs - Night Setback

Outputs - Airflow Alarm and Sash Alarm

Please refer to the manual for further information.

Part Number Format

Black - TC550020-P-B

White - TC550021-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

3 = Flush Mount Option

Optional Sash Switch available:

Part # 550000AS004

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

Accuracy

Repeatability $\pm 1\%$ of reading (under identical conditions)

Air Velocity Range

0.15 to 20 m/s (30 to 4,000 fpm)

*within compensation range

Air Velocity Accuracy*

$\pm 5\%$ of reading or ± 0.05 m/s [10 fpm]

Compensation

Air Temperature Measurement Accuracy: $\pm 2^{\circ}\text{C}$ (3.6°F)

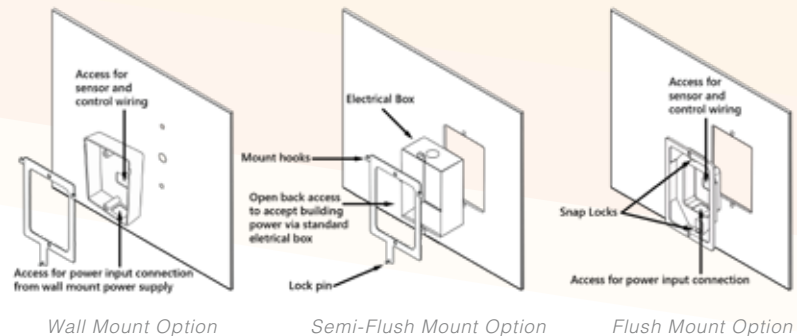
Resolution: 0.1°C

***Temperature Compensation Range:** The Rooster™ Sensor100 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 Sensor100 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 Sensor100 is mounted in two steps. First, the backplate is mounted to the cabinet or electrical box, and the wires are pulled through and connectorized. The connectors are then plugged into the Sensor100, and the front bezel assembly snaps onto the backplate and is secured with bottom captive screw.



The Rooster Sensor100 ships standard with probe sensor and $^{\circ}\text{C}$ Clamp fitting. A gland fitting is also available.



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