

F333 Series Multi-purpose Airflow Sensors

Features

- *State-of-the art constant ΔT technology*
- *Ideal for cost-sensitive application such as HVAC, Facility management*
- *Output configurable 0-5v, 0-10v (velocity only)*
- *Optional: 3.3v UART or I2C provides both air velocity and air temperature data*
- *Small sensor body for compact locations*
- *Accuracy to $\pm 10\%$ of reading from 15-60°C*
- *Wide acceptance angle ($\pm 40^\circ$)*
- *Fully interchangeable with one another*
- *RoHS compliant & Lead free*



About the F333

The AccuSense F333 series uses our latest state-of-the-art constant ΔT technology to achieve accurate, stable air velocity and air temperature measurements at a new best-in-market price point.

The F333 provides airflow measurement over the velocity range 0.2 m/s to 10.0 m/s (40 to 2,000 fpm). The AccuSense F333 offers unimpaired access to tight locations, measurement accuracy to $\pm 10\%$ of reading from 15°C to 60°C, ease of installation, rugged construction, and probe interchangeability.

The small 0.40" sensor body allows access in distant and compact locations such as inside ducts and plenums. The small heads cause minimal distortion of the true airflow picture, and air velocity and airflow temperature measurements are obtained at the same time.

The AccuSense F333 series sensors are fully interchangeable with one another, as each sensor has its own on-line circuitry normalizing the performance of each sensor.

The F333 series airflow sensor can provide a linear 0-5v or 0-10v velocity output. The optional UART or I2C (3.3v) serial communication provides air velocity as well as air temperature data.

The F333 series airflow sensor is the new cost-effective solution for embedded sensor applications such as HVAC, Facility Management, Environmental Monitoring System, etc.

Airflow & Temperature Measurement

Standard medium is air at standard pressure (101.3 kPa, 29.95" Hg). For use with other gases, please contact Degree Controls.

0.2 – 2.0m/s (40 – 400fpm)
0.5 – 5.0m/s (100 – 1,000fpm)
0.5 – 10.0m/s (100 – 2,000fpm)

Air Velocity Accuracies

Greater of 10% of reading or $\pm 0.1\text{m/s}$ or 5% of full scale between 15- 60°C
Repeatability is $\pm 2\%$ under same conditions

Airflow Temperature Accuracy

15-60°C $\pm 2^\circ\text{C}$
Repeatability is $\pm 2\%$ under same conditions

General Specifications

| | |
|------------------------------------|--|
| Operating temperature | 15°C to 60°C |
| Storage temperature | -20°C to 80°C |
| Relative humidity (non-condensing) | 5-95% |
| Response time | < 1 second |
| Acceptance Angle | ± 40 degrees |
| Supply voltage | 12 – 13.2vdc, 10ma nom |
| Output | 0 – 5v, 0 – 10v = 0 fpm - full scale (velocity only) |

Dimensions and Connection

PIN#1 – GND - BLACK
PIN#2 – +12V - RED
PIN#3 – Output - YELLOW
PIN#4 – Comm - BLUE
PIN#5 – Comm - ORANGE

Standard Dimension
4.22" long x 0.40" diameter



Part Number Format

F333 – V – A – O – C

V = Velocity Range

1 = 0.2 – 2.0m/s (40 – 400fpm)
2 = 0.5 – 5.0m/s (100 – 1,000fpm)
3 = 0.5 – 10.0m/s (100 – 2,000fpm)

A = Accuracy

10 = Greater of 10% of reading or $\pm 0.1\text{m/s}$ or 5% of full scale

O = Output

5 = 0-5v (velocity only)
10 = 0-10v (velocity only)

C = Communications (optional)

0 = I2C (3.3v)
1 = UART (3.3v)

Specifications subject to change without notice