

Critical Containment Airflow Monitor Safety Device

Sidewall mounted airflow monitor

The R-II Series is part of the Cambridge Accusense™ Embedded Air Flow Sensor product line, and addresses the needs of those customers demanding highly accurate airflow monitoring in their critical containment applications. The analog/digital output (UART or I²C, 0-10V range) from the R-II can be easily integrated into a system level control device, or you can use the R-II II with its in-situ alarm/reset capabilities. The side mounted connector provides a dedicated open drain alarm pin for fully configurable temperature or velocity set points, and the user can access specific memory locations for even more complex algorithms.

The R-II Series uses Degree Controls' latest state-of-the-art constant ΔT technology to achieve accurate, stable air velocity and air temperature measurements, with models that offer two velocity ranges of: 0.2m/s to 2.0m/s and 1.0m/s to 10m/s.

The small size and flush-mount form factor of the R-II offers simple installation and effective monitoring in compact spaces and hard-to-reach locations. The flow channel design eliminates distortion of the true airflow profile, ensuring accurate airflow and temperature measurements.



Purpose built airflow monitor for
BioSafety, Fume Hoods,
and Clean Room HVAC Systems

- Highly cost-effective solution to accurate airflow monitoring
- Simple operation with powerful auxiliary options
- Integrate into existing control system or can be used as stand-alone alarm monitor
- Accurate! $\pm 2\%$ Repeatability
- Small size, easy to install
- Embedded or temporary installation

Air Velocity _____

Temperature compensation range: 15-60°C (60-140°F):

Accuracy: $\pm 10\%$ reading or $\pm 0.1\text{m/s}$ (20fpm)

Repeatability: $\pm 2\%$ of reading (under identical conditions)

Operating temperature 15°C to 60°C Connector Pin Out

Relative humidity(non-condensing) 5-95%

Supply voltage 12-24 VDC (10mA nominal)

Airflow Temperature _____

Measurement range: 0-60°C (32-140°F)

Measurement Accuracy: $\pm 3^\circ\text{C}$ (5.4°F)

Resolution: $\pm 0.1^\circ\text{C}$

Storage temperature -40°C to 85°C

Response time < 1 second

Output 0-5V or 0-10V

Temperature Compensation Range: The R-II is a thermal airflow sensor; it is sensitive to changes in air density and indicates velocity with reference to a set of standard conditions (25°C (77°F), 760mmHg (101.325kPa), and 0%RH). The R-II 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. Changes in relative humidity have a minimal impact and can usually be ignored.

Accuracy: Valid between 20-30°C (68-86°F), increasing by $\pm 0.25\%$ per degree and $\pm 0.005\text{m/s}$ (1fpm) over remaining temperature compensation range.