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Representative photograph, actual product appearance may vary.

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AWM5104VN

Airflow Sensor, Signal Conditioning: Amplified; Flow/Pressure: 0 SLPM to 20.0 SLPM; Port Style: Threaded, 1/4 NPT

Features

- Linear voltage output
- Venturi design
- Remote mounting capability
- Active laser trimming improves interchangeability
- Separate gas calibration types:
 - Ar (argon)
 - N₂ (nitrogen) or
 - CO₂ (carbon dioxide)

Typical Applications

- Damper control for heating, ventilation, and air conditioning systems
- Gas analyzers
- Low vacuum control
- Process control
- Medical respirators and ventilators
- Oxygen concentrators
- Leak detection equipment
- Vent hoods
- Anesthesia control
- Gas metering
- Gas chromatography

Description

In-Line Flow Measurement

AWM5000 Series Microbridge Mass Airflow Sensors feature a flow housing. They measure flow as high as 20 standard liter (SLPM) while inducing a maximum pressure drop of 2.25" H₂O. The microbridge chip is in direct contact with the flow stream, greatly reducing error possibilities due to orifice or bypass channel clogging.

Rugged, Versatile Package

The rugged plastic package has been designed to withstand common mode pressure. The small sensing element allows 100 g of shock without compromising performance. The compatible connector provides reliable connection in demanding applications.

On-board Signal Conditioning

Each AWM5000 sensor contains circuitry which performs amplification, linearization, compensation, and gas calibration. A 1 to 5 Vdc linear output is possible for all listing ranges (5, 10, 15, or 20 SLPM) or calibration gas (nitrogen, carbon dioxide, nitrous oxide). Calibration is performed by active laser.

CAUTION

PRODUCT DAMAGE

AWM Series Microbridge Mass Airflow Sensors are not designed for liquid flow and will be damaged by liquid flow through the sensor. Failure to comply with these instructions could result in product damage.

damage.

Product Specifications	
Signal Conditioning	Amplified
Flow/Pressure Range	0 SLPM to 20.0 SLPM
Output Voltage @ Trim Point	5.0 Vdc @ Full Scale Flow
Port Style	1/4 in - 18 NPT
Series Name	AWM5000 Series
Null Shift over Temperature	± 0.050 Vdc typ., &@177 0.20 Vdc max.
Output Shift over Temperature	± 7% Reading
Maximum change in flow rate	5.0 SLPM/s
Max. Repeatability & Hysteresis Error	± 0.50% Reading
Null Offset	0.95 Vdc min., 1 Vdc typ., 1.05 Vdc max.
Response Time	60 ms max.
Supply Voltage	8.0 Vdc min., 10.0 Vdc typ., 15.0 Vdc max.
Maximum Common Mode Pressure	50.0 psi
Power Consumption	100 mW max.
Operating Temperature Range	-20 °C to 70 °C [-4 °F to 158 °F]
Storage Temperature Range	-20 °C to 70 °C [-4 °F to 158 °F]
Media Compatibility	Dry gas only
Weight	60 g
Shock	100 g peak 6 ms half-sine (3 drops, each direction of 3 axe
Availability	Global
Comment	Nitrogen calibration gas. This calibration is identical to using oxygen or air as calibration gas.
UNSPSC Code	411121
UNSPSC Commodity	411121 Transducers

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