



AWM5101VN



**Airflow Sensor, Signal Conditioning:
Amplified; Flow/Pressure Range: 0
SLPM to 5.0 SLPM; Port Style:
Threaded, ¼ NPT**

Actual product appearance may vary.

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)

Potential 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 Venturi type flow housing. They measure flow as high as 20 standard liters per minute (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 pressures up to 50 psi, and the small sensing element allows 100 g of shock without compromising performance. The included "AMP" compatible connector provides reliable connection in demanding applications.

On-board Signal Conditioning

Each AWM5000 sensor contains circuitry which performs amplification, linearization, temperature compensation, and gas calibration. A 1 to 5 Vdc linear output is possible for all listings regardless of flow range (5, 10, 15, or 20 SLPM) or calibration gas (nitrogen, carbon dioxide, nitrous oxide, or argon). All calibration is performed by active laser

CAUTION

PRODUCT DAMAGE

AWM Series Microbridge Mass Airflow Sensors are not designed to sense liquid flow and will be damaged by liquid flow through the sensor.

Failure to comply with these instructions could result in product damage.

Supporting Documentation

Product Specifications	
Signal Conditioning	Amplified
Flow/Pressure Range	0 SLPM to 5.0 SLPM
Output Voltage @ Trim Point	5.0 Vdc @ 5SLPM
Port Style	1/4 in - 18 NPT
Series Name	AWM5000
Null Shift over Temperature	± 0.050 Vdc typ., ± 0.20 Vdc max.
Output Shift over Temperature	± 7 % Reading
Maximum change in flow rate	5.0 SLPM/s
Max. Repeatability & Hysteresis Error	$\pm 0.50\%$ 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 axes)
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

