

Honeywell



Representative photograph, actual product appearance may vary.

Due to regional agency approval requirements, some products may not be available in your area. Please contact your regional Honeywell office regarding your product of choice.

AWM5103VN

**Airflow Sensor, Signal Conditioning: Amplified;
Flow/Pressure Range: 0 SLPM to 15.0 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 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 possibility 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 a reliable connection in demanding applications.

On-board Signal Conditioning

Each AWM5000 sensor contains circuitry which performs amplification, linearization, temperature compensation, and c

calibration. A 1 to 5 Vdc linear output is possible for all listing 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.



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| Product Specifications | |
|--|--|
| Signal Conditioning | Amplified |
| Flow/Pressure Range | 0 SLPM to 15.0 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 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 |



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WARNING

PERSONAL INJURY

DO NOT USE these products as safety or emergency stop devices, or in any other application where failure of the product could result in personal injury.

Failure to comply with these instructions could result in death or serious injury.

WARNING

MISUSE OF DOCUMENTATION

- The information presented in this product sheet (or catalog) is for reference only. DO NOT USE this document as product installation information.
- Complete installation, operation and maintenance information is provided in the instructions supplied with each product.

Failure to comply with these instructions could result in death or serious injury.

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