



AWM2100V



Airflow Sensor, Signal Conditioning:
Unamplified (mV); Flow/Pressure
Range: ± 200 sccm; Port Style: Straight

Actual product appearance may vary.

Features

- Bidirectional sensing capability
- Actual mass air flow sensing
- Low differential pressure sensing

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

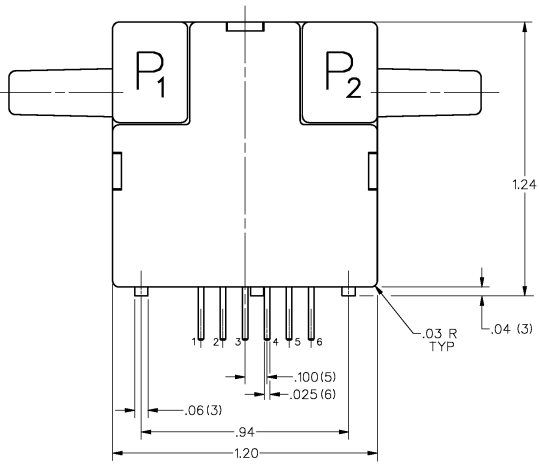
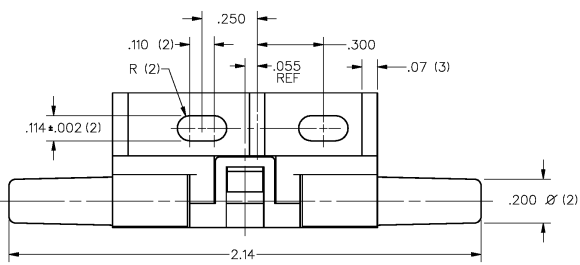
The AWM2000 Series microbridge mass airflow sensor is a passive device comprised of two Wheatstone bridges. The heater control circuit is required for operation per specifications. The sensing bridge supply circuit is also required for operation per specifications. These two circuits are not on board the package and must be supplied in the application. The differential amplifier is a useful interface for the sensing bridge. It can be used to introduce gain and to voltage offsets to the sensor output.

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.

Product Specifications	
Signal Conditioning	Unamplified (mV)
Flow/Pressure Range	±200 sccm
Output Voltage @ Trim Point	30.0 mV dc @ 100 sccm
Port Style	Straight
Series Name	AWM2000
Null Shift over Temperature	±0.20 mV dc
Output Shift over Temperature	±2.5 % Reading
Maximum change in flow rate	5.0 SLPM/s
Max. Repeatability & Hysteresis Error	±0.35% Reading
Null Offset	±1 mV dc
Response Time	1 ms typ., 3 ms max.
Supply Voltage	8.0 Vdc min., 10.0 Vdc typ., 15.0 Vdc max.
Maximum Common Mode Pressure	25.0 psi
Power Consumption	30 mW typ., 50 mW max.
Operating Temperature Range	-25 °C to 85 °C [-13 °F to 185 °F]
Storage Temperature Range	-40 °C to 90 °C [-40 °F to 194 °F]
Media Compatibility	Dry gas only
Sensor Resistance	5.0 kOhm
Sensor Current	0.6 mA max.
Weight	10.8 g
Shock	100 g peak (5 drops, 6 axes)
Availability	Global
UNSPSC Code	411121
UNSPSC Commodity	411121 Transducers

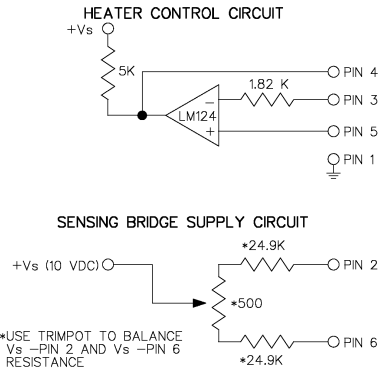
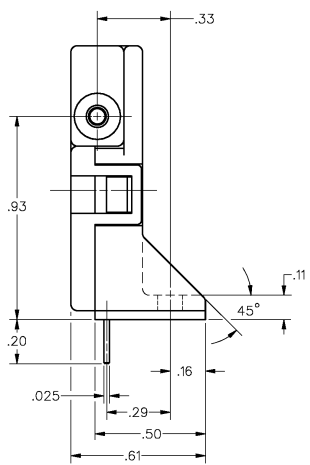
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 PACKAGE: X86481-AW



SPECIFICATIONS:		AWM2100V
RECOMMENDED EXCITATION (USING TEST CIRCUIT) 8VDC MIN		10.00±0.1VDC (15.00 VDC MAX)
POWER CONSUMPTION		30mW TYP
OUTPUT VOLTAGE TRIM POINT		30mV @ 100 sccm
NULL VOLTAGE		0.0±1.0mV
NULL VOLTAGE SHIFT (-25°C TO +85°C)		±.14mV TYP
OUTPUT VOLTAGE SHIFT (+25°C TO -25°C)		+2.5% READING MAX
OUTPUT VOLTAGE SHIFT (+25°C TO +85°C)		-2.5% READING MAX
REPEATABILITY & HYSTERESIS		±.35% READING MAX
RESPONSE TIME		3.0 msec MAX
OPERATING TEMPERATURE RANGE		-25°C TO +85°C
STORAGE TEMPERATURE RANGE		-40°C TO +90°C
TERMINATION (ON .100 CENTERS)		0.025 SQ. IN.
WEIGHT		10.8 GRAMS
SHOCK RATING (5 DROPS, EACH OF 6 AXES)		100G PEAK
OVERPRESSURE		25 psi MAX
SENSOR RESISTANCE (PIN 2-PIN 1, PIN 6-PIN 1)		5 K-OHMS (TYP)
SENSOR CURRENT (PIN 2-PIN 1, PIN 6-PIN 1)		0.6 mA (MAX)

AWM2100V OUTPUT FLOW VS. INTERCHANGEABILITY		
FLOW (SCCM)	NOMINAL (mV)	TOL. (±mV)
200	44.50	4.25
150	38.75	3.00
100	30.00	1.5
50	18.50	2.50
0	0.00	1.0
-50	-16.50	4.50
-100	-30.00	5.00
-150	-38.75	7.65
-200	-44.50	9.75

NOTES
 1 - POSITIVE FLOW DIRECTION IS DEFINED AS PROCEEDING FROM P1 TO P2 AND RESULTS IN POSITIVE OUTPUT (PIN 6 > PIN 2). NEGATIVE FLOW DIRECTION IS DEFINED CONVERSELY AND RESULTS IN NEGATIVE OUTPUT (PIN 6 < PIN 2)



THIRD ANGLE PROJECTION
 SCALE 3 : 1
 DO NOT SCALE PRINT
 UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:
 ONE PLACE (L) ±.030
 TWO PLACES (L00) ±.015
 THREE PLACES (L000) ±.005
 ANGLES ±
 WEIGHT

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MICRO SWITCH
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 MASS AIRFLOW SENSOR
 CATALOG LISTING
 AWM2100V
 FED. REG. CODE #1826

MASTER REDUCED