



AWM3100V



**Airflow Sensor, Signal Conditioning:
Amplified; Flow/Pressure Range: + 200
sccm; Port Style: Straight**

Actual product appearance may vary.

Features

- Laser trimmed for improved sensor interchangeability
- Flow sensing up to 1.0 SLPM
- 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

Like the AWM2000 Series, the dual Wheatstone bridges control airflow measurement. The AWM3000 Series is amplified; therefore, it can be used to increase the gain and to introduce voltage offsets to the sensor output. The heater control circuit and the sensing bridge supply circuit are on board the package.

CAUTION PRODUCT DAMAGE

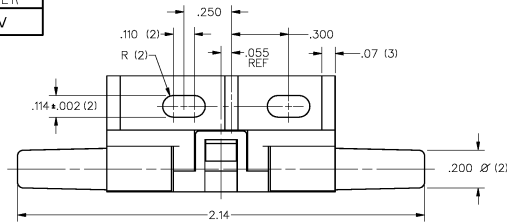
AWM Series Microbridge Mass Airflow Sensors are not designed to sense liquid flow and will be damaged by liquid flow through the sensor.

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

Product Specifications	
Signal Conditioning	Amplified
Flow/Pressure Range	200 sccm
Output Voltage @ Trim Point	5.0 Vdc @ 200 sccm
Port Style	Straight
Series Name	AWM3000
Null Shift over Temperature	±25.0 mV dc
Output Shift over Temperature	±4 % Full Scale
Maximum change in flow rate	5.0 SLPM/s
Max. Repeatability & Hysteresis Error	±0.50% Reading
Null Offset	1.00 Vdc ±0.05 Vdc
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	50 mW typ., 60 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
Weight	10.8 g
Shock	100 g peak (5 drops, 6 axes)
Availability	Global
UNSPSC Code	411121
UNSPSC Commodity	411121 Transducers

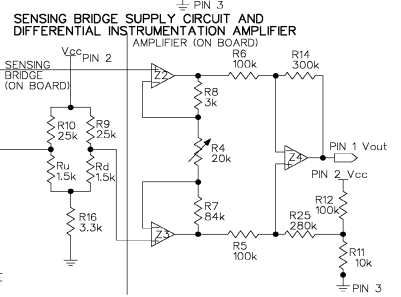
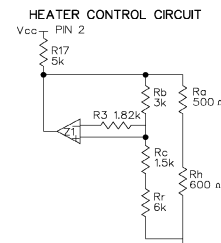
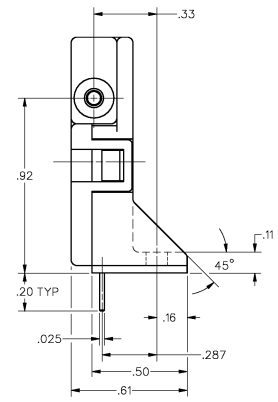
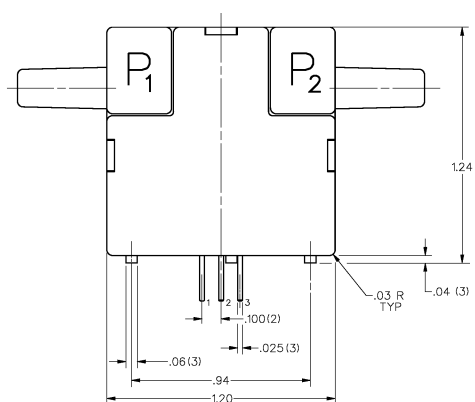
HONEYWELL
PART NUMBER
AWM3100V

REV	DOCUMENT	CHANGED BY	CHECK
5	0013772	RS 16JUNE05	AK



SPECIFICATIONS:	AWM3100V
RECOMMENDED EXCITATION	10.00 ± 0.1VDC
POWER CONSUMPTION	1.0mW MAX
OUTPUT VOLTAGE @ LASER TRIM POINT	5.00 VDC @ 200 sccm
NULL VOLTAGE	1.00 ± 0.05 VDC
NULL VOLTAGE SHIFT (-25°C TO +85°C)	±25mV
OUTPUT VOLTAGE SHIFT (+25°C TO -25°C)	-4% READING MAX
OUTPUT VOLTAGE SHIFT (+25°C TO +85°C)	+4% READING MAX
REPEATABILITY & HYSTERESIS	±50% 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

AWM3100V OUTPUT FLOW VS. INTERCHANGEABILITY		
FLOW sccm	NOMINAL (VDC)	TOL. (±VDC)
200	5.00	0.15
175	4.80	0.16
150	4.50	0.17
125	4.17	0.18
100	3.75	0.19
75	3.27	0.19
50	2.67	0.17
25	1.90	0.13
0	1.00	0.05



OUTPUT CONNECTIONS
PIN 1 OUTPUT VOLTAGE
PIN 2 + SUPPLY VOLTAGE
PIN 3 GROUND

REPLACES X86483-AW

NOTES
1 - POSITIVE FLOW DIRECTION IS DEFINED AS PROCEEDING FROM P1 TO P2 AND RESULTS IN POSITIVE OUTPUT (PIN 1 > PIN 3). NEGATIVE FLOW DIRECTION IS DEFINED CONVERSELY AND RESULTS IN NEGATIVE OUTPUT (PIN 1 < PIN 3)

DESIGN UNITS:	INCH
TOLERANCES UNLESS NOTED:	
NO PLACE	X ±
ONE PLACE	.X ±
TWO PLACE	.XX ±
THREE PLACE	.XXX ±
FOUR PLACE	.XXXX ±
ANGLES	±

DRAWN	KAG	10JAN90
CHECK	JAF	12JAN90
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INTERPRET PER ASME Y14.5M-1994 OTHER HONEYWELL ENGINEERING STANDARDS MAY APPLY		
RASTER		

Honeywell			
TITLE			
MASS AIRFLOW SENSOR			
SIZE	TYPE	DRAWING NAME	REV
B	I	AWM3100V	5
SCALE	3:1	SHEET	1 OF 1