

The AWM 7 Series  
Air Flow Compensated & Amplified  
High Level Analog Output  
Honeywell Replacement



### DESCRIPTION

Advanced Sensors AWM 7 series of Mass Air Flow Sensors offer pin compatible upgrade solutions to the popular AWM7000 series. Using the robust Advanced Sensors Thermal Flow Sensor Die, and incorporating the latest microcontroller technology, AWM7 offers drastically improved interchangeability (< 2% full scale), temperature stability (< 3% full scale from 0°C to +50°C), and resistance to adverse environmental factors such as dust particles and water vapor that have plagued the AWM7000.

For those more stringent applications, Advanced Sensors offers other precision versions with output tolerance as low as 1%..

### APPLICATIONS

- HVAC damper control
- Industrial process control
- Medical respirators,
- Ventilators, O2 concentrators and anesthesia equipment
- Gas leak detectors
- Gas analyzers

### FEATURES

- Resistance to dust, water vapor and shock
- Sensitivity to low flows
- Fast response time (1ms typ.)
- Digitally improved sensor interchangeability (2%F.S. Max.)
- Amplified analog output 1 - 5V
- Replaces AWM3000 series

### SPECIFICATIONS

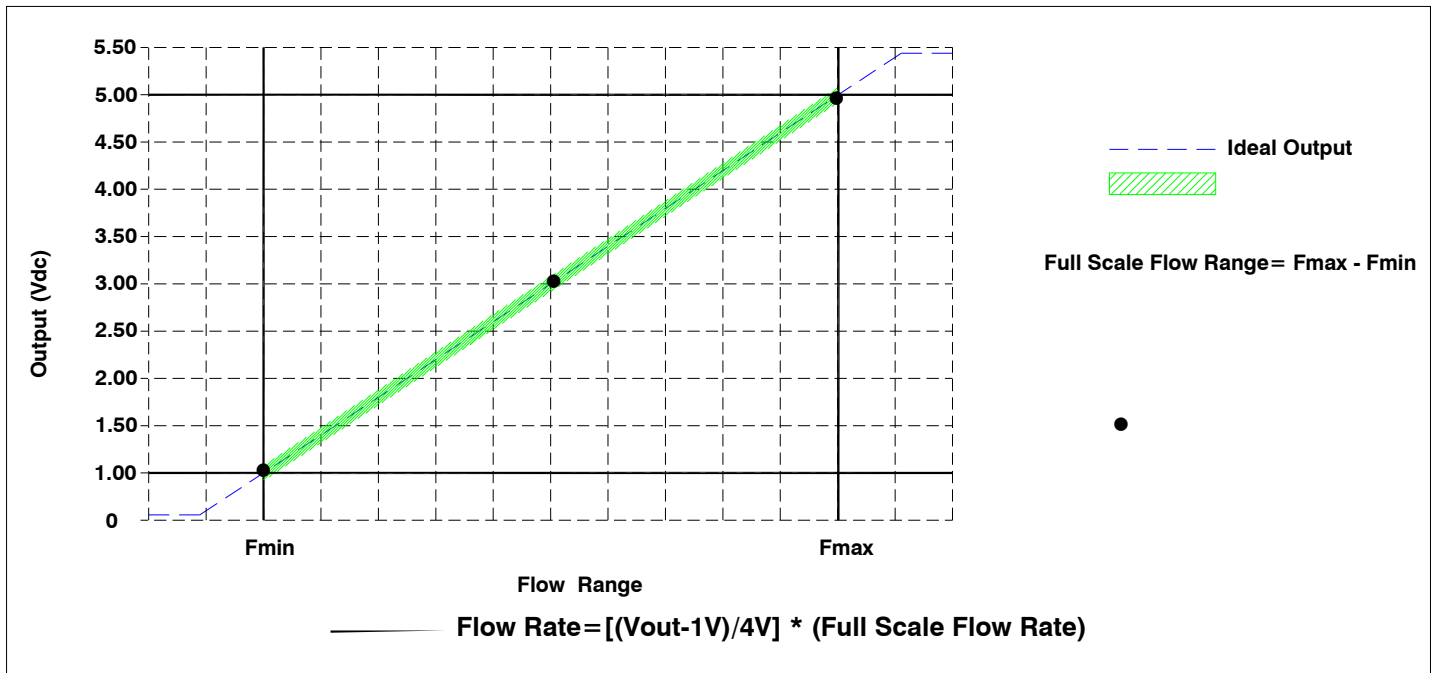
	Symbol	Min	Typical	Max	Unit	Note
<b>Performance Specifications</b>						
Supply Voltage		8	10	14	Vdc	
Current Consumption		22		23	mA	
Null Voltage		0.95	1.0	1.05	Vdc	2
Full Scale Voltage	FSS		4.00		Vdc	2
Accuracy		-3	2	+3	%FSS	3
Repeatability			0.1		%FSS	
Null Drift			0.2		%FSS	4
Pressure Drop at Full Scale			1		inH2O	
Response Time			1.0	3.0	mS	
Weight			40		grams	
Load			100k		Ohms	
Compensated Temperature			0 to 50		°C	
Operating Temperature			-20 to 85		°C	

SPECIFICATIONS	Symbol	Min	Typical	Max	Unit	Note
<b>Absolute Maximum Conditions</b>						5
Supply Voltage				14	V	
Storage Temperature		-40		90	°C	
Package Integrity, Common Mode				25	psi	
Media Compatibility		CDA, Non Ionic, Non Corrosive Gases				
Wetted Materials		Silicon Carbide, PPS, FR4, Epoxy, Silicon,				

**Reference Conditions:** Vsupply: 10± 0.01, Ta=25° C, Relative Humidity: 40%<RH< 60%

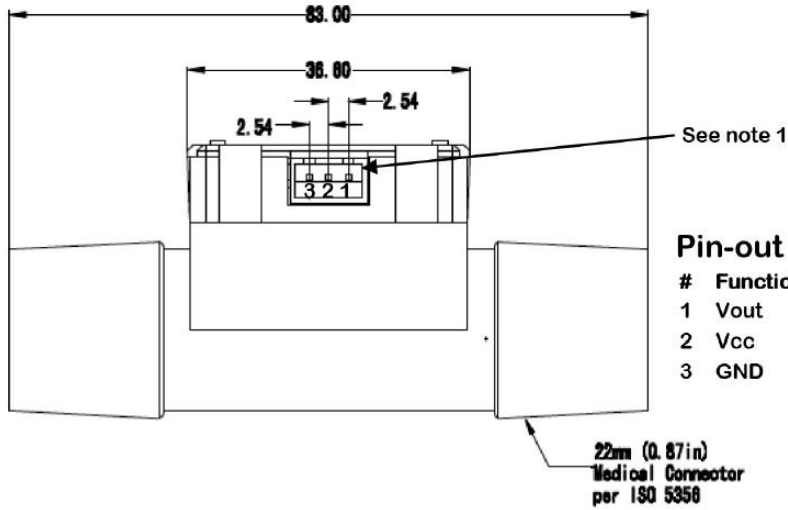
1. All specification at reference conditions unless otherwise noted.
2. Output is ratiometric to supply voltage.
3. Maximum deviation from the Ideal Transfer Function expressed as a percentage of the %FSS over the compensated temperature range. Includes calibration errors (Offset & Span), temperature errors (Offset & Span), pressure non-linearity, pressure and thermal hysteresis.
4. Deviation after 1 year period measured at reference conditions.
5. Exceeding Absolute Maximum Specification may damage the device. Extended exposure beyond the operating conditions may affect device reliability.

## FLOW TRANSFER FUNCTIONS



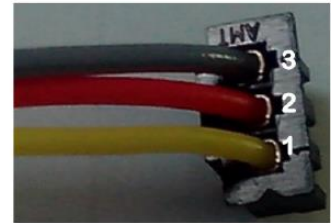
Type 1, Flow Transfer Function

### MECHANICAL DIMENSIONS in [mm]

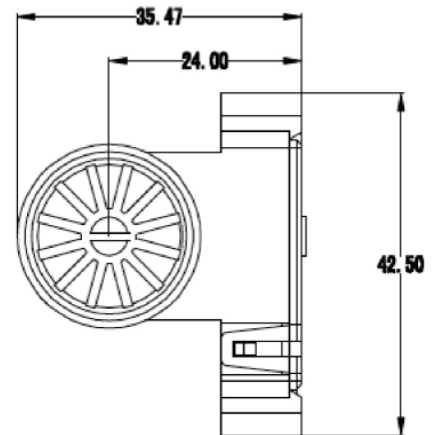
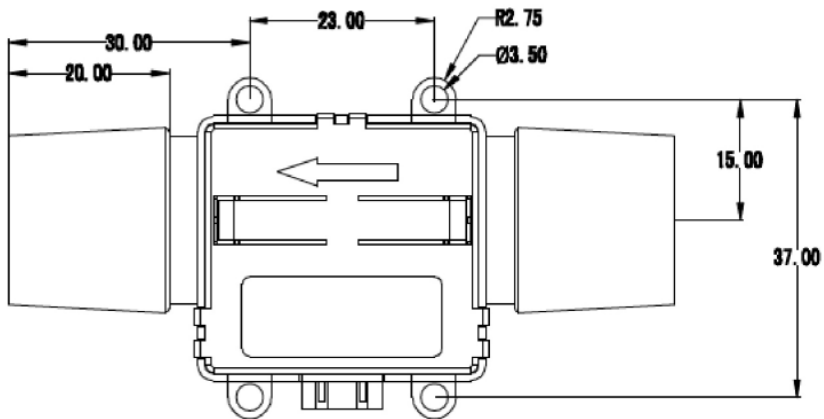


#### Pin-out

#	Function	Wire Color
1	Vout	Yellow
2	Vcc	Red
3	GND	Grey



Mating Connector



### PART NUMBERING FOR ORDERS

Series	Port Type	Package	Flow Range	Flow Units	Type	Calibrated Voltage	Output Type
AWM-7	HBD=Horizontal Barb, Dual	C= Compact	012 020 035 050 100 150 200 300	SLPM= Standard Liters Per Minute	F= Flow	10=10Vdc	Type 1= 1 to 5 Vdc

**Part Number Example: AWM 7 HBDC 012SLPM F101**

**Horizontal Barbed Dual, Compact, 0 to 12 SLPM Range, 10.0Vdc Supply, 1 to 5 Vdc Output, Fmin=0, Fmax= 12 SLPM**

### WARRANTY

Pressure sensors have a limited one-year warranty to the original purchaser. AVSensors will repair or replace, at its option, without charge those items it finds defective. This is the buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall AVSensors be liable for consequential, special, or indirect damages. This warranty does not apply to units that have been modified, misused, neglected or installed where the application exceeds published ratings. Specifications may change without notice. The information supplied is believed to be accurate and reliable as of this printing, however, we assume no responsibility for its use.