Ares

- **PCB Mounted Pressure Transducers**
- **Amplified Output**
- **Differential and Gage**
- **Temperature Compensated**

DESCRIPTION

The Ares is a small, low cost pressure transducer, which is able to measure pressures as low as 0-5 inches of water and as high as 0-1 psi. Sensitivity to extremely low pressures combined with the small physical size make this device ideally suited for application such as HVAC, medical equipment, and flow monitoring. The GA100 series has a 4V span from 0.50V to 4.50V and the GA200 series has a 3.75V span from 0.25-4.00 V.

The plastic housing design for the Ares Series makes the device very user friendly. The housing is designed to be printed circuit board mountable, requiring no additional hardware. Built into the housing are self locking pins which insure a secure fit between the housing and the PCB. The pressure ports are 3/16" barbed ports which mate with industry standard 1/8" or 3/16" ID tubing. These ports are mounted 90° to the printed circuit board to allow other boards to be located above the sensor.

The Ares utilizes a unique sensor circuit design to provide ASIC digital error correction and signal amplification while maintaining an analog signal path. This technique delivers the high level of error correction associated with microprocessor-based circuits, while maintaining a typical bandwidth of >1 kHz generally found only in analog circuits. The result is a pressure sensor that offers the ultimate in low cost and high accuracy, while preserving the fast response and smooth output inherent to silicon sensors.

Due to its small size, barbed pressure ports, and solder re-flow capability, the Ares pressure transducer is ideally suited for a wide range of applications.

FEATURES

- In H_2O Pressure Ranges
- PCB Mountable
- Solder Reflow Capability
- Barbed Pressure Ports
- Dry/Dry Differential Transducer

APPLICATIONS

- Respirators/Ventilators
- CPAP/Sleep Apnea Instruments
- Medical Instruments
- HVAC/Air Flow Management
- Leak Detection

STANDARD RANGES

Range	In H_2O	psi
0 to 5	•	
0 to 10	•	
0 to 15	•	
0 to 1		•

PERFORMANCE SPECIFICATIONS

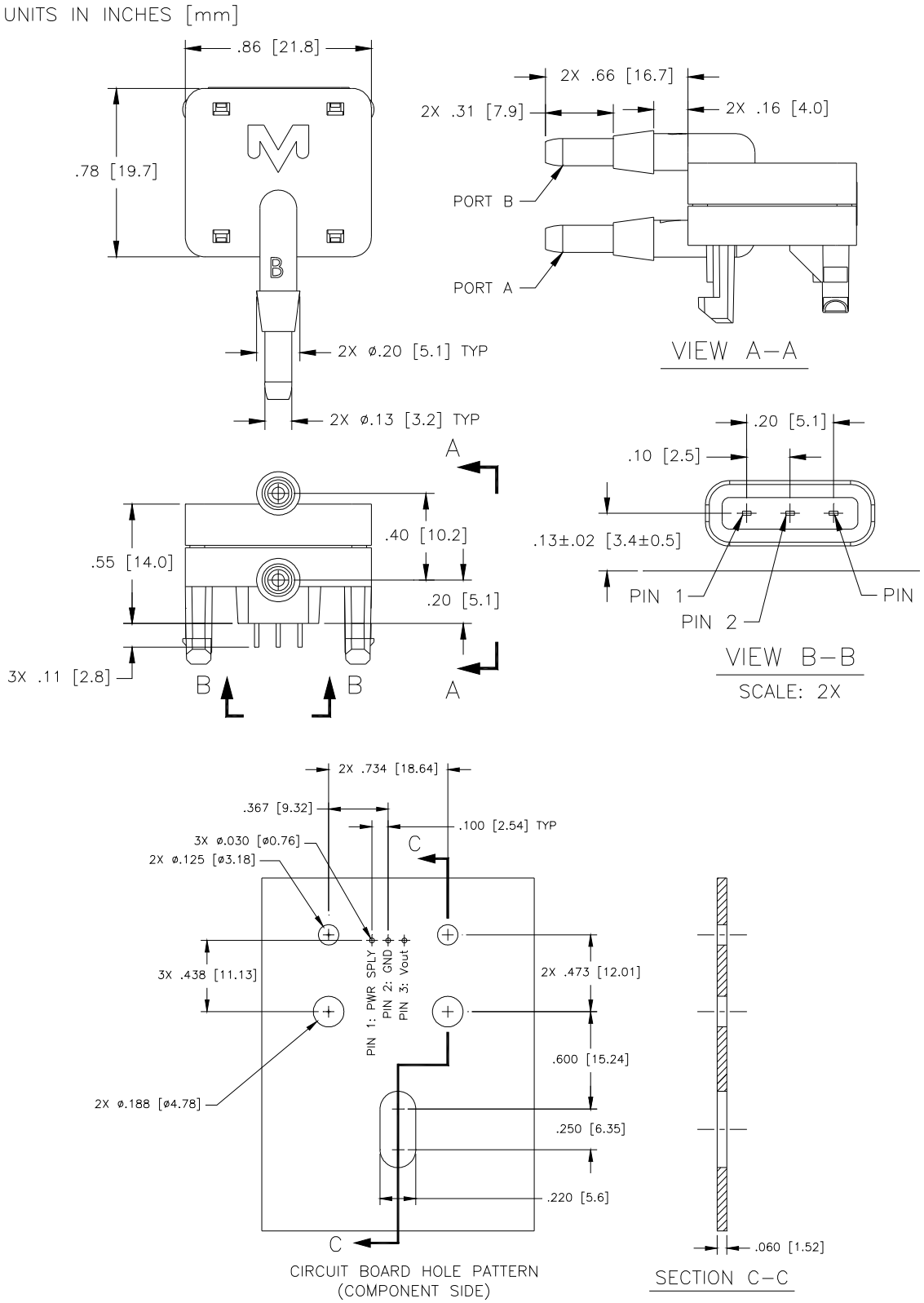
Supply Voltage: 5V
Ambient Temperature: 25°C (unless otherwise specified)
Pressure applied to Port A

PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Span (GA100 Series)	3.975	4.000	4.025	V	1,5
Span (GA200 Series)	3.725	3.750	3.775	V	1,5
Zero Offset (GA100 Series)	0.450	0.500	0.550	V	1
Zero Offset (GA200 Series)	0.200	0.250	0.300	V	1
Pressure Non Linearity (0-5 in H_2O)	-0.25		0.25	%Span	2
Pressure Non Linearity (0-10 and 0-15 in H_2O)	-0.5		0.5	%Span	2
Pressure Non Linearity (0-1 psi)	-1.5		1.5	%Span	2
Output Impedance		5		Ω	
Temperature Error – Span			1.5	%Span	3
Temperature Error – Zero			1.5	%Span	3
Input Voltage Range	4.75	5.00	5.25	V	
Quiescent Current		3		mA	
Burst Pressure	10			psi	
Common Mode Pressure			10	psi	
Long Term Stability (Offset & Span)		±0.5		%Span	4
Compensated Temperature	0		60	ºC	
Operating Temperature	-25		+80	ºC	
Storage Temperature	-25		+80	ºC	
Humidity	0		95	RH	
Weight			3	grams	
Solder Temperature	240ºC Max 5 Sec.				
Media	Non-Corrosive Dry Gases				

Notes

1. Ratiometric to supply voltage.
2. Best fit straight line.
3. Maximum temperature error between 0°C and 60°C with respect to 25°C.
4. Long term stability over a one year period with constant voltage and temperature.
5. For differential applications, the input pressure to Port A must be higher than Port B.

DIMENSIONS



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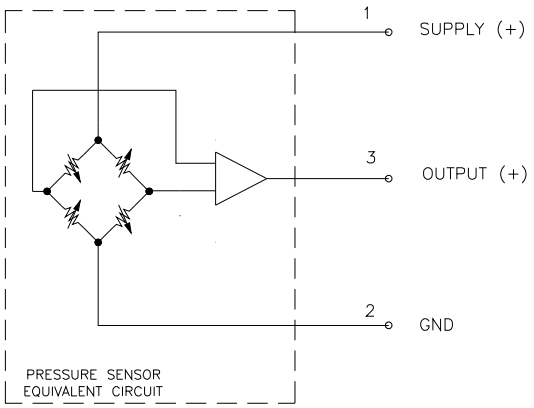
CONNECTIONS



ORDERING INFORMATION

GA 100 - 005WD

Pressure Range (005WD = 5 in H2O, 010WD = 10 in H2O, 015WD = 15 in H2O, 001PD = 1psi)

Output Configuration (100 = 0.5 to 4.5V, 200 = 0.250 to 4V)

Model