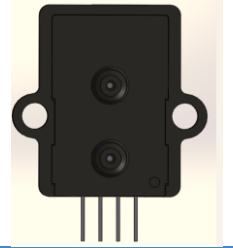


The ASCX MCT-8A Series

Dual Vertical Ports

High Level Analog Output

5.0 Vdc Supply Voltages



DESCRIPTION

Advanced Sensors Multi Chip Technology (MCT) 8 Series incorporates the latest mixed signal ASIC (Application Specific Integrated Circuit) along with a elastomeric silicon bonded MEMS sensor design to provide a high level analog output for medical, life science and pneumatic control industries. The updated design improves upon the ASCX traditional form factor and output with superior performance of across a wide temperature range of 0 to 60°C. The ASIC's advanced design allows for the sensor output to be limited for safety critical operations with internal error checking of the sensor's input and output lines. With all the advanced features, the MCT-8A series is the ideal choice for OEM customers.

APPLICATIONS

- Pneumatic controls
- Medical equipment/instrumentation
- Environmental controls
- Barometric pressure measurement
- Factory Automation
- Process Controls

FEATURES

- Ratiometric, Analog Voltage Output
- Matched Pressure Ports Options
- 5.0Vdc Supply Voltages
- Low Overall Errors, 1%TEB
- Dual Vertical Ports
- Custom Outputs and Ranges Available

SPECIFICATIONS

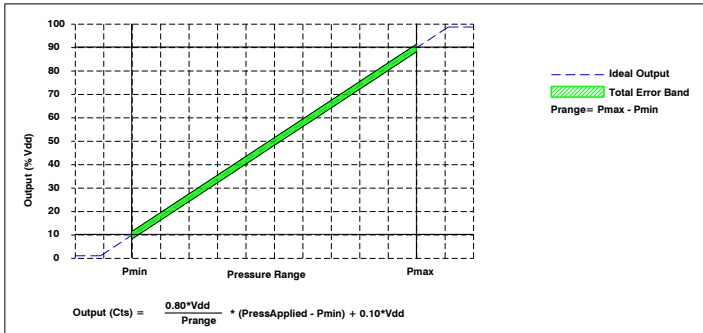
	Symbol	Min	Typical	Max	Unit	Note
Performance Specifications						
Supply Voltage		4.5V	5.0	5.50	V	
Current Consumption				3	mA	
<i>Type 1</i>	<i>Gage/Absolute</i>					
Offset Voltage		0.460	0.500	0.540		
Full Scale Span		3.960	4.000	4.040		
<i>Type 2</i>	<i>Gage/Absolute</i>					
Offset Voltage		0.210	0.250	0.290		
Full Scale Span		4.460	4.500	4.540		
<i>Type 1</i>	<i>Differential</i>					
Offset Voltage		2.460	2.500	2.540		
Full Scale Span		1.960	2.000	2.040		
<i>Type 2</i>	<i>Differential</i>					
Offset Voltage		2.460	2.500	2.540		
Full Scale Span		2.210	2.250	2.290		
Pressure Accuracy		-0.25		0.25	%FSS	2
Thermal Error Of Offset		-0.5		0.5	%FSS	3
Thermal Error Of Span		-1.0		1.0	%FSS	3
Response Time				<100	uS	4
Compensated Temperature			0 to 60		°C	6
Operating Temperature			-20 to 105		°C	6

SPECIFICATIONS	Symbol	Min	Typical	Max	Unit	Note
Absolute Maximum Conditions						10
Supply Voltage		-5.0		6	V	
Storage Temperature		-40		125	°C	
Package Integrity, Common Mode				150	psi	7
Proof Pressure				3x		8
Burst Pressure				5x		9
Media Compatibility		CDA, Non Ionic, Non Corrosive Gases				
Wetted Materials		Ceramic, RTV, Epoxy, Silicon, Gold, Aluminum, LCP				

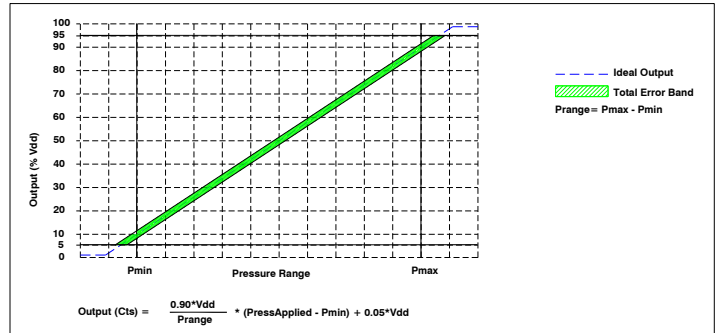
Reference Conditions: Vsupply: 5.00Vdc, Ta=25 °C, Positive Pressure Port B

1. All specification at reference conditions unless otherwise noted.
2. Maximum deviation from a Best Fit Straight Line through Pmin and Pmax measured at 25 °C. Errors included Pressure Non Linearity, Pressure Hysteresis and Repeatability.
3. Errors measured relative values at 25 °C.
6. Compensated and operating temperature for mBar ranges are 10 °C to 50 °C and -20 °C – to 105 °C, respectively.
7. Maximum pressure the sensor package can withstand without rupture.
8. Maximum pressure without degrading sensor’s performance specifications.
9. Maximum pressure the silicon diaphragm can withstand without rupture.
10. Exceeding Absolute Maximum Specification may damage the device. Extended exposure beyond the operating conditions may affect device reliability.

PRESSURE TRANSFER FUNCTIONS

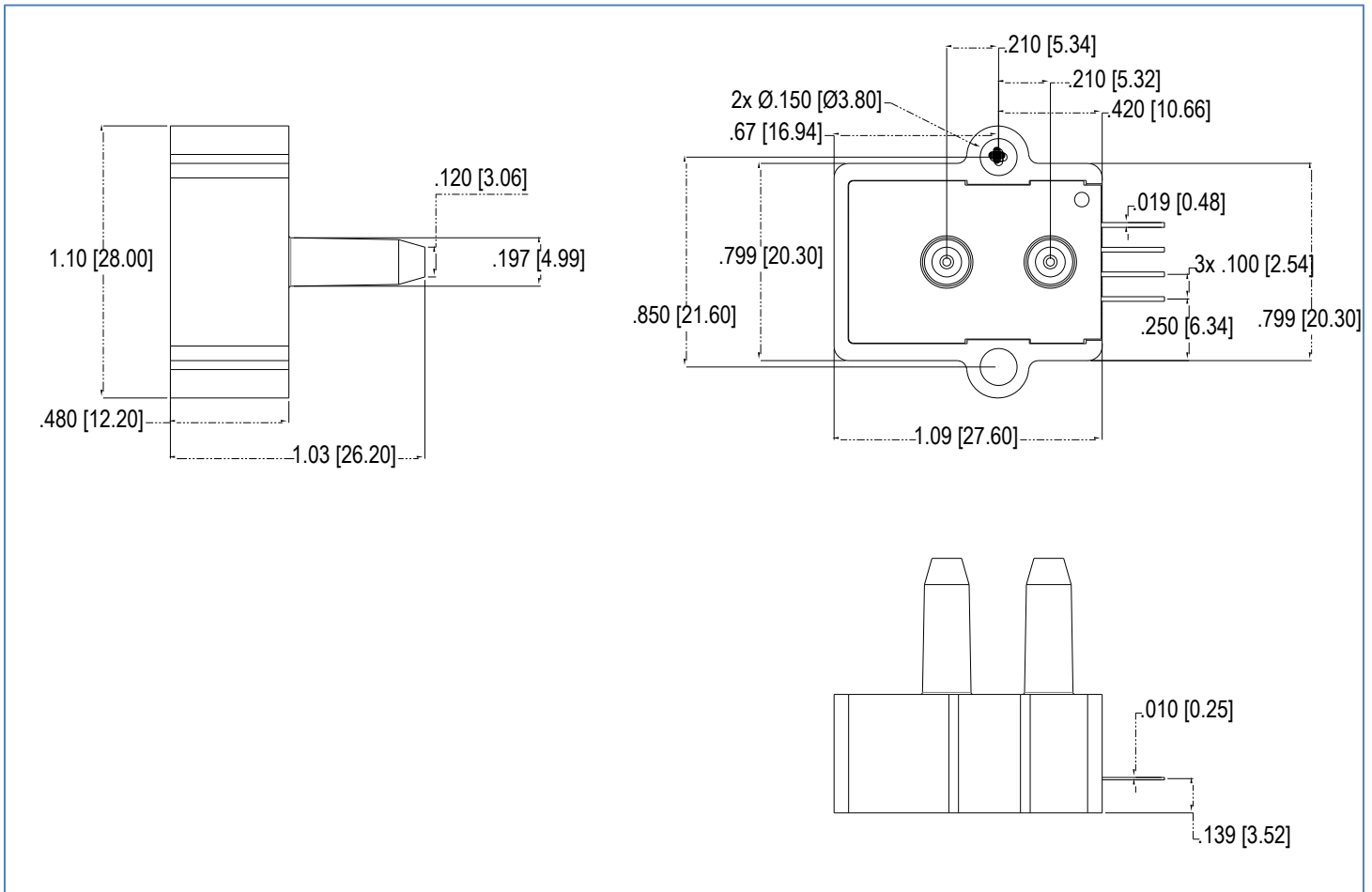


Type 1, 10-90%, Pressure Transfer Function



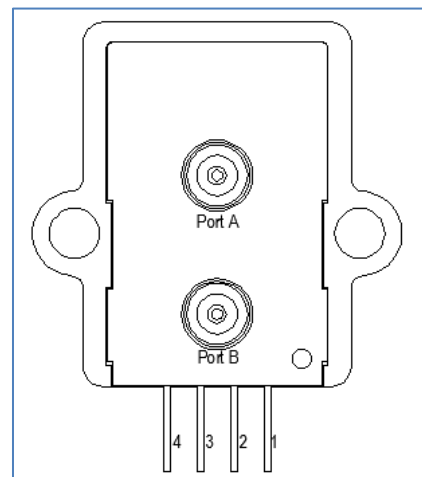
Type 2, 5-95%, Pressure Transfer Function

MECHANICAL DIMENSIONS in [mm]



Electrical Connections (Reference Pin 1 Connection)

- Pin 1 Voltage Supply
- Pin 2 Common
- Pin 3 Output
- Pin 4 No Connection



PART NUMBERING FOR ORDERS

Series	Port Type	Package	Pressure Range	Pressure Units	Pressure Type (Range Availability) [Package Availability]	Calibrated Voltage	Output Type	-Options
ASCX MCT-8A	VBT=Vertical Barb, Top	T= SIL Thru Hole	005	M=mBar	G= Gage (All Ranges) [All Port Types]	3=3.3Vdc 5-5.0Vdc	Type1= 10 -90% of Supply Voltage Type2= 5 -95% of Supply Voltage	-MP = Matched Ports -PC = Parylene Coating -GC = Gel Coat -OC = Output Clipping
			010					
			020					
			050					
			100					
			200					
			001	P=PSI	A=Absolute (15,30,50,100 PSI Ranges) [All Port Types]			
			002					
			005					
			015					
			030					
			050					
100	B=Bar	B=Bidirectional (All Ranges) [All Port Types]						
150								
001								
002								
003								
006								

Part Number Example: ASCX MCT-8A VBTT005PG51

Vertical Barbed Top Port, SIL Thru Hole Package, 0 to +5 PSI Range, 5.0Vdc Supply, Pmin=0 PSIG, Pmax= + 5PSIG, Output 10% to 90% VDD, 0.50 to 4.50 Output.

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.