

Model 5000 *Wet/Wet*



Differential Pressure Sensor

Overview

The Model 5000 offers wet/wet differential pressure measurement of both liquids and gases compatible with stainless steel, but without the use of fluid-filled cavities. This eliminates the risk of system contamination and at the same time offers all of the benefits associated with AST's MEMs-based **Krystal Bond™ Technology**. In the event that either pressure port is at full line pressure and the other at zero, no damage can be done to the transducer/transmitter.

Benefits

- Compact, Rugged Design
- High Strength Stainless Steel Construction
- No Fluid Fill Cavities or Internal O-rings
- Differential Ranges up to 1,000 PSI [70 Bar]
- CE EN61326
- Wide Operating Temperature Range
- Excellent Price to Performance Ratio

Applications

- Industrial OEM Equipment
- Gas Compressors
- HVAC
- Test Stands
- Train Braking Circuits
- Water Management
- Filtration
- Off Road / Marine
- Refrigeration
- Hydrogen*
- Data Loggers

*Please consult factory for wetted materials

Performance @ 25°C (77°F)

Line Pressure	0-100 to 1000 PSI (0-7, 0-17, 0-35 and 0-70 Bar)
Measurement Range	20% of line pressure, minimum
Proof Pressure	Rated line pressure on either P1 or P2
Burst Pressure	5X rated line pressure or 2,000 PSI (whichever is less)
Accuracy ¹	< ± 0.3% BFSL
Pressure Cycles	> 10 Million

¹ Accuracy includes non-linearity, hysteresis & non-repeatability



Environmental Data

Temperature

Operating	-40 to 85°C (-40 to 185°F)
Storage	-40 to 100°C (-40 to 212°F)

Thermal Limits

Compensated Range	0 to 55°C (30 to 130°F)
TC Zero	<±1.5% of FS
TC Span	<± 1.5% of FS

Other

Shock	100G, 11 msec, 1/2 sine
Vibration	10G peak, 20 to 2000 Hz.
EMI/RFI Protection:	100V/m, 150kHz to 1GHz
Rating:	IP-66

Electrical Data

Output	4-20mA	Voltage (1-5V, 1-6V)	0.5-4.5V Ratiometric
Excitation	10-30VDC	10-30VDC	5VDC, regulated
Output Impedance	-	<100 Ohms, Nominal	<100 Ohms, Nominal
Current Consumption:	<25mA	<10mA	<10mA
Bandwidth	(-3dB): DC to 250 Hz	(3dB): DC to 1kHz	(3dB): DC to 1kHz
Output Load:	0-800 Ohms@10-28VDC	10k Ohms, min	10k Ohms, min
Reverse Polarity Protection	Yes	Yes	No

Ordering Information

5000 A 0100 P 4 E 1 0050 P 00

Series Type

Process Connection
 A = 1/4" Male NPT
 C = 1/4" BSP Male
 J = 1/8" Female NPT

Line Pressure
 Insert 4 -digit code from chart

Pressure Unit
 P=PSI
 B=BAR,
 K=kg/cm2

Outputs
 1=0.5-4.5V ratiometric [5VDC Supply]
 3=1-5V
 4=4-20mA } 10-28 VDC Supply
 6=1-6V

Electrical*
 A=2 ft. (24 AWG) (0.6m)
 B=4 ft. (24 AWG) (1.2m)
 E=Mini DIN 43650
 L=Conduit 2 ft. (0.6m)

Wetted Material
 0=17-4PH
 1=316L

Differential Pressure Range
 Insert 4-digit code from Chart

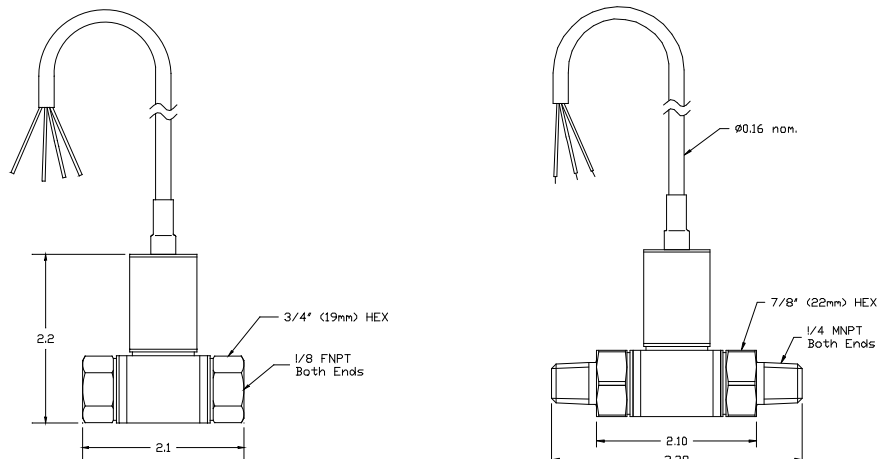
Options
 00=No Special Options

		Line Pressure PSI							
		100	150	200	250	500	750	1000	
Differential Pressure PSID	CODE	0100	0150	0200	0250	0500	0750	1000	
	20	0020	x						
	25	0025	x						
	30	0030	x	x					
	50	0050	x	x	x				
	75	0075	x	x	x	x			
	100	0100	x	x	x	x	x		
	150	0150		x	x	x	x	x	
	200	0200			x	x	x	x	x
	250	0250				x	x	x	x
300	0300					x	x	x	
400	0400					x	x	x	
500	0500					x	x	x	
750	0750						x	x	
1000	1000							x	

"x" denotes differential pressure range available.
 Bar and kg/cm² available; consult factory for ordering assistance.

*Wiring information available at: <http://www.astensors.com/mediacenter.php>

Dimensional Data



Warranty

Workmanship - AST, Inc. pressure transmitters have a limited one-year warranty to the original purchaser. AST, Inc. will replace or repair, free of charge, any defective transmitter. This warranty does not apply to any units that have been modified; misused, neglected or installed where the application exceeds published ratings. AST's sensors are made with pride in New Jersey, USA. If in the area please feel free to stop by for a visit!

Installation/Applications - The purchaser is responsible for media compatibility, functional adequacy, and correct installation of the transmitter.