

## AST5000 *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	5 times the rated line pressure or 2,000PSI, whichever is less
Accuracy <sup>1</sup>	< ± 0.3% BFSL
Pressure Cycles	> 10Million

<sup>1</sup> 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
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

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# Ordering information

**5000 A 0100 P 4 E 1 0050 P 00**

**Series Type**

**Process Connection**

A = 1/4" Male NPT  
J = 1/8" Female NPT

**Line Pressure**

Insert 4 -digit code from Chart

**Pressure Unit**

P=PSI  
B=BAR,  
K=kg/cm<sup>2</sup>

**Outputs**

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

**Electrical**

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

**Wetted Material**

0=17-4PH  
1=316L

**Differential Pressure Range**

Insert 4-digit code from Chart

**Options**

00=No Special Options

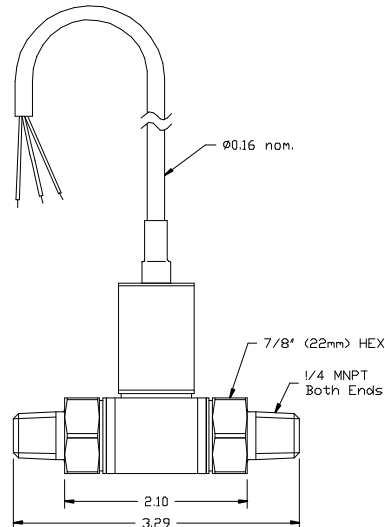
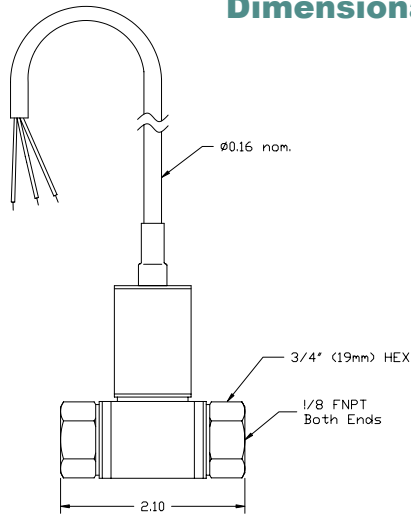
**Line Pressure PSI**

		100	150	200	250	500	750	1000	
Differential Pressure PSD	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/cm<sup>2</sup> available; consult factory for ordering assistance.

**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.

**Installation/Applications** - The purchaser is responsible for media compatibility, functional adequacy, and correct installation of the transmitter. AST's sensors are made with pride in New Jersey, USA. If in the area please feel free to stop by for a visit!

[www.astensors.com](http://www.astensors.com)