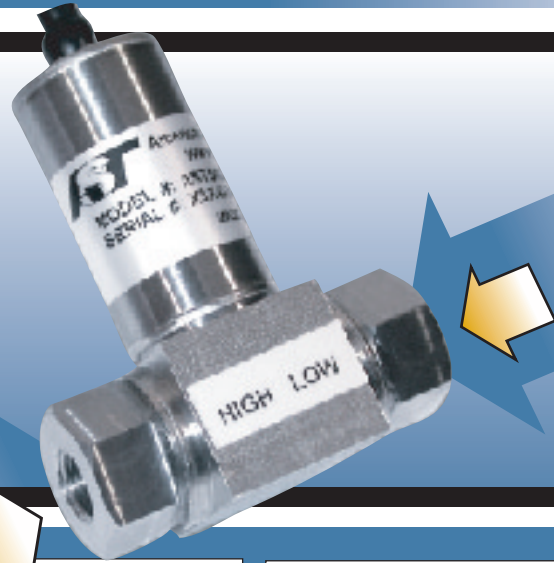


Model 5000

Wet/Wet Differential Pressure Sensor



OVERVIEW

The Model 5000 offers wet/wet differential pressure measurements of gases and liquids compatible with stainless steel. The compact size contains no internal O-rings or fluid filled cavities, making it ideal for water management, gas pipeline instrumentation, filtration, natural gas compressors and many other applications. In the even that either pressure port is at full line pressure and the other at zero, no damage will be done to the transducer/transmitter.

The Model 5000 has been designed specifically for applications with demanding price and performance requirements. Measurements are available in differential pressures covering line pressures up to 1,000PSI.

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.

BENEFITS

- Compact and Rugged Design
- High Strength Stainless Steel Construction
- No Internal Fluid Filled Cavities
- No Internal O-rings
- Wide Operating Temperature Range
- Low static and thermal errors
- EMI/RFI Protection to 100V/m
- Suitable for high shock and vibration applications

APPLICATIONS

- Industrial OEM Equipment
- Hydraulic Systems
- Train Braking Circuits
- HVAC/R Equipment
- Refrigeration
- Offroad
- Test Stands
- Data Loggers
- Filtration
- Energy and Water Management

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Model 5000

Wet/Wet Differential Pressure Transducer

Krystal Bond
Technology
by AST



detailed specifications

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 ¹ | < ± 0.3% BFSL |
| Pressure Cycles | >10 Million |

¹ Accuracy includes: Non-linearity, Hysteresis and 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) |
| Total Error Band | ±1.5% of FS |

Total Error = RSS of zero offset, span tolerance, TC zero, TC span and accuracy.

Other

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

Physical Description

| | |
|----------------|---------------------|
| Pressure Port | 1/8" NPT female |
| Case (housing) | 304 stainless steel |

* All pressure ranges between the minimum range and line pressure are available.

Pressure Ranges (Voltage .25-5V, 1-5, 1-6V)

| DP range (PSI), min* | Line pressure (PSI), max | Burst Pressure (PSI) | Measurement Code | Line Code |
|----------------------|--------------------------|----------------------|------------------|-----------|
| 0-20 | 100 | 500 | 0020 | 0100 |
| 0-50 | 250 | 1250 | 0050 | 0250 |
| 0-100 | 500 | 2000 | 0100 | 0500 |
| 0-200 | 1000 | 2000 | 0200 | 1000 |

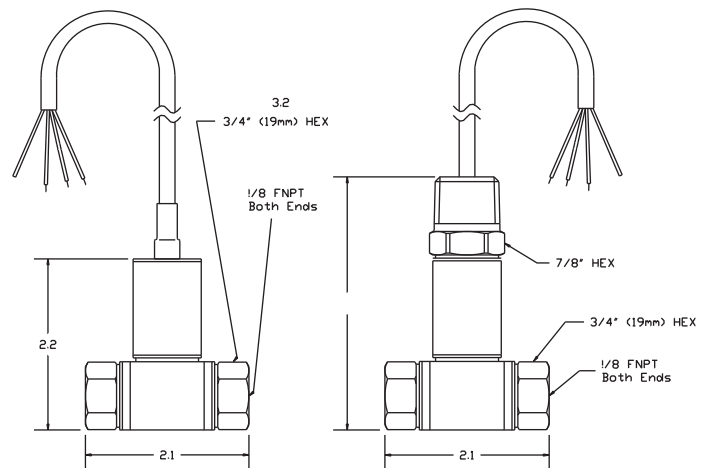
ORDERING INFORMATION

Construct a product code using the chart below. (Consult factory for other options.)

5000-J-0100-P-1-A-0-0000-00

| | | | | | | | | |
|--------------------|--|---|--|---|--|--|---|------------------------------------|
| Series Type | Process Connection J=1/8" FNPT | Pressure Range Insert 4-digit pressure range code from chart below. | Pressure Unit P=PSI, B=Bar, K=kg/cm ² | Outputs 1=0.5-4.5V ratiometric, 3=1-5V, 4=4-20mA, 6=1-6V | Electrical A=2Ft. Cable, B=4Ft. Cable, E=Mini DIN 43650, L=Conduit 2ft. Cable | Wetted Material No Options Available | Measurement Range Insert 4-digit measurement range code from chart below. | Options - 0=Stainless Steel |
|--------------------|--|---|--|---|--|--|---|------------------------------------|

Dimensional Data



Pressure Ranges (4-20mA, 0.5-4-5V Ratiometric)

| DP range (PSI), min* | Line pressure (PSI), max | Burst Pressure (PSI) | Measurement Code | Line Code |
|----------------------|--------------------------|----------------------|------------------|-----------|
| 0-30 | 100 | 500 | 0030 | 0100 |
| 0-60 | 250 | 1250 | 0060 | 0200 |
| 0-150 | 500 | 2000 | 0150 | 0500 |
| 0-300 | 1000 | 2000 | 0300 | 1000 |

Electrical Data

| Excitation | 10-30VDC, Typ. | 5VDC | 10-30VDC |
|-----------------------------|------------------------------|----------------------|-----------------------|
| Output | Voltage (.25-5V, 1-5V, 1-6V) | 0.5-4.5V Ratiometric | 4-20mA |
| Output Impedance | <100 Ohms, Nominal | <100 Ohms, Nominal | - |
| Current Consumption | <10mA | <10mA | < 25mA |
| Bandwidth | (-3dB): DC to 1kHz | (-3dB): DC to 1kHz | (-3dB): DC to 250 Hz |
| Output Load | 10k Ohms, Min. | 10K Ohms, Min. | See Load Line Curve ▲ |
| Reverse Polarity Protection | Yes | No | Yes |

