American Sensing Inc (ASI)

Made in the USA

HIGH LINE AEROSPACE DIFFERENTIAL PRESSURE TRANSDUCER

MODEL ASI 2040

Model ASI 2040
High Line Aerospace
Differential Pressure Transducer

FEATURES:

- High static line option to 10K PSI (689 BAR)
- True wet-wet design
- All stainless steel wetted parts
- High-accuracy to ±0.3% FSO
- Designed to meet *MIL-STD-810F shock and vibration specification

APPLICATIONS:

- Ground support systems
- Aircraft engine test stands
- Hydraulic test stands
- Launch vehicles
- Ground and engine testing

PRODUCT OVERVIEW:

The Model 2040 from ASI is a high-line, high-pressure, aerospace grade differential pressure transducer. Its true wet-wet all stainless steel design allows it to effectively measure both corrosive fluid and industrial gas pressures to high degrees of accuracy and repeatability. Its optional 10X proof pressure and 10K PSI (689 BAR) line rating also facilitates its use within demanding aircraft engine and hydraulic systems. In addition to expanded ranges, a variety of pressure ports, electrical connections, outputs, and wetted part materials are available. Please consult the factory for details.

FIELD OPTIONS:

- 4-20 mA, 0-5 and 0-10 Vdc isolated and non-isolated outputs
- Optional 10X proof and 10K PSI line rating
- RTD temperature output
- Hastelloy C276 wetted parts
- Wide selection of pressure ports and electrical connections

DSPM Industria® sensori & trasduttori
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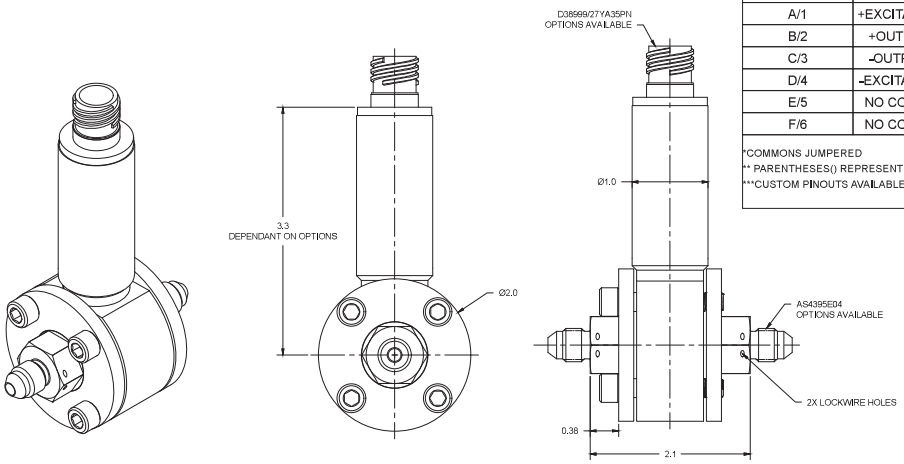
DIMENSIONAL DRAWING

All dimensions are in inches (mm)



WIRING CONFIGURATION

PIN(A/#)	mV/V	4-20 mA	VDC, 3 WIRE	VDC, 4 WIRE NON-ISOLATED	VDC, 4 WIRE ISOLATED
A/1	+EXCITATION(R)	+EXCITATION(R)	+EXCITATION(R)	+EXCITATION(R)	+EXCITATION(R)
B/2	+OUTPUT(G)	-EXC/OUTPUT(B)	-EXC/COM(B)	+OUTPUT(G)	+OUTPUT(G)
C/3	-OUTPUT(W)	NO CONNECT	+OUTPUT(G)	-OUTPUT(W)*	-OUTPUT(W)
D/4	-EXCITATION(B)	NO CONNECT	NO CONNECT	-EXCITATION(B)*	-EXCITATION(B)
E/5	NO CONNECT	NO CONNECT	NO CONNECT	NO CONNECT	NO CONNECT
F/6	NO CONNECT	NO CONNECT	NO CONNECT	NO CONNECT	NO CONNECT

*COMMONS JUMPERED
** PARENTHESES() REPRESENT COLORS FOR CABLE OPTION. (R) = RED, (B) = BLACK, (G) = GREEN, (W) = WHITE
***CUSTOM PINOUTS AVAILABLE. SHUNTS AND TEMPERATURE PINS MAY BE USED WITH ADDITIONAL COLORS

SPECIFICATIONS

ELECTRICAL

- Output Signal: 4-20 mA, 0 to 5 Vdc or 0 to 10 Vdc (3-wire or optional 4-wire isolated)
- Supply Voltage: 18 V to 36 Vdc (others available)
- Load Impedance (4-20 mA): 1,350 Ω max. at 36 Vdc, 750 Ω max. at 24 Vdc, 300 Ω max. at 18 Vdc
- Output Current (Vdc): 2 mA max. for <0.1% FSO attenuation
- Input Current: 4 -wire isolated Vdc options - 45 mA nominal, non-isolated Vdc -10 mA nominal
- Response Time: 4 ms typical
- Connection: PTIH-10-6P standard (please consult factory for other options)

ACCURACY (HYSTERESIS, NON-LINEARITY & REPEATABILITY @ +70 °F)

- Static Accuracy (RSS) <±0.3% FSO
- Zero/span balance: ±0.5% FSO
- Non-repeatability: < ±0.1% FSO
- Hysteresis: < ±0.2% FSO
- Non-linearity: < ±0.2% FSO
- Thermal Error: ±1.0% FSO/100 °F
- Total Error Band: ±2.3% FSO (includes all 5 parameters)
- Line Pressure Effect (Zero): <±1% FSO at 1,000 PSI (69 BAR), <±2.5% FSO at 3,000 PSI (207 BAR), <±5% FSO at 10K PSI (689 BAR) optional

MATERIALS OF CONSTRUCTION

- Wetted Parts: 316L stainless steel
- Housing: 300 series stainless steel
- Internal Fill: Silicon Oil (Fomblin Oil Available)

MECHANICAL

- Process connection: AS5202-04 (Other ports available)
- Proof Pressure: (high & low side) 2X pressure range or 10K PSI (689 BAR) max, whichever is less
- Burst Pressure: (high & low side) 3X pressure range or 4,500 PSI (310 BAR) max, whichever is less
- Static Line Pressure: 3K PSI (207 BAR), optional 10K PSI (689 BAR)
- Random Vibration: >25 G RMS (20 Hz to 2,000 Hz)
- Approximate Weight: 1.5 lbs (0.7 kg) (some options may affect weight)

PRESSURE RANGES

- 0 to 30 thru 0 to 7,500 PSID (2 thru 517 BAR) (bidirectional or unidirectional)

THERMAL SPECIFICATION

- Compensated: 0 °F to +180 °F (-18 °C to +82 °C)
- Operating: -20 °F to +190 °F (-29 °C to +88 °C)
- Storage: -65 °F to +250 °F (-53 °C to +121 °C)
- Effect on Zero/Span: ±2.0% FSO/100 °F (Improved to +/-0.5%/100 °F available)

*Options may affect Mil-specifications.
Please consult factory for your specific needs.

Standard configurations shown.

All specifications are for reference purposes only. In the interests of continuous product improvement, all specifications are subject to change without notice. Please contact ASI for assistance with your application.

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