

CANADA SENSORS TECHNOLOGY INC.



Manufacturer of Advanced Technology Pressure & Level Transmitters

PRESSURE TRANSMITTER – PROCESS 2-HYD-IS

HART™ Enabled Intrinsically Safe or Intrinsically Safe / Explosion Proof for High Pressure Hydrogen Service

Canada Sensors *intelligent* transmitters bring the latest technology to the pressure transmitter & related instrumentation market-place with self-diagnostic features which will maintain consistent accuracy throughout temperature and pressure scales.

SPECIFICATIONS & TECHNICAL DATA

- ✓ **HART™ Enabled** Two Wire 4-20 mA Output or Three Wire 1-5 vDC Output Pressure Transmitter
- ✓ **Intrinsically Safe or Intrinsically Safe / Explosion Proof** Process 2-HYD-IS Pressure Transmitters are scaled & have digitally mapped error correction throughout the pressure range
- ✓ **On-board RTD** Temperature compensation, through a mathematical formula, will occur at multiple levels throughout the range of the pressure transmitter offering highly accurate information.
- ✓ **Eliminate Output Drift** Highly accurate and repeatable 0.10% full scale accuracy, optional 0.10% full scale accuracy
- ✓ **Monolithic Block Sensor Head > 100 million cycles** Ingress Protection is minimum IP66
- ✓ **Full Scale Accuracy 0.25% FSO, Optional 0.10% FSO** Operating pressure ranges to 15,000 PSI or 20,000 PSI, Operating temperatures from -40C to + 95C
- ✓ **RoHS Compliant** Individually characterized sensor head - hardened 316SS machined one piece monolithic block sensor head with no internal o-rings or seals which are single seal compliant to ANSI/ISA-12.27.01.2003
- ✓ **1 Year Conditional Warranty** Multiple Electrical Connectors & Housings Available
- ✓ **Powder Coated Canister** Process Connection: Autoclave 1/4" F250C in 316SS only
- ✓ **Engraved Product Information**
- ✓ **Laser Welded**
- ✓ **Traceable Calibration Certificate Included**

Smart THROUGH and THROUGH
This transmitter packs a powerful punch
No drift. No set-up. It just works.

Canada Sensors Technology Inc.

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Canadian Manufacturer of Advanced Technology
Level and Pressure Transmitters



Technical Specifications - Process 2-HYD-IS & HYD-IS/EX

Performance

Accuracy:	0.25% Full Scale Output
Stability:	< 0.25% Full Scale Output
Temperature Range:	-40C to +95C Calibrated
Temperature Accuracy:	< 0.25% Full Scale Output
Pressure Cycles:	> 100 Million
Over Range Protection:	2 x Full Scale Output
Burst Pressure:	2.5 x Full Scale Output

NOTE: Over Range Protection and Burst Pressure shall be reduced to 1.5 x Full Scale Output for pressures exceeding 10,000 PSI due to thread limitations

Electrical Data

Excitation:	14-33 VDC (product accessories may alter excitation values)
Comms:	HART Protocol
Current Consumption:	3.8 mA
Zero Offset:	4 mA, 1-5 vDC
Span Tolerance:	Range or Sensor with Turndown
Output Load:	500 OHMS
RTD Temperature:	On Board 100 ohm Platinum
Intrinsically Safe	
Intrinsically Safe /Explosion Proof	

Pollution Degree 4
Installation Category I

NOTE: An Ex Barrier is required for any connections that cross the boundary from an Ordinary Location (Non-Classified/Non-Hazardous) to a Classified (Hazardous) location

Environmental Data

Temperature	
Operating:	-40C to +95C (product accessories may alter temperature ratings)
Storage:	-55C to +125C

Thermal Limits

Compensated Range:	As per Customer Specifications
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Physical Data

Sensor:	Hardened 316SS is standard on all Monolithic Block
Vibration:	25gRMS from 20Hz to 2000Hz
Shock:	100g , half sine, 11mSec.
Sensor:	Silicone Oil Filled NOT Available on this model
Vibration:	25gRMS from 20Hz to 2000Hz
Shock:	100g , half sine, 11mSec.
NOTE: Silicone Oil Filled Sensors are a factory option for low pressure	
Process Connection:	1/4" F250C
NOTE: ANSI Regulations dictate that NPT Thread should not to exceed 8,000 PSI @ +125C	
Electrical Connection:	Intrinsically Safe: 316SS Weld-on: 1/2" MNPT Solid Conduit or w/ Aluminum XP Heads; Bendix Twist Connector 6 Pin (PTIH-10-6P), M12 Twist Connector 4 Pin Intrinsically Safe / Explosion Proof: 316SS Weld-on: 1/2" MNPT Solid Conduit or w/ Aluminum XP Heads

Product Weights:

	OZ	LBS	KG
Process 2-HYD w/ 316SS Weld-on 1/2" MNPT Solid Conduit Fitting (2 ft Lead Extension Wire);Bendix Twist Connector 6 Pin (PTIH-10-6P); M12 Twist Connector 4-Pin	27.5	1.7	0.78
Process 2-HYD w/ F250C Autoclave & Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting - Blank - No Window	62.5	3.9	1.77
Process 2-HYD w/ F250C Autoclave & Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting w/ 5 Digits LCD Loop Powered Display	75.5	4.7	2.14

Process Connections:



1/4" F250C



1/2" MNPT SOLID CONDUIT FITTING



BENDIX TWIST CONNECTOR 6 PIN (PTIH-10-6P)



M12 TWIST CONNECTOR 4 PIN

Product Accessories:

Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting - Blank - No Window
Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting w/ 5 Digits LCD Loop Powered Display



Product Nomenclature

MODEL: Pressure Transmitter - Process 2-HYD - Intrinsically Safe
 PN Example: A-B-C-D-E-F-G-H-I-J
 02-HYD-IS-01-01-034-09-02-08-02-04:
 Process 2-HYD IS Transmitter, 4-20 mA, HART Enabled, Gauge (PSIG), 0 - 15000 PSI, 1/4" F-250C, 316SS Wetted Parts, 316SS Weld-on 1/2" MNPT Solid Conduit Fitting with 4 ft Lead Extension Wire, No Treatment, 0.10% Accuracy

	A	B	C	D	E	F	G	H	I	J
Model	02-HYD-IS - Process 2-HYD - Intrinsically Safe									
Output	01 - 4-20 mA 09 - 1-5 vDC									
Calibration Adjustment	01 - HART Enabled									
Pressure Reference	01 - Gauge (PSIG)									
Pressure Range	033 - 0 - 15000 PSI 034 - 0 - 20000 PSI									
Process Connection	09 - 1/4" F250C									
Wetted Parts	02 - 316SS									
Electrical Connection	07 - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting (2 ft Lead Extension Wire) 08 - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting (4 ft Lead Extension Wire) 09 - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting (6 ft Lead Extension Wire) 10 - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting (10 ft Lead Extension Wire) 31 - Weld-on Bendix 6-Pin (PTIH-10-6P) - Aluminum 32 - M12 4-Pin 33 - Weld-on Bendix 6-Pin (PTIH-10-6P) - 316SS 35 - Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting - Blank - No Window 41 - Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting w/ 5 Digits LCD Loop Powered Display									
Environmental Treatment	02 - No Treatment									
Accuracy	02 - 0.25 % 04 - 0.10 %									

MODEL: Pressure Transmitter - Process 2-HYD - Intrinsically Safe / Explosion Proof
 PN Example: A-B-C-D-E-F-G-H-I-J
 02-HYD-IS/EX-01-01-034-09-02-09-02-04:
 Process 2-HYD IS/EX Transmitter, 4-20 mA, HART Enabled, Gauge (PSIG), 0 - 15000 PSI, 1/4" F-250C, 316SS Wetted Parts, 316SS Weld-on 1/2" MNPT Ex d Solid Conduit Fitting with 6 ft Lead Extension Wire, No Treatment, 0.10% Accuracy

	A	B	C	D	E	F	G	H	I	J
Model	02-HYD-IS/EX - Process 2-HYD - Intrinsically Safe / Explosion Proof									
Output	01 - 4-20 mA 09 - 1-5 vDC									
Calibration Adjustment	01 - HART Enabled									
Pressure Reference	01 - Gauge (PSIG)									
Pressure Range	033 - 0 - 15000 PSI 034 - 0 - 20000 PSI									
Process Connection	09 - 1/4" F250C									
Wetted Parts	02 - 316SS									
Electrical Connection	09 - 316SS Weld-on 1/2" MNPT Ex d Solid Conduit Fitting (6 ft lead extension wire) 35 - Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Ex d Solid Conduit Fitting - Blank - No Window 41 - Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Ex d Solid Conduit Fitting w/ 5 Digits LCD Loop Powered Display									
Environmental Treatment	02 - No Treatment									
Accuracy	02 - 0.25 % 04 - 0.10 %									

E: Alternate Pressure Range Units

kPa			
kPa	033 - kPa	-	0 - 100000 kPa
kPa	034 - kPa	-	0 - 140000 kPa

mBar			
mBar	033 - mBar	-	0 - 1000000 mBar
mBar	034 - mBar	-	0 - 1400000 mBar

mm Hg			
mm Hg	033 - mm Hg	-	0 - 800000 mm Hg
mm Hg	034 - mm Hg	-	0 - 1000000 mm Hg

in H₂O (60° F)			
in H ₂ O (60° F)	033 - in H ₂ O	-	0 - 400000 in H ₂ O (60° F)
in H ₂ O (60° F)	034 - in H ₂ O	-	0 - 500000 in H ₂ O (60° F)

mm H₂O (4° C)			
mm H ₂ O (4° C)	033 - mm H ₂ O	-	0 - 10000000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	034 - mm H ₂ O	-	0 - 14000000 mm H ₂ O (4° C)

in Hg (32° F)			
in Hg (32° F)	033 - in Hg	-	0 - 30000 in Hg (32° F)
in Hg (32° F)	034 - in Hg	-	0 - 40000 in Hg (32° F)

Bar			
Bar	033 - Bar	-	0 - 1000 Bar
Bar	034 - Bar	-	0 - 1400 Bar

ata (kg/cm²)			
ata (kg/cm ²)	033 - ata	-	0 - 1000 ata (kg/cm ²)
ata (kg/cm ²)	034 - ata	-	0 - 1400 ata (kg/cm ²)