

CANADA SENSORS TECHNOLOGY INC.



Manufacturer of Advanced Technology Pressure & Level Transmitters

CRN Approval ISO 9001:2015



PRESSURE TRANSMITTER – PROCESS 2

HART™ Enabled Intrinsically Safe Model, HART™ Enabled General Purpose Model for High Pressure 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.

FEATURES

- ✓ HART™ Protocol
- ✓ Intrinsically Safe
- ✓ On-board Barometric Sensor
- ✓ Eliminate Output Drift
- ✓ Self-Adjusting Real Time Data
- ✓ Real Time Temperature Compensation
- ✓ On-board RTD
- ✓ Pressure Ranges 15,000 PSI, 20,000 PSI, 30,000 PSI
- ✓ Characterized Sensor Head
- ✓ Monolithic Block Sensor Head >100 million cycles
- ✓ Full Scale Accuracy 0.25% (or better)
- ✓ RoHS Compliant
- ✓ 3 Year Conditional Warranty

TECHNICAL DATA

HART™ Enabled

Two Wire 4-20 mA Output Pressure Transmitter

Process 2 Pressure Transmitters are scaled & digitally mapped to temperatures from -40C to + 95C

Temperature compensation, through a mathematical formula, will occur at multiple levels throughout the range of the pressure transmitter offering highly accurate information.

The Process 2 transmitter has an on-board barometric calibration chip. This is a self-zeroing and self-adjusting feature with zero drift at any altitude or day or night. The transmitter does not require any external adjustments.

Highly accurate and repeatable 0.25% (or better) full scale accuracy

Intrinsically Safe

Ingress Protection is minimum IP66

Operating pressure ranges to 15,000 PSI, 20,000 PSI and 30,000 PSI

Digitally mapped error correction throughout the pressure range

Individually characterized sensor head – 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 Autoclave ¼" F250C Connector (17-4phSS or 316SS).

Corrosion Inhibiting feature is standard on the Process 2 model. This PTFE corrosion protection protects from ambient conditions such as UV rays, humidity, sand, sea-spray, hydrogen sulfide environments, and most chemicals.

PTFE coating on the process connection provides protection from thread galling and corrosive media

Multiple Electrical Connectors & Housings Available



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**Manufacturer of Advanced Technology
Level and Pressure Transmitters**

Additional Features: Powder Coated Canister
Engraved Product Information
Laser Welded
3 Year Conditional Warranty (Serial Number Traceability)

Advanced Technology ... Improving Business**Smart THROUGH and THROUGH****This transmitter packs a powerful punch****No drift. No set-up. It just works.****MISSION STATEMENT**

Canada Sensors Technology Inc. strives to build a mutually positive and beneficial relationship with our customers, ensuring their long-term success, through the understanding of their needs and the needs of their customers.

We will listen to our customers and constantly improve our technologies as our customers' needs change with time.

Canada Sensors Technology Inc. is committed to providing the highest level of product quality and customer service.

Canada Sensors Technology Inc. operates a Quality Management System that ensures compliance with the requirements of ISO 9001:2015 and relevant legislation.

Technical Specifications - Process 2**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:	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
Span Tolerance:	Range or Sensor with Turndown
Output Load:	500 OHMS
Barometric Chip:	Monitoring Range 88KPA (12.76 PSI) to 108 KPA (15.7 PSI)
RTD Temperature:	On Board 100 ohm Platinum
Intrinsically Safe	

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:	-40C to +95C
Temp Comp Zero:	0.25% Full Scale Output @ +95C
Temp Comp Span:	0.25% Full Scale Output @ +95C

Physical Data

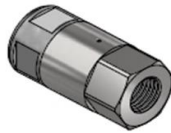
Sensor:	PFAC-8 Treatment is standard on all Monolithic Block - 17-4phSS or 316SS
Vibration:	25gRMS from 20Hz to 2000Hz
Shock:	100g , half sine, 11mSec.
Sensor:	Silicone Oil Filled NOT Available on this model
Vibration:	25gRMS from 20Hz to 2000Hz
Shock:	100g , half sine, 11mSec.
NOTE: Silicone Oil Filled 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:	316SS Weld-on: 6 Pin 90 Degree Military Connector; 1/2" MNPT Solid Conduit; 1/2" MNPT Positional Swivel Conduit; or w/ Aluminum XP Heads; Bendix Twist Connector 6 Pin (PTIH-10-6P)

NOTE: 316SS Wetted Parts are the minimum requirement for NACE compliance

Product Weights:

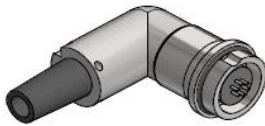
	OZ	LBS	KG
Process 2 w/ F250C Autoclave & 316SS Weld-on 6 Pin 90 Degree Military Connector	21.5	1.3	0.61
Process 2 w/ F250C Autoclave & 316SS Weld-on x 1/2" MNPT Positional Swivel Conduit Fitting (2 ft Lead)	29.5	1.8	0.84
Process 2 w/ F250C Autoclave & 316SS Weld-on 1/2" MNPT Solid Conduit Fitting (2 ft Lead); Bendix Twist Connector 6 Pin (PTIH-10-6P); M12	27.5	1.7	0.78
Process 2 w/ F250C Autoclave & Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Positional Swivel Conduit Fitting - Blank - No Window	64.5	4.0	1.83
Process 2 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 w/ F250C Autoclave & Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Positional Swivel Conduit Fitting w/ 5 Digits LCD Loop Powered Display	117.5	7.3	3.33
Process 2 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	115.5	7.2	3.27

Process Connections:



1/4" F250C

Electrical Connections:



6 PIN 90 DEGREE
MILITARY CONNECTOR



1/2" MNPT POSITIONAL
SWIVEL CONDUIT FITTING



1/2" MNPT SOLID
CONDUIT FITTING



BENDIX TWIST CONNECTOR
6 PIN

Product Accessories:

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

PN Example: A-B-C-D-E-F-G-H-I-J

02-01-01-01-034-09-02-08-01-02:

Process 2 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, PTFE Treatment, 0.25% Accuracy

	A	B	C	D	E	F	G	H	I	J
Model										
02	-	Process 2								
Output										
01	-	4-20 mA								
Calibration Adjustment										
04	-	ModBus RTU								
Pressure Reference										
01	-	Gauge (PSIG)								
Pressure Range										
033	-	0 – 15000 PSI								
034	-	0 – 20000 PSI								
035	-	0 – 30000 PSI								
Process Connection										
09	-	¼" F250C								
Wetted Parts										
01	-	17-4phSS								
02	-	316SS								
Electrical Connection										
01	-	316SS Weld-on 6 Pin 90 Degree Military Connector								
02	-	316SS Weld-on ½" MNPT Positional Swivel Conduit Fitting (2 ft Lead Extension Wire)								
03	-	316SS Weld-on ½" MNPT Positional Swivel Conduit Fitting (4 ft Lead Extension Wire)								
04	-	316SS Weld-on ½" MNPT Positional Swivel Conduit Fitting (6 ft Lead Extension Wire)								
05	-	316SS Weld-on ½" MNPT Positional Swivel Conduit Fitting (10 ft Lead Extension Wire)								
07	-	316SS Weld-on ½" MNPT Solid Conduit Fitting (2 ft Lead Extension Wire)								
08	-	316SS Weld-on ½" MNPT Solid Conduit Fitting (4 ft Lead Extension Wire)								
09	-	316SS Weld-on ½" MNPT Solid Conduit Fitting (6 ft Lead Extension Wire)								
10	-	316SS Weld-on ½" MNPT Solid Conduit Fitting (10 ft Lead Extension Wire)								
31	-	Weld-on Bendix 6-Pin - Aluminum								
33	-	Weld-on Bendix 6-Pin - 316SS								
34	-	Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Positional Swivel Conduit Fitting - Blank - No Window								
35	-	Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting - Blank - No Window								
40	-	Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Positional Swivel Conduit Fitting w/ 5 Digits LCD Loop Powered Display								
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										
01	-	PTFE Treatment								
02	-	No Treatment								
Accuracy										
02	-	0.25 %								

E: Alternate Pressure Range Units

kPa			
kPa	033 - kPa	-	0 – 100000 kPa
kPa	034 - kPa	-	0 – 140000 kPa
kPa	035 - kPa	-	0 – 200000 kPa
mBar			
mBar	033 - mBar	-	0 – 1000000 mBar
mBar	034 - mBar	-	0 – 1400000 mBar
mBar	035 - mBar	-	0 – 2000000 mBar
mm Hg			
mm Hg	033 - mm Hg	-	0 – 800000 mm Hg
mm Hg	034 - mm Hg	-	0 – 1000000 mm Hg
mm Hg	035 - mm Hg	-	0 – 1500000 mm Hg
in H₂O (60° F)			
in H ₂ O (60° F)	033 - in H ₂ C	-	0 - 400000 in H ₂ O (60° F)
in H ₂ O (60° F)	034 - in H ₂ C	-	0 - 500000 in H ₂ O (60° F)
in H ₂ O (60° F)	035 - in H ₂ C	-	0 - 800000 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)
mm H ₂ O (4° C)	035 - mm H ₂ O	-	0 - 20000000 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)
in Hg (32° F)	035 - in Hg	-	0 - 60000 in Hg (32° F)
Bar			
Bar	033 - Bar	-	0 – 1000 Bar
Bar	034 - Bar	-	0 – 1400 Bar
Bar	035 - Bar	-	0 – 2000 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)
ata (kg/cm ²)	035 - ata	-	0 - 2100 ata (kg/cm ²)