

CANADA SENSORS TECHNOLOGY INC.



Manufacturer of Advanced Technology Pressure & Level Transmitters

CRN Approval ISO 9001:2015



DIFFERENTIAL PRESSURE TRANSMITTER – PROCESS 8 HART™ Enabled General Purpose Model for Differential Pressure

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 Pressure Transmitter
- ✓ On-board RTD Process 8 Pressure Transmitters are scaled & digitally mapped to temperatures from -40C to + 95C
- ✓ Eliminate Output Drift Temperature compensation, through a mathematical formula, will occur at multiple levels throughout the range of the pressure transmitter offering highly accurate information.
- ✓ Monolithic Block Sensor Head >100 million cycles
- ✓ Full Scale Accuracy 0.075% Highly accurate and repeatable 0.075% (or better) full scale accuracy
- ✓ Real Time Temperature Compensation Ingress Protection is minimum IP66
- ✓ Engraved Product Information Operating pressure ranges to 1,000 PSI
- ✓ Line Pressure Ranges up to 1,000 PSI Digitally mapped error correction throughout the pressure range
- ✓ Differential Pressures from 0 - 2 PSID to 0 to 200 PSID Individually characterized sensor head - 316SS silicone oil filled sensor is standard
- ✓ Laser Welded Corrosion Inhibiting feature is optional on the Process 8 model. This PTFE corrosion protection protects from ambient conditions such as UV rays, humidity, sand, sea-spray, hydrogen sulfide environments, and most chemicals.
- ✓ Full Scale Accuracy 0.075%
- ✓ RoHS Compliant Multiple Electrical Connectors & Housings Available
- ✓ 2 Year Conditional Warranty Multiple Process Connection Materials & Connection Threads Available

Contact Us:

Canada Sensors Technology Inc.

sales@canadasensors.com
www.canadasensors.com

Manufacturer of Advanced Technology
Level and Pressure Transmitters

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



Technical Specifications - Process 8

Performance

Accuracy:	0.075% Full Scale Output
Stability:	< 0.075% Full Scale Output
Temperature Range:	-40C to +95C Calibrated
Temperature Accuracy:	< 0.075% Full Scale Output
Pressure Cycles:	> 50 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 1,000 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:	0.075% Full Scale Output @ +95C
Temp Comp Span:	0.075% Full Scale Output @ +95C

Physical Data

Sensor:	Monolithic Block NOT Available on this model
Vibration:	25gRMS from 20Hz to 2000Hz
Shock:	100g , half sine, 11mSec.
Sensor:	PFAC-8 Treatment is standard on all Silicone Oil Filled 316SS, Inconel-718, Titanium, Hastalloy-276
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" MNPT; 1/4" FNPT; 1/2" MNPT; 1/2" FNPT; G-1/4"; G-1/2"
NOTE: ANSI Regulations dictate that NPT Thread should not to exceed 8,000 PSI @ +125C	
Electrical Connection:	316SS Weld-on 1/2" MNPT Solid 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:

	<u>OZ</u>	<u>LBS</u>	<u>KG</u>
Process 8 w/ 316SS Weld-on 1/2" MNPT Solid Conduit Fitting (2 ft Lead); Bendix Twist Connector 6 Pin (PTIH-10-6P)	23.5	1.5	0.67
Process 8 w/ Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting - Blank - No Window	58.5	3.7	1.66
Process 8 w/ Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting w/ 3 1/2 + Digits LCD Loop Powered Display	71.5	4.5	2.03
Process 8 w/ Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting w/ 5 Digits LCD Loop Powered Display	111.5	7.0	3.16
Process 8 w/Aluminum XP Head (1/2" FNPT x 1, 3/4" FNPT x 2) - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting w/ 5 or 7 Digits LCD Loop Powered Flow Rate Totalizer	111.5	7.0	3.16

Process Connections:



1/4" MNPT



1/4" FNPT



1/2" MNPT



1/2" FNPT



G-1/4"



G-1/2"

Electrical Connections:



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 Solid Conduit Fitting - Blank - No Window
- Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting w/ 3 1/2 + 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
- Aluminum XP Head (1/2" FNPT x 1, 3/4" FNPT x 2) - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting w/ 5 or 7 Digits LCD Loop Powered Flow Rate Totalizer



Product Nomenclature

MODEL: Differential Pressure Transmitter - Process 8

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

08-01-01-04-051-02-02-08-01-01:

Process 8 Differential Transmitter, 4-20 mA, HART Enabled, Differential, 0 - 50 PSID, 1/4" FNPT, 316SS Wetted Parts, 316SS Weld-on 1/2" MNPT Solid Conduit Fitting with 4 ft Lead Extension Wire, PTFE Treatment, 0.075% Accuracy

	A	B	C	D	E	F	G	H	I	J
Model	08	-	Process 8							
Output	01	-	4-20 mA							
Calibration Adjustment	01	-	HART Enabled							
Pressure Reference	04	-	Differential							
Pressure Range	046	-	0 - 2 PSID							
	047	-	0 - 5 PSID							
	048	-	0 - 10 PSID							
	049	-	0 - 15 PSID							
	050	-	0 - 30 PSID							
	051	-	0 - 50 PSID							
	052	-	0 - 100 PSID							
	053	-	0 - 150 PSID							
	054	-	0 - 200 PSID							
Process Connection	01	-	1/4" MNPT							
	02	-	1/4" FNPT							
	03	-	1/2" MNPT							
	04	-	1/2" FNPT							
	07	-	G-1/4"							
	08	-	G-1/2"							
Wetted Parts	02	-	316SS							
	03	-	Inconel-718							
	04	-	Titanium							
	05	-	Hastelloy-276							
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 - Aluminum							
	33	-	Weld-on Bendix 6-Pin - 316SS							
	35	-	Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting - Blank - No Window							
	38	-	Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting w/ 3 1/2 + 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							
	48	-	Aluminum XP Head (1/2" FNPT x 1, 3/4" FNPT x 2) - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting w/ 5 or 7 Digits LCD Loop Powered Flow Rate Totalizer							
Environmental Treatment	01	-	PTFE Treatment							
	02	-	No Treatment							
Accuracy	01	-	0.075%							

E: Alternate Pressure Range Units

kPa

kPa	046 - kPa	-	0 - 15 kPaD
kPa	047 - kPa	-	0 - 35 kPaD
kPa	048 - kPa	-	0 - 70 kPaD
kPa	049 - kPa	-	0 - 100 kPaD
kPa	050 - kPa	-	0 - 200 kPaD
kPa	051 - kPa	-	0 - 350 kPaD
kPa	052 - kPa	-	0 - 700 kPaD
kPa	053 - kPa	-	0 - 1000 kPaD
kPa	054 - kPa	-	0 - 1400 kPaD

mBar

mBar	046 - mBar	-	0 - 150 mBarD
mBar	047 - mBar	-	0 - 350 mBarD
mBar	048 - mBar	-	0 - 700 mBarD
mBar	049 - mBar	-	0 - 1000 mBarD
mBar	050 - mBar	-	0 - 2000 mBarD
mBar	051 - mBar	-	0 - 3500 mBarD
mBar	052 - mBar	-	0 - 7000 mBarD
mBar	053 - mBar	-	0 - 10000 mBarD
mBar	054 - mBar	-	0 - 14000 mBarD

mm Hg

mm Hg	046 - mm Hg	-	0 - 100 mm HgD
mm Hg	047 - mm Hg	-	0 - 250 mm HgD
mm Hg	048 - mm Hg	-	0 - 500 mm HgD
mm Hg	049 - mm Hg	-	0 - 800 mm HgD
mm Hg	050 - mm Hg	-	0 - 1500 mm HgD
mm Hg	051 - mm Hg	-	0 - 2500 mm HgD
mm Hg	052 - mm Hg	-	0 - 5000 mm HgD
mm Hg	053 - mm Hg	-	0 - 8000 mm HgD
mm Hg	054 - mm Hg	-	0 - 10000 mm HgD

in H₂O (60° F)

in H ₂ O (60° F)	046 - in H ₂ O	-	0 - 60 in H ₂ OD (60° F)
in H ₂ O (60° F)	047 - in H ₂ O	-	0 - 150 in H ₂ OD (60° F)
in H ₂ O (60° F)	048 - in H ₂ O	-	0 - 300 in H ₂ OD (60° F)
in H ₂ O (60° F)	049 - in H ₂ O	-	0 - 400 in H ₂ OD (60° F)
in H ₂ O (60° F)	050 - in H ₂ O	-	0 - 800 in H ₂ OD (60° F)
in H ₂ O (60° F)	051 - in H ₂ O	-	0 - 1500 in H ₂ OD (60° F)
in H ₂ O (60° F)	052 - in H ₂ O	-	0 - 3000 in H ₂ OD (60° F)
in H ₂ O (60° F)	053 - in H ₂ O	-	0 - 4000 in H ₂ OD (60° F)
in H ₂ O (60° F)	054 - in H ₂ O	-	0 - 5000 in H ₂ OD (60° F)

mm H₂O (4° C)

mm H ₂ O (4° C)	046 - mm H ₂ O	-	0 - 1400 mm H ₂ OD (4° C)
mm H ₂ O (4° C)	047 - mm H ₂ O	-	0 - 3500 mm H ₂ OD (4° C)
mm H ₂ O (4° C)	048 - mm H ₂ O	-	0 - 7000 mm H ₂ OD (4° C)
mm H ₂ O (4° C)	049 - mm H ₂ O	-	0 - 10000 mm H ₂ OD (4° C)
mm H ₂ O (4° C)	050 - mm H ₂ O	-	0 - 20000 mm H ₂ OD (4° C)
mm H ₂ O (4° C)	051 - mm H ₂ O	-	0 - 35000 mm H ₂ OD (4° C)
mm H ₂ O (4° C)	052 - mm H ₂ O	-	0 - 70000 mm H ₂ OD (4° C)
mm H ₂ O (4° C)	053 - mm H ₂ O	-	0 - 100000 mm H ₂ OD (4° C)
mm H ₂ O (4° C)	054 - mm H ₂ O	-	0 - 140000 mm H ₂ OD (4° C)

in Hg (32° F)

in Hg (32° F)	046 - in Hg	-	0 - 5 in HgD(32° F)
in Hg (32° F)	047 - in Hg	-	0 - 10 in HgD(32° F)
in Hg (32° F)	048 - in Hg	-	0 - 20 in HgD(32° F)
in Hg (32° F)	049 - in Hg	-	0 - 30 in HgD(32° F)
in Hg (32° F)	050 - in Hg	-	0 - 30 in HgD(32° F)
in Hg (32° F)	051 - in Hg	-	0 - 100 in HgD(32° F)
in Hg (32° F)	052 - in Hg	-	0 - 200 in HgD(32° F)
in Hg (32° F)	053 - in Hg	-	0 - 300 in HgD(32° F)
in Hg (32° F)	054 - in Hg	-	0 - 400 in HgD(32° F)

Bar

Bar	046 - Bar	-	0 - 0.15 BarD
Bar	047 - Bar	-	0 - 0.35 BarD
Bar	048 - Bar	-	0 - 0.7 BarD
Bar	049 - Bar	-	0 - 1 BarD
Bar	050 - Bar	-	0 - 2 BarD
Bar	051 - Bar	-	0 - 3.5 BarD
Bar	052 - Bar	-	0 - 7 BarD
Bar	053 - Bar	-	0 - 10 BarD
Bar	054 - Bar	-	0 - 14 BarD

ata (kg/cm ²)	046 - ata	-	0 - 0.14 ata (kg/cm ²)D
ata (kg/cm ²)	047 - ata	-	0 - 0.35 ata (kg/cm ²)D
ata (kg/cm ²)	048 - ata	-	0 - 0.7 ata (kg/cm ²)D
ata (kg/cm ²)	049 - ata	-	0 - 1 ata (kg/cm ²)D
ata (kg/cm ²)	050 - ata	-	0 - 2.1 ata (kg/cm ²)D
ata (kg/cm ²)	051 - ata	-	0 - 3.5 ata (kg/cm ²)D
ata (kg/cm ²)	052 - ata	-	0 - 7 ata (kg/cm ²)D
ata (kg/cm ²)	053 - ata	-	0 - 10 ata (kg/cm ²)D
ata (kg/cm ²)	054 - ata	-	0 - 14 ata (kg/cm ²)D