

CANADA SENSORS TECHNOLOGY INC.



Manufacturer of Advanced Technology Pressure & Level Transmitters

CRN Approval ISO 9001:2015



CI D2 Grp ABCD Class I Zone 2
AEx ec IIC T4 Gc, Ex ec IIC T4 Gc

DIFFERENTIAL PRESSURE TRANSMITTER – PROCESS 9-IS Increased Safety Model for Differential Pressure

Canada Sensors Technology Inc. offers an affordable solution with the Process 9-IS Differential Pressure Transmitter without sacrificing quality or longevity of use.

FEATURES

- ✓ Increased Safety for Class I, Div. 2, Zone 2 Hazardous Locations
- ✓ 4 – 20 mA Two Wire, Voltage, MODbus, CANbus, J1939, USB, Ethernet
- ✓ 0.25% BSL Accuracy
- ✓ Zero & Span Function
- ✓ >50 million Cycles
- ✓ Line Pressure Ranges to 1,000 PSI
- ✓ Differential Pressures from 0 – 2 PSID to 0 – 200 PSID
- ✓ Heavy Duty 316SS Powder Coated Canister
- ✓ Temperature Compensated 0C to +50C
- ✓ Maximum Operating Temperature -40C to +95C
- ✓ Ingress Protection IP65 (up to IP67 on request)
- ✓ Multiple Electrical Connectors & Housings Available
- ✓ Multiple Process Connection Materials & Connection Threads Available
- ✓ Laser Engraved Product Information
- ✓ RoHS Compliant
- ✓ 2 Year Conditional Warranty (Serial Number Traceability)
- ✓ Unparalleled Value



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Manufacturer of Advanced Technology
Level and Pressure Transmitters

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 9 - IS

Performance

Accuracy:	0.25% Full Scale Output
Stability:	< 0.1% Full Scale Output/Year
Temperature Range:	-40C to +95C
Temperature Accuracy:	1% Full Scale Output @ +50C
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 1,000 PSI due to thread limitations

Electrical Data

Excitation:	10 - 28 VDC (product accessories may alter excitation values)
Comms:	4-20 mA, 0-5 VDC or 0-10 VDC or Ratio Metric, RS485-Modbus, CANopen, J939
Current Consumption:	5 mA
Zero Offset:	0.5% Full Scale Output
Span Tolerance:	0.5% Full Scale Output
Output Load:	9 Volts typical @ 24 VDC 750 OHMS
Increased Safety for Zone 2 Division 2 Hazardous Locations	

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

Note: Electrical Connection: Big-DIN 43650A is limited to Class I Div II installations

Environmental Data

Temperature

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

Thermal Limits

Compensated Range:	0 to +50C
Temp Comp Zero:	1% Full Scale Output @ +50C
Temp Comp Span:	1% Full Scale Output @ +50C

Physical Data

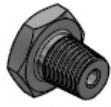
Sensor:	Monolithic Block NOT Available on this model
Vibration:	25gRMS from 20Hz to 2000Hz
Shock:	100g, half sine, 11mSec.
Sensor:	Silicone Oil Filled: 316SS, Inconel-718, Titanium, Hastalloy-276
Vibration:	25gRMS from 20Hz to 2000Hz
Shock:	100g, half sine, 11mSec.
NOTE: Silicone Oil Filled Sensors are 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 Thread-on 1/2" MNPT Solid Conduit Fitting or w/ Aluminum XP Heads; Big-DIN 43650A; Bendix Twist 6 Pin (PTIH-10-6P); M12

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

Product Weights:

	OZ	LBS	KG
Process 9-IS w/ 316SS Thread-on 1/2" MNPT Solid Conduit Fitting (2 ft Lead)	20.5	1.3	0.58
Process 9-IS w/ Big-DIN (43650A 90 Degree Hirschmann) or Bendix Twist 6 Pin (PTIH-10-6P) or M12	11.5	0.7	0.33
Process 9-IS w/ Aluminum XP Head (1/2" FNPT x 3) - 316SS Thread-on 1/2" MNPT Solid Conduit Fitting - Blank - No Window	55.5	3.5	1.57
Process 9-IS w/ Aluminum XP Head (1/2" FNPT x 3) - 316SS Thread-on 1/2" MNPT Solid Conduit Fitting w/ 3 1/2 + Digits LCD Loop Powered Display	68.5	4.3	1.94
Process 9-IS w/ Aluminum XP Head (1/2" FNPT x 3) - 316SS Thread-on 1/2" MNPT Solid Conduit Fitting w/ 5 Digits LCD Loop Powered Display	108.5	6.8	3.08
Process 9-IS w/ Aluminum XP Head (1/2" FNPT x 1, 3/4" FNPT x 2) - 316SS Thread-on 1/2" MNPT Solid Conduit Fitting w/ 5 or 7 Digits LCD Loop Powered Flow Rate Totalizer	108.5	6.8	3.08

Process Connections:



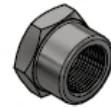
1/4" MNPT



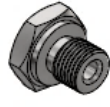
1/4" FNPT



1/2" MNPT



1/2" FNPT

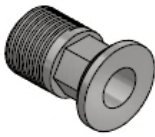


G-1/4"

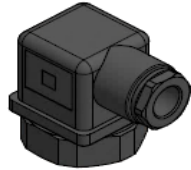


G-1/2"

Electrical Connections:



1/2" MNPT SOLID
CONDUIT FITTING



43650A DIN CONNECTOR
(BIG-DIN HIRSCHMANN)



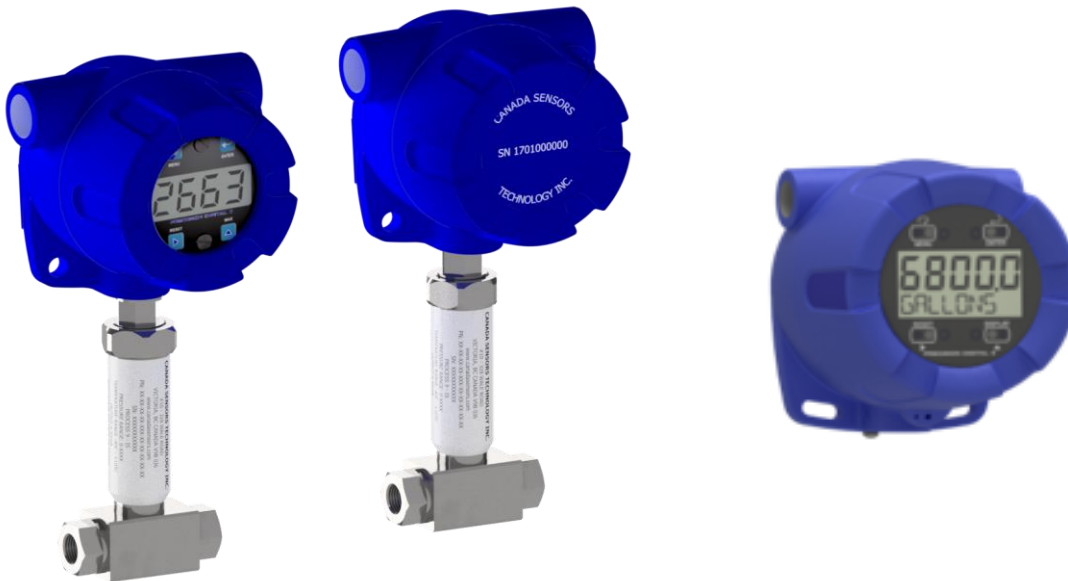
BENDIX TWIST CONNECTOR
6 PIN



M12 - 4 PIN

Product Accessories

- Aluminum XP Head (1/2" FNPT x 3) - 316SS Thread-on 1/2" MNPT Solid Conduit Fitting - Blank - No Window
- Aluminum XP Head (1/2" FNPT x 3) - 316SS Thread-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 Thread-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 Thread-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 9-IS

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

09-IS-01-03-04-051-02-01-12-02-02:

Process 9-IS Differential Transmitter, 4-20 mA, Zero and Span, Differential, 0 - 50 PSID, 1/4" FNPT, 17-4phSS Wetted Parts, 316SS Thread-on 1/2" MNPT Solid Conduit Fitting with 2 ft Lead Extension Wire, No Treatment, 0.25% Accuracy

	A	B	C	D	E	F	G	H	I	J
Model										
09-IS	-	Process 9-IS								
Output										
01	-	4-20 mA								
02	-	0-5 Volts								
03	-	0-10 Volts								
04	-	RS485 – Modbus								
05	-	CANopen								
06	-	J1939								
Calibration Adjustment										
03	-	Zero and Span								
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	-	¼" MNPT								
02	-	¼" FNPT								
03	-	½" MNPT								
04	-	½" FNPT								
07	-	G-¼"								
08	-	G-1/2"								
Wetted Parts										
02	-	316SS								
03	-	Inconel-718								
04	-	Titanium								
05	-	Hastelloy-276								
Electrical Connection										
12	-	316SS Thread-on ½" MNPT Solid Conduit Fitting (2 ft Lead Extension Wire)								
13	-	316SS Thread-on ½" MNPT Solid Conduit Fitting (4 ft Lead Extension Wire)								
14	-	316SS Thread-on ½" MNPT Solid Conduit Fitting (6 ft Lead Extension Wire)								
15	-	316SS Thread-on ½" MNPT Solid Conduit Fitting (10 ft Lead Extension Wire)								
22	-	Big-DIN (DIN 43650A 90 Degree Hirschmann)								
31	-	Bendix Twist Connector 6 Pin (PTIH-10-6P)								
32	-	M12								
36	-	Aluminum XP Head (1/2" FNPT x 3) - 316SS Thread-on 1/2" MNPT Solid Conduit Fitting - Blank - No Window								
39	-	Aluminum XP Head (1/2" FNPT x 3) - 316SS Thread-on 1/2" MNPT Solid Conduit Fitting w/ 3 1/2 + Digits LCD Loop Powered Display								
42	-	Aluminum XP Head (1/2" FNPT x 3) - 316SS Thread-on 1/2" MNPT Solid Conduit Fitting w/ 5 Digits LCD Loop Powered Display								
49	-	Aluminum XP Head (1/2" FNPT x 1, 3/4" FNPT x 2) - 316SS Thread-on 1/2" MNPT Solid Conduit Fitting w/ 5 or 7 Digits LCD Loop Powered Flow Rate Totalizer								
Environmental Treatment										
02	-	No Treatment								
04	-	DLC (Diamond Like Coating)								
Accuracy										
02	-	0.25 %								

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/cm²)			
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