

CANADA SENSORS TECHNOLOGY INC.



Manufacturer of Advanced Technology Pressure & Liquid Level Transmitters

DIFFERENTIAL PRESSURE TRANSMITTER – PROCESS 9-IS Intrinsically Safe 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

- ✓ Intrinsically Safe 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 +105C
- ✓ Ingress Protection IP65
- ✓ Multiple Electrical Connectors & Housings Available
- ✓ Multiple Process Connection Materials & Connection Threads Available
- ✓ Laser Engraved Product Information
- ✓ RoHS2 Compliant Directive 2011/65/EU
- ✓ 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. is ISO 9001:2015 certified.

Technical Specifications

Performance

Accuracy:	0.25% Full Scale Output
Stability:	< 0.1% Full Scale Output/Year
Temperature Range:	-40C to +105C
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 set by Customer
Span Tolerance:	0.5% Full Scale Output set by Customer
Output Load:	9 Volts typical @ 24 VDC 750 OHMS
Intrinsically Safe for Zone 2 Division 2 Hazardous Locations	

NOTE: Intrinsically safe pressure sensors may only be used in hazardous areas if they are installed in conjunction with an Ex barrier

Environmental Data

Temperature

Operating:	-40C to +105C
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

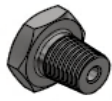
Sensor:	Monolithic Block NOT Available on this model
Vibration:	25gRMS from 20Hz to 2000Hz
Shock:	100g , half sine, 11mSec.
Sensor:	Silicone Oil Filled: 316SS, Inconel-718, Titanium, Hastalloy-276
Vibration:	25gRMS from 20Hz to 2000Hz
Shock:	100g , half sine, 11mSec.
NOTE: Silicone Oil Filled Sensors 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; Bendix Twist 6 Pin;

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

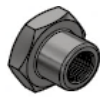
Product Weights:

	OZ	LBS	KG
Process 9-IS w/ 316SS Thread-on 1/2" MNPT Solid Conduit Fitting (2 ft Flying Lead)	20.5	1.3	0.58
Process 9-IS w/ Big-DIN (DIN 43650 90 Degree Hirschmann); or Bendix Twist 6 Pin;	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 (2ft Flying Lead) 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 (2ft Flying Lead) 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 (2ft Flying Lead) w/ 5 Digits LCD Loop Powered Display	108.5	6.8	3.08

Process Connections:



1/4" MNPT



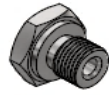
1/4" FNPT



1/2" MNPT



1/2" FNPT

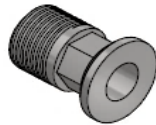


G-1/4"



G-1/2"

Electrical Connections:



1/2" MNPT SOLID
CONDUIT FITTING



43650A DIN CONNECTOR
(BIG-DIN HIRSCHMANN)



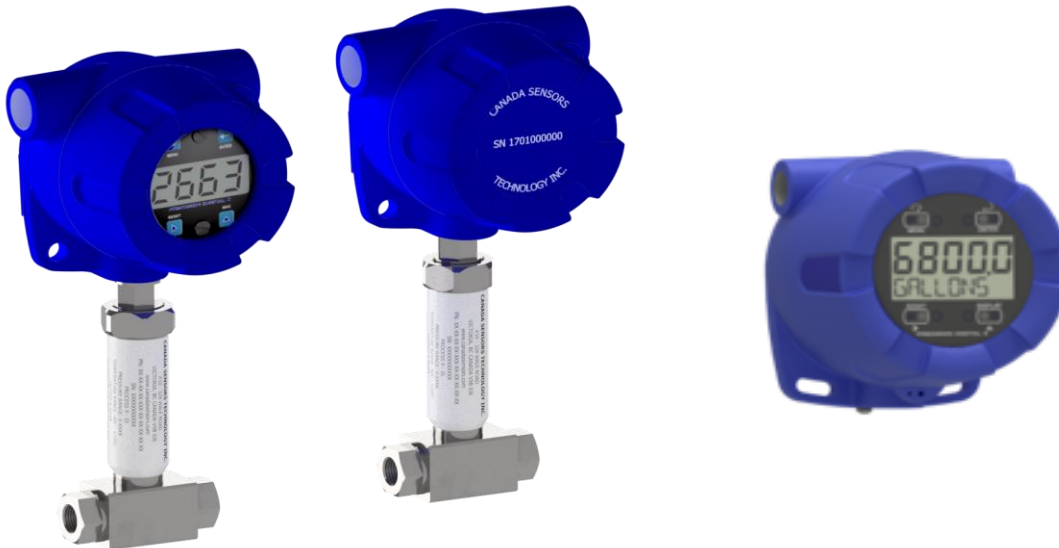
BENDIX TWIST CONNECTOR
6 PIN

Product Accessories

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

Aluminum XP Head (1/2" FNPT x 3) - 316SS Thread-on 1/2" MNPT Solid Conduit Fitting (2ft Flying Lead) 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 (2ft Flying Lead) w/ 5 Digits LCD Loop Powered Display



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 Flying Lead, 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 (Maximum Pressure 10,000 PSI)							
	02	-	¼" FNPT (Maximum Pressure 10,000 PSI)							
	03	-	½" MNPT (Maximum Pressure 10,000 PSI)							
	04	-	½" FNPT (Maximum Pressure 10,000 PSI)							
	07	-	G-¾" (Maximum Pressure 5,000 PSI)							
	08	-	G-1/2" (Maximum Pressure 5,000 PSI)							
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 Flying Lead)							
	13	-	316SS Thread-on ½" MNPT Solid Conduit Fitting (4 ft Flying Lead)							
	14	-	316SS Thread-on ½" MNPT Solid Conduit Fitting (6 ft Flying Lead)							
	15	-	316SS Thread-on ½" MNPT Solid Conduit Fitting (10 ft Flying Lead)							
	22	-	Big-DIN (DIN 43650 90 Degree Hirschmann)							
	23	-	Bendix Twist Connector 6 Pin (PTIH-10-6P)							
	36	-	Aluminum XP Head (1/2" FNPT x 3) - 316SS Thread-on 1/2" MNPT Solid Conduit Fitting (2ft Flying Lead) Blank - No Window							
	39	-	Aluminum XP Head (1/2" FNPT x 3) - 316SS Thread-on 1/2" MNPT Solid Conduit Fitting (2ft Flying Lead) 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 (2ft Flying Lead) w/ 5 Digits LCD Loop Powered Display							
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