**Differential Transmitter** 



1. Low Range

2. High Range

#### **Description & Features:**

- Designed to measure the differential pressures of liquids and gases between two ports
- Compact, efficient design available in Low or High psi ranges that facilitates installation in tight spaces
  - Low Range housing is constructed of stainless steel and aluminum
- High Range housing is made from a 316-grade stainless steel ideally suited for an industrial environment
- Fast response sensor and signal conditioned electronic circuitry provide quick and accurate readings
- Unique isolation system responds to pressure changes approximately 20 times faster than conventional transmitters with ranges below 100 psi (Low Range model)
- CE approval is standard on all models
- NEMA 4 approval is standard on the Low Range model
- 5 year warranty

## **Applications:**

- To measure pressure drops across filters
- Pumps and compressors, flow measurements of gases and liquids, liquid level measurement of pressurized vessels

Specifications	Low Range	High Range	
Electrical Output	4-20 mA, 2 wire 0-5 Vdc or 0-10 Vdc	4-20 mA, 2 wire (other options available)	
Electrical Connection	Barrier strip terminal block with conduit enclosure and 0.875 dia. conduit opening	DIN 43650 with mate	
Excitation Voltage	9-30 Vdc	8-38 Vdc	
Wetted Parts / Connection	17-4PH SS with FKM O-ring, 1/4"-18 NPTF	316L SS, 1/4" NPTF 300 series SS, 17-4PH SS with FKM O-ring	
Housing	304 SS, cast aluminum	316L SS	
Proof Pressure	e Refer to pressure range chart on next page Refer to pressure range chart on r (20X full scale optional)		
Burst Pressure	Refer to pressure range chart on next page	Refer to pressure range chart on next page	
Normal Operating Temperature Range	0°F to 175°F (-17°C to 79°C)	-40°F to 200°F (-40°C to 93°C)	
Compensated Temperature Range	30°F to 150°F (0°C to 65°C)	0°F to 170°F (-18°C to 76°C)	
Ambient Temperature Effect on Zero / Span			
Response Time	30-50 ms	<50 ms	
Long Term Stability	±0.5% FSO/yr	≤±0.25% FSO/yr	
Weight	14.4 oz. (408 g)	13 oz. (368 g)	
Accuracy	±0.25% FSO ±0.25% FSO		
Enclosure Rating	IP65	IP65	

# **LTD** Differential Transmitter

LTD Low Range					
Uni-directional		Bi-directional			
Gauge psid	Proof Pressure psi	Burst Pressure psi	Gauge psid	Proof Pressure psi	Burst Pressure psi
0/1	2.5	20	0/±0.5	1.25	20
0/2	5	40	0/ ±1	2.5	40
0/5	12.5	100	0/±2.5	6.25	100
0/10	25	100	0/±5	12.5	100
0/25	62.5	250	0/±10	25	200
0/50	125	250	0/±25	62.5	250
0/100	250	250	0/±50	125	250

LTD High Range			
Gauge psid	Proof Pressure psi	Burst Pressure psi	
0/50	100	750	
0/100	200	1,000	
0/200	500	2,000	
0/500	1,000	3,000	
0/1,000	2,000	5,000	
0/3,000	4,500	7,500	
0/5,000	7,500	10,000	

# **Order Codes**

Low Range Uni-directional		
Range	Code	
0/1 (27.7in/H <sub>2</sub> O)	LTDU1	
0/2 (55.4in/H <sub>2</sub> O)	LTDU2	
0/5 (138.4in/H <sub>2</sub> O)	LTDU5	
0/10 (276.8in/H <sub>2</sub> O)	LTDU10	
0/25 psi	LTDU25	
0/50 psi	LTDU50	
0/100 psi	LTDU100	

Low Range Bi-directional		
Range	Code	
±0/0.5 (13in/H <sub>2</sub> O)	LTDB0.5	
±0/1 (27.7in/H <sub>2</sub> O)	LTDB1	
±0/2.5 (69in/H <sub>2</sub> O)	LTDB2.5	
±0/5 (138.4in/H <sub>2</sub> O)	LTDB5	
±0/10 (276.8in/H <sub>2</sub> O)	LTDB10	
±0/25 psi	LTDB25	
±0/50 psi	LTDB50	

High Range		
Range	Code	
0/150 psid	LTD150	
0/200 psid	LTD200	
0/300 psid	LTD300	
0/500 psid	LTD500	
0/1,000 psid	LTD1000	
0/3,000 psid	LTD3000	
0/5,000 psid	LTD5000	

#### Option suffix:

4WCABLE = 4 wire shielded data cable (per ft.)

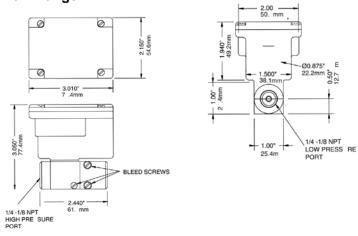
Other ranges (e.g. bar, etc.) available upon request Other outputs and options available upon request

### **Definitions:**

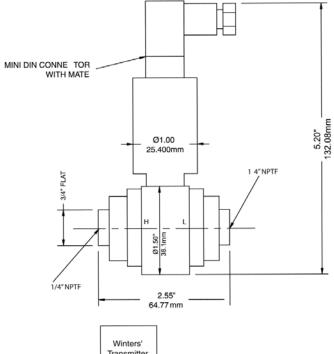
- Uni-directional = The instrument is calibrated with a 4 mA output at 0 psid and 20 mA output at full scale (i.e. For 0-10 psid range: 4 mA = 0 psid and 20 mA = 10 psid)
- Bi-directional = The instrument is calibrated with a 12 mA output at 0 psid/zero centre (i.e. For 0-10 psid range: 4 mA = -5 psid, 12 mA = 0 psid and 20 mA = +5 psid)

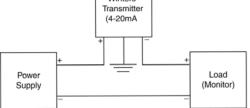
# Differential Transmitter

# Low Range

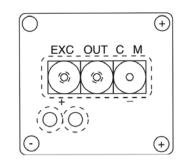




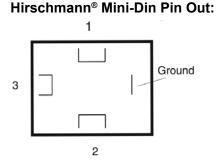




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- For voltage output, use COM, OUT and EXC terminals
  For current (4-20 mA) output,
- For current (4-20 mA) output use + and - terminals



4-20mA output Supply Power: 8-38 Vdc				
Mini-Din Connection				
Pin	Colour Code	V	mA	
1	N/A	+Excitation	+Excitation/Signal	
2	N/A	-Excitation/Signal	-Excitation/Signal	
3	N/A	+ Signal	NC	
Grnd	N/A	Gnd	Gnd	
	Wire Lead Connection			
Wiring	Colour Code	V	mA	
1	Red	+Excitation	+Excitation/Signal	
1	Black	-Excitation/Signal	-Excitation/Signal	
1	Green	+ Signal	NC	
Grnd	Shield/White	Gnd	Gnd	

**Current Output Units** 

- Low Range (current output) transducers are true 2-wire, 4-20 mA current output devices
- Deliver rated current into any external load of 0-1000 ohms
- 4-20 mA current output units are designed to have current flow in one direction only. Please observe polarity
- An electrical cable shield should be connected to the system's loop circuit ground to improve electrical noise rejection

MIN Supply Voltage: 9 + 0.02 x (Resistance of receiver plus line) MAX Supply Voltage: 30 + 0.004 x (Resistance of receiver plus line)