

PTD Series

DIFFERENTIAL PRESSURE TRANSMITTER



Low Range

CE
NEMA 4



High Range

CE

Description

Winters PTD Series is designed to measure the wet to wet differential pressures of liquids and gases. This compact, efficient design is available in Low or High psi ranges that facilitates installation in tight spaces. The PTD Low Range housing is constructed of stainless steel and aluminum. The PTD High Range housing is made from a 316-grade stainless steel ideally suited for an industrial environment. The PTD's fast response sensor and signal conditioned electronic circuitry provides quick and accurate readings. A 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.

Differential transmitters are commonly utilized to measure drops across filters. Other applications include; pumps and compressors, flow measurements of gases and liquids, liquid level measurement of pressurized vessels.



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PTD Series

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High Range Specifications

Electrical Output:	4-20mA, 2 wire (other options available)
Electrical Connection:	DIN 43650 w/mate.
Excitation Voltage:	8-38 Vdc
Wetted parts/Connection:	316L stainless steel 1/4" NPT female 300 series stainless steel and 17-4PH stainless steel with Viton O-ring
Housing:	316L stainless steel
Proof Pressure:	3X full scale (max. 10000 psi) (20X full scale optional).
Burst Pressure:	5X full scale (max. 10000 psi)
Normal Operating Temperature Range:	-40°F to 170°F (-40°C-76°C)
Compensated Temp. Performance:	-40°F to 170°F (-40°C-76°C)
Ambient Temp. Effect on Zero/Span:	Less than +/- 1.5% FSO per 100°F (37.7°C).
Response Time:	50 mS.
Accuracy:	± 0.5% (FSO)
Long Term Stability:	± 0.25% FSO per annum.
Protection:	IP65
Weight:	13 oz. (368g)

Low Range Specifications

Electrical Output:	4-20mA, 2 wire 0-5Vdc or 0-10 Vdc
Electrical Connection:	Barrier trip terminal block with conduit enclosure & .875 DIA conduit opening
Excitation Voltage:	9-30 Vdc
Wetted parts/Connection:	17-4PH stainless steel with Viton O-ring , 1/4"- 18 NPT internal
Housing:	Stainless steel/cast aluminum
Proof Pressure:	Refer to pressure range chart on next page.
Burst Pressure:	Refer to pressure range chart on next page.
Normal Operating Temperature Range:	0-175°F (-17°C to 82°C)
Compensated Temp. Range	30-150°F(0-65°C)
Ambient Temp. Effect on Zero/Span:	2% of full scale/100°F (37.7°C)
Response Time:	30-50 milliseconds
Accuracy:	+/- 0.25% (FSO)
Long Term Stability:	0.5% full scale per annum
Weight:	14.4 oz. (408g)



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How to order: Specify product code

PTD Series High Range Wet/Wet	
Range *	Code
0-150 psi	PTD150
0-200 psi	PTD200
0-300 psi	PTD300
0-500 psi	PTD500
0-1000 psi	PTD1000
0-3000 psi	PTD3000
0-5000 psi	PTD5000
Other	PTD - OR (Range)

PTD High Pressure Range		
Gauge psig	Proof Pressure psig	Burst Pressure psig
0-50	100	750
0-100	200	1000
0-200	500	2000
0-500	1000	3000
0-1000	2000	5000
0-3000	4500	7500
0-5000	7500	10000
0-10000	12500	20000

PTD Series Low Range Wet/Wet			
Unidirectional		Bidirectional	
Range*	Code	Range	Code
0-1 (27.7in/H ₂ O)	PTDU1	0-0.5 (±) (13in/H ₂ O)	PTDB0.5
0-2 (55.4in/H ₂ O)	PTDU2	0-1(±) (27.7in/H ₂ O)	PTDB1
0-5 (138.4in/H ₂ O)	PTDU5	0-2.5 (±) (69in/H ₂ O)	PTDB2.5
0-10 (276.8in/H ₂ O)	PTDU10	0-5 (±) (138.4in/H ₂ O)	PTDB5
0-25 psi	PTDU25	0-10 (±) (276.8in/H ₂ O)	PTDB10
0-50 psi	PTDU50	0-25 (±) (psi)	PTDB25
0-100 psi	PTDU100	0-50 (±) (psi)	PTDB50

* Calibrated in psi. Other ranges (e.g. bar, etc.) available upon request.
Other outputs & options available

PTD Low Pressure Range					
Gauge psig	Proof Pressure psig	Burst Pressure psig	Gauge psig	Proof Pressure psig	Burst Pressure psig
Unidirectional			Bidirectional		
0-1	2.5	20	0 to +/- 0.5	1.25	20
0-2	5	40	0 to +/- 1	2.5	40
0-5	12.5	100	0 to +/- 2.5	6.25	100
0-10	25	100	0 to +/- 5	12.5	100
0-25	62.5	250	0 to +/- 10	25	200
0-50	125	250	0 to +/- 25	62.5	250
0-100	250	250	0 to +/- 50	12.5	250



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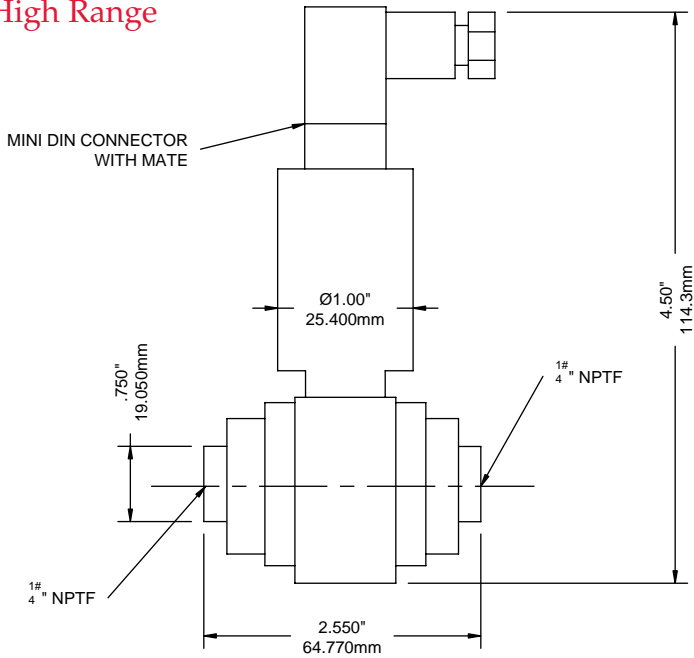
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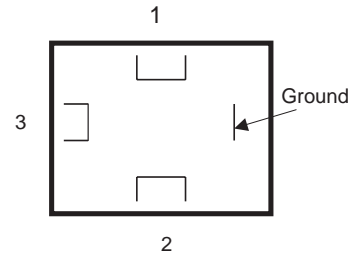
PTD Series

DIFFERENTIAL PRESSURE TRANSMITTER

High Range



Hirshman Mini-DIN Pin Out:



1.0 Connection type:

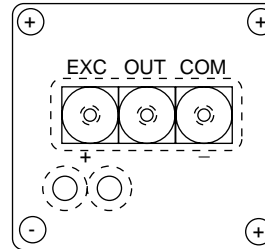
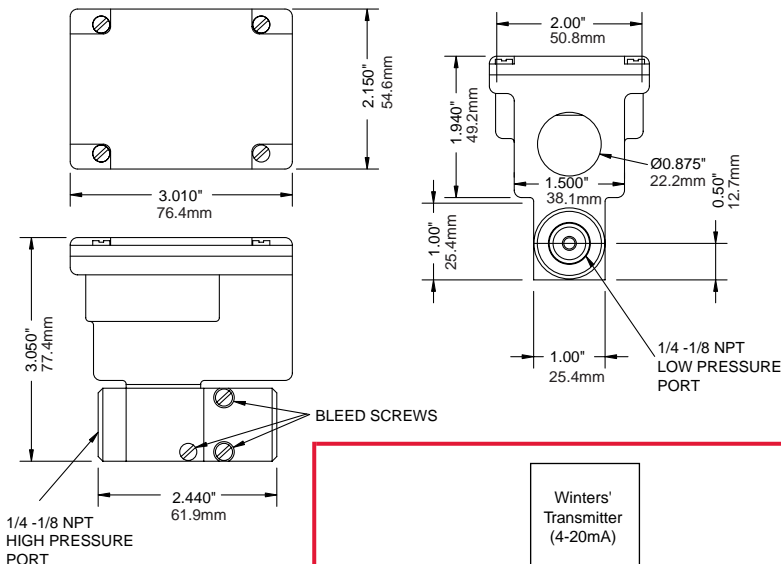
4-20mA output Supply Power: 8-38 Vdc

Mini-DIN 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

Wiring	Colour Code	V	mA
1	Red	+Excitation.	+Excitation/Signal
2	Black	-Excitation/Signal	-Excitation/Signal
3	Green	+Signal	NC
Grnd.	Shield	Gnd	Gnd

Low Range

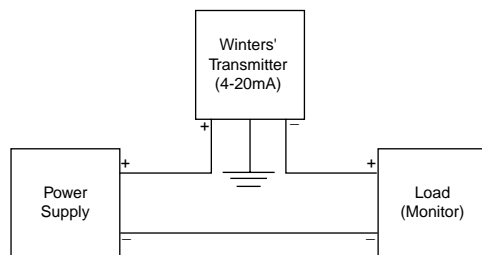


For voltage output, use COM, OUT and EXC terminals.

For current (4-20 mA) output, use + and - terminals.

Current Output Units

Winters PTD Low Range (current output) transducers are true 2-wire, 4-20 mA current output devices and deliver rated current into any external load of 0-1000 ohms. The 4-20 mA current output units are designed to have current flow in one direction only. PLEASE OBSERVE POLARITY. We suggest that an electrical cable shield be connected to the system's loop circuit ground to improve electrical noise rejection.



MIN Supply Voltage: $9 + .02 \times (\text{Resistance of receiver plus line})$

MAX Supply Voltage: $30 + .004 \times (\text{Resistance of receiver plus line})$



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12/02