

proSense®PTD25 Series Pressure Transmitters



The ProSense PTD25 pressure transmitter series is engineered to meet many industrial, commercial, and OEM pressure measurement applications. The ceramic sensing element with Viton seals provides high over pressure ratings and can be used to sense any compatible media. With a robust design resistant to vibration, shock, and EMI/RFI, the PTD25 series provides high accuracy over a wide compensated temperature range. Pressure sensing ranges from vacuum to 5000 psig are available along with a 1/4 inch NPT male threaded process connection. Choose from linear outputs of 4-20 mA or 0-10VDC with a 4-pin M12 quick-disconnect plug electrical connection. The PTD25 series is UL508 listed, CE marked and comes with a 3 year warranty.

Applications

- Process control & automation
- Pump & compressor control
- Hydraulic systems
- Pneumatic systems
- Engine monitoring
- Presses
- Machine tools

Features

- Ceramic sensing element with Viton seals
- High over pressure ratings
- Pressure ranges from vacuum to 5000 psig
- 1/4 inch NPT male threaded process connection
- Output options: 4-20 mA or 0-10 VDC
- M12 quick disconnect electrical connection
- UL508 listed, CE marked
- CE marked
- 3-year warranty




Note: Check the chemical compatibility of the sensor's wetted parts with the medium to be measured. For gaseous media, limit the process pressure to 363 Psig (25 bar) maximum.

ProSense PTD25 Series Pressure Transmitters				
Part Number	Description	Pcs/Pkg	Wt(lb)	Price
PTD25-10-VH	Vacuum transmitter, 10 to 0 V output, -14.5 to 0 psig range vacuum, 1/4" NPT male port	1	0.48	\$151.00
PTD25-10-0100WCH	Pressure transmitter, 0 to 10 V output, 0 to 100 inches wc* range, 1/4" NPT male port	1	0.48	\$157.00
PTD25-10-0015H	Pressure transmitter, 0 to 10 V output, 0 to 15 psig range, 1/4" NPT male port	1	0.48	\$151.00
PTD25-10-0030H	Pressure transmitter, 0 to 10 V output, 0 to 30 psig range, 1/4" NPT male port	1	0.48	\$151.00
PTD25-10-0100H	Pressure transmitter, 0 to 10 V output, 0 to 100 psig range, 1/4" NPT male port	1	0.48	\$151.00
PTD25-10-0200H	Pressure transmitter, 0 to 10 V output, 0 to 200 psig range, 1/4" NPT male port	1	0.48	\$151.00
PTD25-10-0500H	Pressure transmitter, 0 to 10 V output, 0 to 500 psig range, 1/4" NPT male port	1	0.48	\$151.00
PTD25-10-1000H	Pressure transmitter, 0 to 10 V output, 0 to 1000 psig range, 1/4" NPT male port	1	0.48	\$151.00
PTD25-10-3000H	Pressure transmitter, 0 to 10 V output, 0 to 3000 psig range, 1/4" NPT male port	1	0.48	\$157.00
PTD25-10-5000H	Pressure transmitter, 0 to 10 V output, 0 to 5000 psig range, 1/4" NPT male port	1	0.48	\$157.00
PTD25-20-VH	Vacuum transmitter, 20 to 4 mA output, -14.5 to 0 psig range vacuum, 1/4" NPT male port	1	0.48	\$151.00
PTD25-20-0100WCH	Pressure transmitter, 4 to 20 mA output, 0 to 100 inches wc* range, 1/4" NPT male port	1	0.48	\$157.00
PTD25-20-0015H	Pressure transmitter, 4 to 20 mA output, 0 to 15 psig range, 1/4" NPT male port	1	0.48	\$151.00
PTD25-20-0030H	Pressure transmitter, 4 to 20 mA output, 0 to 30 psig range, 1/4" NPT male port	1	0.48	\$151.00
PTD25-20-0100H	Pressure transmitter, 4 to 20 mA output, 0 to 100 psig range, 1/4" NPT male port	1	0.48	\$151.00
PTD25-20-0200H	Pressure transmitter, 4 to 20 mA output, 0 to 200 psig range, 1/4" NPT male port	1	0.48	\$151.00
PTD25-20-0500H	Pressure transmitter, 4 to 20 mA output, 0 to 500 psig range, 1/4" NPT male port	1	0.48	\$151.00
PTD25-20-1000H	Pressure transmitter, 4 to 20 mA output, 0 to 1000 psig range, 1/4" NPT male port	1	0.48	\$151.00
PTD25-20-3000H	Pressure transmitter, 4 to 20 mA output, 0 to 3000 psig range, 1/4" NPT male port	1	0.48	\$157.00
PTD25-20-5000H	Pressure transmitter, 4 to 20 mA output, 0 to 5000 psig range, 1/4" NPT male port	1	0.48	\$157.00

*wc = water column

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ProSense PTD25 Series General Specifications	
Housing Material	Stainless steel (316S12); FPM (Viton); PA; EPDM/X (Santoprene)
Materials (wetted parts)*	Stainless steel (303S22); ceramics; FPM (Viton)
Operating Temperature	-13 to 176°F (-25 to 80°C)
Medium Temperature	-13 to 194°F (-25 to 90°C)
Storage Temperature	-40 to 212°F (-40 to 100°C)
Protection	IP 68 / IP 69K (Units with pressure range 1000 psig and higher)
Protection	IP 65 (Units with pressure range 500 psig and lower)
Protection Class	Class III 
Accuracy	< ± 0.75% of full range
Repeatability	< ± 0.15% of full range
Insulation Resistance	> 100 MΩ: (500V DC)
Shock Resistance	50g (DIN / IEC 68-2-27, 11ms)
Vibration Resistance	20g (DIN / IEC 68-2-6, 10 - 2000 Hz)
EMC	
EN 61000-4-2 ESD	4 kV / 8 kV AD
EN 61000-4-3 HF Radiated	30 V/m
EN 61000-4-4 Burst	2 kV
EN 61000-4-6 HF Conducted	10 V
EMC (PTD25-20-xxxxx)	
EN 61000-4-2 ESD	4 kV / 8 kV AD
EN 61000-4-3 HF Radiated	30 V/m
EN 61000-4-4 Burst	2 kV
EN 61000-4-6 HF Conducted	10 V
Radiation of Interference	2004/104/EC / CISPR25, according to the road vehicle guideline
Noise Immunity	2004/104/EC / ISO 11452-2, according to the road vehicle guideline
HF Conducted	100 V/m
Pulse Resistance	According to ISO7637-2: Severity level 3
Agency Approvals	cULus (E320431), CE, RoHS
* Not cleaned for oxygen service	

ProSense PTD25 Series Technical Specifications	
Technical Specifications PTD25-10-xxxx	
Operating Voltage PTD25-10-xxxx	16 to 32 VDC ¹
Current Consumption	< 18 mA
Analog Output	0 to 10 V (min/max 0 to 10.5V)
Minimum Load	2000 Ω
Step Response Time Analog Output	3 ms
Technical Specifications PTD25-20-xxxx	
Operating Voltage PTD25-20-xxxx	9.6 to 32 VDC
Analog Output	4 to 20 mA (min/max 3.85 to 22 mA)
Maximum Load	[(supply voltage - 9.6) x 50]Ω For example: [(24 VDC - 9.6) x 50] = 720Ω
Step Response Time Analog Output	3 ms
Radiation of Interference	2004/104/EC / CISPR25, according to the road vehicle guideline
Noise Immunity	2004/104/EC / ISO 11452-2, according to the road vehicle guideline
HF Conducted	100 V/m
Pulse Resistance	According to ISO7637-2: Severity level 3
¹) per EN50178, SELV, PELV	
*Note: BFSL = Best Fit Straight Line / FR = Full Range	



Warning! Avoid static and dynamic overpressure exceeding the given overload pressure. Exceeding the bursting pressure for even a short time can cause destruction of the unit and possible injuries!

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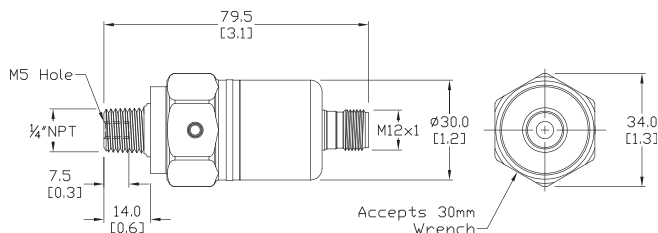
Applications (Type of Pressure: Relative Pressure, Liquids and Gases)			
Part Number	Measuring Range	Permissible Overload Pressure	Bursting Pressure
	Psig	Psig	Psig
PTD25-10-5000H PTD25-20-5000H	0 to 5000	11600	17400
PTD25-10-3000H PTD25-20-3000H	0 to 3000	5800	12300
PTD25-10-1000H PTD25-20-1000H	0 to 1000	4350	9400
PTD25-10-0500H PTD25-20-0500H	0 to 500	2175	5075
PTD25-10-0200H PTD25-20-0200H	0 to 200	1087	2175
PTD25-10-0100H PTD25-20-0100H	0 to 100	1087	2175
PTD25-10-0030H PTD25-20-0030H	0 to 30	290	725
PTD25-10-0015H PTD25-20-0015H	0 to 15	145	450
PTD25-10-VH PTD25-20-VH	-14.5 to 0 (vacuum)	145	450
	<i>inH₂O</i>	<i>inH₂O</i>	<i>inH₂O</i>
PTD25-10-0100WCH PTD25-20-0100WCH	0 to 100	2400	12043

inH₂O = Inches of Water (represents Water Column)

All PTD25 series transmitters can withstand vacuum down to -14.5 psig

Dimensions

mm [inches]



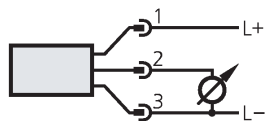
See our website www.AutomationDirect.com for complete Engineering drawings.

PTD25-10 Wiring Diagrams



Cable Assembly Wiring

- Colors:
Pin 1 - Brown
Pin 2 - White
Pin 3 - Blue
Pin 4 - Black



See Proximity Sensor section for cable specs

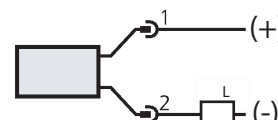
Note: Wiring colors are based on AutomationDirect CD12L and CD12M 4-pole cable assemblies.

PTD25-20 Wiring Diagrams



Cable Assembly Wiring

- Colors:
Pin 1 - Brown
Pin 2 - White
Pin 3 - Blue
Pin 4 - Black



See Proximity Sensor section for cable specs

Pressure Units Conversion Chart

Pressure Conversion Table: Multiplication Factors									
Desired Units	Known Units								
	Atmos	Bars	In of Hg (0°C)	In of H ₂ O (4°C)	K grams/meter ²	Lb/in ² (psig)	Lb/ft ²	mm of Hg torr	Pascals
Atmos	1	9.86923 x 10 ⁻¹	3.34207 x 10 ⁻²	2.458 x 10 ⁻³	9.678 x 10 ⁻⁵	0.068046	4.7254 x 10 ⁻⁴	1.316 x 10 ⁻³	9.869 x 10 ⁻⁶
Bars	1.01325	1	3.3864 x 10 ⁻²	2.491 x 10 ⁻³	9.8067 x 10 ⁻⁵	6.8948 x 10 ⁻²	4.788 x 10 ⁻⁴	1.333 x 10 ⁻³	10 ⁻⁵
In of Hg (0°C)	29.9213	29.53	1	7.355 x 10 ⁻²	2.896 x 10 ⁻³	2.036	0.014139	3.937 x 10 ⁻²	2.953 x 10 ⁻⁴
In of H ₂ O (4°C)	406.8	401.46	13.60	1	3.937 x 10 ⁻²	27.68	0.1922	0.5354	4.014 x 10 ⁻³
K grams/meter ²	1.033227 x 10 ⁴	1.0197 x 10 ⁴	345.3	25.40	1	7.0306 x 10 ²	4.882	13.59	1.019 x 10 ⁻¹
Lb/in ² (psig)	14.695595	14.504	0.4912	3.6126 x 10 ⁻²	1.423 x 10 ⁻³	1	6.9444 x 10 ⁻³	1.934 x 10 ⁻²	1.450 x 10 ⁻⁴
Lb/ft ²	2116.22	2088.5	70.726	5.202	0.2048	144.0	1	2.7844	2.089 x 10 ⁻²
mm of Hg torr	760	750.06	25.400	1.868	7.3558 x 10 ⁻²	51.715	0.35913	1	7.502 x 10 ⁻³
Pascals	1.01325 x 10 ⁵	1 x 10 ⁵	3.386 x 10 ³	2.491 x 10 ²	9.8067	6.8948 x 10 ³	4.788 x 10 ¹	1.333 x 10 ²	1

Example: To convert from 50 psig to "In of H₂O", (50 psig) (27.68) = 1384 In of H₂O