

# 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 psi 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 psi
- 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 PSI (25 BAR) MAXIMUM.**

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

\*wc = water column



Company Information

Drives

Soft Starters

Motors

Power Transmission

Motion: Servos and Steppers

Motor Controls

Sensors: Proximity

Sensors: Photoelectric

Sensors: Encoders

Sensors: Limit Switches

Sensors: Current

Sensors: Pressure

Sensors: Temperature

Sensors: Level

Sensors: Flow Switches

Pushbuttons and Lights

Stacklights

Signal Devices

Process

Relays and Timers

Pneumatics: Air Prep

Pneumatics: Directional Control Valves

Pneumatics: Cylinders

Pneumatics: Tubing

Pneumatics: Air Fittings

Appendix Book 2

Terms and Conditions

# proSense® PTD25 Pressure Transmitters

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

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



**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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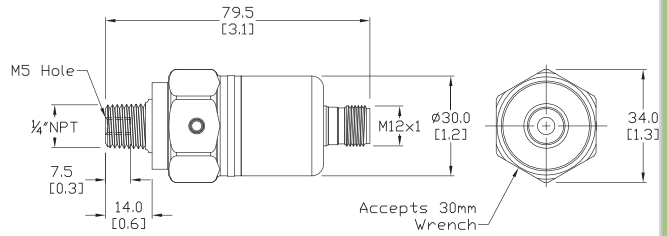
Appendix Book 2

Terms and Conditions

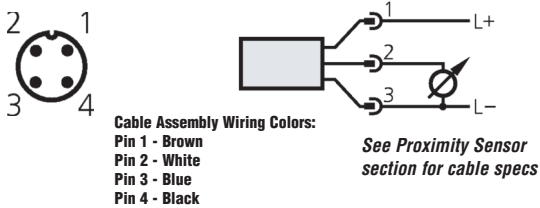
Applications (Type of Pressure: Relative Pressure, Liquids and Gases)			
Part Number	Measuring Range	Permissible Overload Pressure	Bursting Pressure
	PSI	PSI	PSI
PTD25-10-5000H PTD25-20-5000H	0 to 5000	11600	17400
PTD25-10-3000H PTD25-20-3000H	0 to 3000	5800	12300
PTD25-10-1000H PTD25-20-1000H	0 to 1000	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
	inH <sub>2</sub> O	inH <sub>2</sub> O	inH <sub>2</sub> O
PTD25-10-0100WCH PTD25-20-0100WCH	0 to 100	4015	12043

inH<sub>2</sub>O = Inches of Water (represents Water Column)  
All PTD25 series transmitters can withstand vacuum down to -14.5 psi

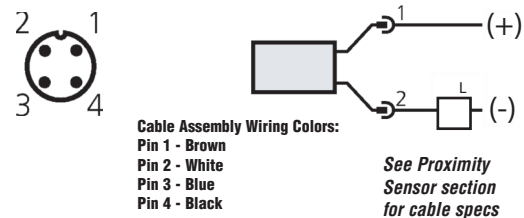
## Dimensions mm [inches]



## PTD25-10 Wiring Diagrams



## PTD25-20 Wiring Diagrams



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

## Pressure Units Conversion Chart

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

Example: To convert from 50 psi to "In of H<sub>2</sub>O", (50 psi) (27.68) = 1384 In of H<sub>2</sub>O