

proSense™ PTD25 Series Pressure Transmitters

by AUTOMATIONDIRECT



Features

PTD25 series pressure sensors detect system pressure and convert it to an analog output signal.

- Ceramic sensing element provides high burst/overpressure protection
- Output options: 4-20 mA or 0-10 V
- M12 quick-disconnect signal cable connection
- Flexible film circuit results in excellent shock and vibration resistance
- Robust stainless steel housing
- 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)	Price	Cable Assemblies	
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	<--->	CD12L-0B-020-A0 CD12L-0B-020-C0 CD12M-0B-070-A1 CD12M-0B-070-C1 CDP12-0B-010-AA CDP12-0B-030-AA CDP12-0B-010-BB CDP12-0B-030-BB (order separately - see Proximity Sensor section for cable specs)	
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

Systems Overview

Programmable Controllers

Field I/O

Software

C-more & other HMI

Drives

Soft Starters

Motors & Gearbox

Steppers/ Servos

Motor Controls

Proximity Sensors

Photo Sensors

Limit Switches

Encoders

Current Sensors

Pressure Sensors

Temperature Sensors

Pushbuttons/ Lights

Process

Relays/ Timers

Comm.

Terminal Blocks & Wiring

Power

Circuit Protection

Enclosures

Tools

Pneumatics

Appendix

Product Index

Part # Index

proSense™ PTD25 Pressure Transmitters

by AUTOMATIONDIRECT

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 PSI and higher)
Protection	IP 65 (Units with pressure range 500 PSI and lower)
Protection Class	III
Accuracy	< ± 0.75% of full range
Repeatability	< ± 0.15% of full range
Insulation Resistance	> 100 MΩ: (500 V DC)
Shock Resistance	50g (DIN / IEC 68-2-27, 11ms)
Vibration Resistance	20g (DIN / IEC 68-2-6, 10 - 2000 Hz)
EMC (PTD25-10-xxxx)	
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-xxxx)	
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

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
Characteristics Deviation (in % of full range)*	
PTD25-xx-5000H	< ± 0.35 (BFSL) / < ± 0.75 (FR)
PTD25-xx-3000H	< ± 0.35 (BFSL) / < ± 0.75 (FR)
PTD25-xx-1000H	< ± 0.35 (BFSL) / < ± 0.75 (FR)
PTD25-xx-0500H	< ± 0.35 (BFSL) / < ± 0.75 (FR)
PTD25-xx-0200H	< ± 0.35 (BFSL) / < ± 0.75 (FR)
PTD25-xx-0100H	< ± 0.35 (BFSL) / < ± 0.75 (FR)
PTD25-xx-0030H	< ± 0.35 (BFSL) / < ± 0.75 (FR)
PTD25-xx-0015H	< ± 0.25 (BFSL) / < ± 0.5 (FR)
PTD25-xx-0100WCH	< ± 0.35 (BFSL) / < ± 0.75 (FR)
PTD25-xx-VH	< ± 0.25 (BFSL) / < ± 0.5 (FR)
Repeatability (in % of full range)	
PTD25-xx-5000H	< 0.15
PTD25-xx-3000H	< 0.15
PTD25-xx-1000H	< 0.15
PTD25-xx-0500H	< 0.15
PTD25-xx-0200H	< 0.15
PTD25-xx-0100H	< 0.15
PTD25-xx-0030H	< 0.15
PTD25-xx-0015H	< 0.1
PTD25-xx-0100WCH	< 0.15
PTD25-xx-VH	< 0.1
Temperature Coefficients (TEMPCO) Greatest TEMPCO of the zero point of full range	Temperature range 0 to 80°C (-13 to 176°F) [in % of full range/10°C(50°F)]
PTD25-xx-5000H	0.3 / 0.4
PTD25-xx-3000H	0.2 / 0.3
PTD25-xx-1000H	0.2 / 0.3
PTD25-xx-0500H	0.15 / 0.2
PTD25-xx-0200H	0.15 / 0.2
PTD25-xx-0100H	0.2 / 0.3
PTD25-xx-0030H	0.2 / 0.3
PTD25-xx-0015H	0.15 / 0.2
PTD25-xx-0100WCH	0.2 / 0.3
PTD25-xx-VH	0.15 / 0.2
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!**

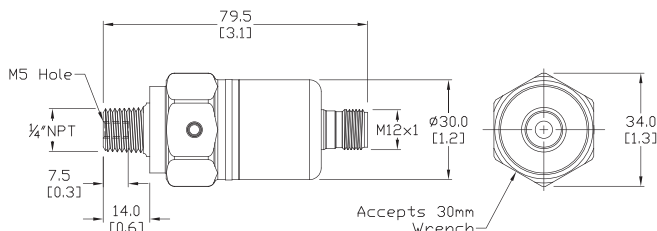
Applications (Type of Pressure: Relative Pressure, Liquids and Gases)			
Part Number	Measuring Range	Permissible Overload Pressure	Bursting Pressure
	PSI	PSI	PSI
PTD25-10-5000H PTD25-20-5000H	0 to 5000	11600	17400
PTD25-10-3000H PTD25-20-3000H	0 to 3000	5800	12300
PTD25-10-1000H PTD25-20-1000H	0 to 1000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

inH₂O = Inches of Water (represents Water Column)

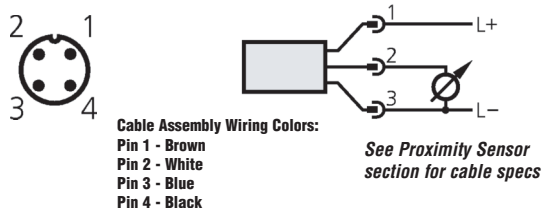
All PTD25 series transmitters can withstand vacuum down to -14.5 psi

Dimensions

mm [inches]

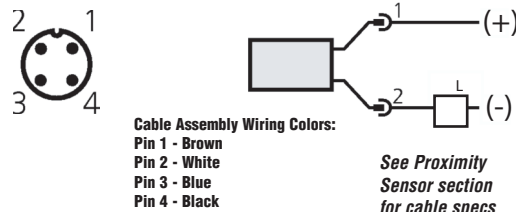


PTD25-10 Wiring Diagrams



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

PTD25-20 Wiring Diagrams



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 (psi)	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	9.678x 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 (psi)	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 psi to “In of H ₂ O”, (50 psi) (27.68) = 1384 In of H ₂ O										

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

Reliable process measurement for less - ProSense™ Pressure Sensors



Digital Pressure Switch/Transmitter QPS Series Features

all models
\$69.00



- Precision digital pressure switch/transmitter with 2 meter cable
- Two digital outputs (NPN or PNP) which may be set individually and a 4-20 mA analog output
- Two vacuum to pressure ranges (-14.5 to 14.5 and -14.5 psi to 145 psi)
- Three operation modes: Easy, Window and Hysteresis
- 3-color digital LCD display
- 6 pressure unit conversions
- Lockable keypad
- Unit parameters are easily copied to other units
- Selectable response times to eliminate output chattering
- Fast zero reset
- Optional panel mount and bracket kits
- 2-year warranty



Pressure and Vacuum Transmitters PTD25 Series Features

all models
\$125.00



- Ceramic sensing element provides high burst/overpressure protection
- Pressure ranges up to 5000 psi
- Output options: 4-20 mA or 0-10 V
- M12 quick-disconnect signal cable connection
- Flexible film circuit results in excellent shock and vibration resistance
- Robust stainless steel housing
- 3-year warranty



Electronic Pressure Switch PSD25 Series Features

all models
\$89.00



- Compact pressure switch features simple setup using mechanical adjustment dials
- Extremely durable housing with 316 stainless steel process connection
- No moving parts ensure long-term stability without setpoint drift
- Pressure ranges up to 5800 psi
- LEDs indicate switching and operating status
- Complementary switching outputs (N.O./N.C.), DC
- Easy set-up dials
- Vibration and shock-resistant

