

# prosense® SPTD25 Series Pressure Transmitters



Part No. SPTD25-20-0100H



The ProSense SPTD25 pressure transmitter series is engineered to meet many industrial, commercial, and OEM pressure measurement applications. The all-stainless steel thin film sensing element provides very fast response time and can be used to sense any compatible media. With a robust design resistant to vibration, shock, and EMI/RFI, the SPTD25 series provides high accuracy over a wide compensated temperature range. Pressure sensing ranges from 100 to 5000 psig are available with a 1/4 inch NPT male threaded process connection and a linear 4-20 mA output with an M12 quick-disconnect electrical connection.

## Applications

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

## Features

- All-stainless steel sensing element
- Fast response time
- Pressure ranges from 100 to 5000 psig
- 1/4 inch NPT male threaded process connection
- 4-20 mA output
- M12 quick-disconnect electrical connection
- UL508 listed, CE marked
- 3-year warranty



Note: Check the chemical compatibility of the sensor's wetted parts with the medium to be measured.

## ProSense SPTD25 Series Pressure Transmitters

Part Number	Description	Pcs/Pkg	Wt (lb)	Price
<a href="#"><u>SPTD25-20-0100H</u></a>	Pressure transmitter, 4 to 20 mA output, 0 to 100 psig range, 1/4" NPT male port, M12 connector	1	0.1	\$119.00
<a href="#"><u>SPTD25-20-0200H</u></a>	Pressure transmitter, 4 to 20 mA output, 0 to 200 psig range, 1/4" NPT male port, M12 connector	1	0.1	\$119.00
<a href="#"><u>SPTD25-20-0300H</u></a>	Pressure transmitter, 4 to 20 mA output, 0 to 300 psig range, 1/4" NPT male port, M12 connector	1	0.1	\$119.00
<a href="#"><u>SPTD25-20-0500H</u></a>	Pressure transmitter, 4 to 20 mA output, 0 to 500 psig range, 1/4" NPT male port, M12 connector	1	0.1	\$119.00
<a href="#"><u>SPTD25-20-1000H</u></a>	Pressure transmitter, 4 to 20 mA output, 0 to 1000 psig range, 1/4" NPT male port, M12 connector	1	0.1	\$119.00
<a href="#"><u>SPTD25-20-3000H</u></a>	Pressure transmitter, 4 to 20 mA output, 0 to 3000 psig range, 1/4" NPT male port, M12 connector	1	0.1	\$119.00
<a href="#"><u>SPTD25-20-5000H</u></a>	Pressure transmitter, 4 to 20 mA output, 0 to 5000 psig range, 1/4" NPT male port, M12 connector	1	0.1	\$119.00

## ProSense SPTD25 Series General Specifications

<b>Housing Material</b>	Stainless steel 316L (DIN 1.4404); Stainless steel 17-4PH (DIN 1.4542); Polyamide (PA)
<b>Materials (wetted parts)*</b>	Stainless steel 17-4PH (DIN 1.4542)
<b>Operating Temperature</b>	-40 to 194°F (-40 to 90°C)
<b>Medium Temperature</b>	-40 to 194°F (-40 to 90°C)
<b>Storage Temperature</b>	-40 to 212°F (-40 to 100°C)
<b>Protection</b>	IP 67 / IP 69K
<b>Accuracy<sup>1</sup></b>	< ± 0.5% of full range
<b>Linearity<sup>2</sup></b>	< ± 0.1% (BFSL) / < ± 0.2% (LS)
<b>Hysteresis</b>	< ± 0.2%
<b>Repeatability<sup>3</sup></b>	< ± 0.05%
<b>Long-Term Stability<sup>4</sup></b>	< ± 0.1%
<p>* Not cleaned for oxygen service</p> <p><sup>1</sup> Zero point and span error, non-linearity, hysteresis</p> <p><sup>2</sup> BFSL = Best fit straight line / LS = limit value setting</p> <p><sup>3</sup> With temperature fluctuations &lt;10°C</p> <p><sup>4</sup> In % of the span / 6 months</p>	

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## ProSense SPTD25 Series General Specifications Continued

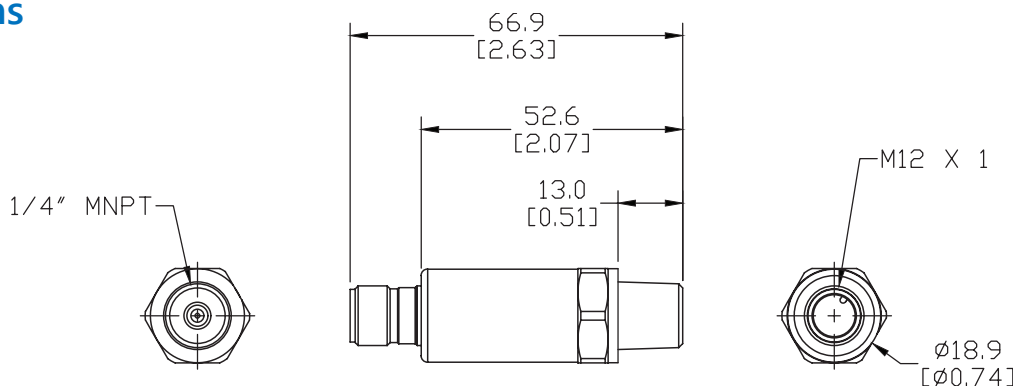
<b>Operating Voltage</b>	8.5 to 36 VDC*
<b>Analog Output</b>	4 to 20 mA
<b>Maximum Load</b>	$[(\text{supply voltage} - 8.5) / 21.5 \text{ mA}] \Omega$   For example: $[(24\text{VDC} - 8.5) / 0.0215] = 720 \Omega$
<b>IEC Protection Class</b>	Class III $\diamond$
<b>Step Response Time Analog Output</b>	1 ms
<b>Short-Circuit Proof</b>	yes
<b>Overload Protection</b>	yes
<b>Reverse Polarity Protection</b>	yes
<b>Insulation Resistance</b>	> 100 M $\Omega$ : (500 VDC)
<b>Shock Resistance</b>	50g (DIN 60068-2-27, 11ms)
<b>Vibration Resistance</b>	20g (DIN 60068-2-6, 10 - 2000 Hz)
<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>	2kV
<b>EN 61000-4-6 HF Conducted</b>	10V
<b>EC Pressure Equipment Directive 97/23/EC</b>	Article 3, section 3: Group 2 Non-Hazardous, Non-flammable, Non-oxidizing
<b>EMC</b>	DIN EN 61000-6-2; DIN EN 61000-6-3
<b>MTTF (Years)</b>	784
<b>Min. Pressure Cycles</b>	60 million lifetime (at 1.2 times the nominal pressure)
<b>Agency Approvals</b>	cULus (E320431), CE, RoHS
* per EN50178, SELV, PELV	



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!

## Dimensions

mm [inches]



See our website [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete Engineering drawings.

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## Pressure Ratings

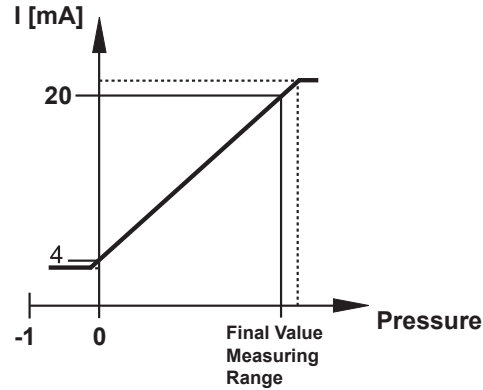
Applications (Type of Pressure: Gauge Pressure, Liquids and Gases)			
Part Number	Final Value of the Measuring Range	Static Proof Pressure Resistance (Max. Permissible Pressure)	Bursting Pressure
	Psig	Psig	Psig
<a href="#">SPTD25-20-0100H</a>	100	250	2900
<a href="#">SPTD25-20-0200H</a>	200	580	6525
<a href="#">SPTD25-20-0300H</a>	300	940	8700
<a href="#">SPTD25-20-0500H</a>	500	1450	11600
<a href="#">SPTD25-20-1000H</a>	1000	2500	13050
<a href="#">SPTD25-20-3000H</a>	3000	7250	14500
<a href="#">SPTD25-20-5000H</a>	5000	14500	24650

All SPTD25 series transmitters can withstand vacuum down to -14.5 psig



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!

## Current Output 4-20 mA



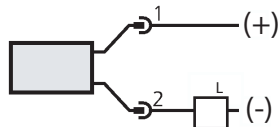
In the measuring range the output signal is between 4 and 20mA. If the system pressure is above or below the measuring range, the analog output performs as follows:

- System pressure above the measuring range: 20...25mA non-linear
- System pressure below the measuring range: 4...3mA non-linear

## SPTD25-20 Wiring Diagrams



**Cable Assembly Wiring**  
Colors:  
Pin 1 - Brown +  
Pin 2 - White - Out  
Pin 3 - Blue, not used  
Pin 4 - Black, not used



See Proximity Sensor section for cable specs

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