### **VAUTOMATION DIRECT**

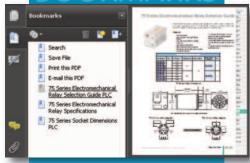
# Pressure Sensors and Gauges











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Company Information

Drives

Soft Starters

Motors

Transmission

Motion: Servos and Steppers

Motor Controls

Sensors: Proximity

Sensors: Photoelectric

Encoders

Sensors: Current

Sensors: Level

Pushbuttons and Lights

Stacklights

Relays and Timers

Pneumatics: Air Prep

Pneumatics: Directional Control Valves

Cylinders

Pneumatics:

Pneumatics Air Fittings

## Reliable process measurement for less - ProSense® Pressure Sensors



#### Digital Pressure Switch/Transmitter QPS Series

- 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)
- Air, non-corrosive/non-flammable gases only
- Three operation modes: Easy, Window and Hysteresis
- 3-color digital LCD display
- 6 pressure unit conversions
- Lockable keypad
- Optional panel mount and bracket kits



\$89,00

## Electronic Pressure Switch PSD25 Series

- Simple setup using mechanical adjustment dials
- Durable housing with 316 stainless steel process connection
- Pressure ranges up to 5800 psi
- M12 guick disconnect electrical connection
- LEDs indicate switching and operating status
- Complementary switching outputs (N.O./N.C.), 500 mA DC
- · Easy set-up dials
- · Vibration and shock-resistant



\$89.00

## MPS25 Series Mechanical Pressure Switches

- 316 stainless steel housing
- All stainless welded diaphragm or stainless piston and Buna-N O-ring
- Pressure ranges from-15 psi vacuum to 7500 psi
- Tamper resistant field adjustment
- Integral 6-foot cable with 1/2 inch NPT male conduit connection, or DIN formC electrical connections
- 1/4 inch NPT male process connection
- Wide operating temperature range
- Precision snap-acting SPDT, 3 Amp mechanically operated switch

Pressure and Vacuum Transmitters



#### **PTD25 Series 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
- $\bullet \ M12 \ quick \ disconnect \ electrical \ connection$
- UL508 listed, CE marked
- 3 year warranty



#### **SPT25 Series Features**

- All stainless steel wetted parts
- Pressure ranges from vacuum to 5000 psi
- Fast response time of <1ms
- Output options: 4-20 mA or 0-10 VDC
- Integral 6.6 ft cable or DIN connector
- Made in USA
- \$115 with integral cable,
   \$109 with DIN connector



#### **DPTA Series Features**

- Differential pressure measurement with a highly stable capacitive sensing element
- Positive, negative, and bi-directional pressure measurement
- Pressure ranges from 0.1"w.c. to 25"w.c.
- Accuracy is +/-1% of span maximum
- High overpressure rating of 15 psi
- LED loop power status indicator
- Made in USA
- 3 year warranty



## Mechanical Dial Pressure Gauges with 1.5", 2.0" and 2.5" Diameter Dials

- Available in durable steel or stainless steel cases and in either dry or liquid filled models. (Liquid filled gauges dampen the effects of vibration and pulsations).
- Brass wetted parts are suitable for air, oil, or water pressure gauge applications.
- Stainless steel wetted parts are available for use in pressure gauge applications for corrosive materials.
- Dual marked gauge dial faces (psi/kPa or inHg/kPa) are available in pressure ranges from vacuumup to 6000 psi.
- 5 year warranty

## **Or** Sense PSD25 Series Pressure Switches



#### **Features**

- · 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
- LEDs indicate switching and operating
- Complementary switching outputs (N.O./N.C.), DC
- · Easy set-up dials
- · Vibration and shock-resistant

#### **Agency Approvals**

- cULus, File number E320431
- RoHS



Drives

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Relays and Timers

Pneumatics: Air Prep

Pneumatics: Directional Control Valves

Cylinders Pneumatics:

Pneumatics Air Fittings

Conditions

ProSense Series Pressure Sensors							
Part Number	Description	Pcs/Pkg	Wt(lb)	Price	Cable Assemblies		
PSD25-0P-0145H	Pressure switch, DC, PNP NO/NC, 7.5 to 145 psi range, 1/4" NPT male port	1	0.21	\$89.00	CD12L-0B-020-A0 CD12L-0B-020-C0		
PSD25-0P-1450H	Pressure switch, DC, PNP NO/NC, 75 to 1450 psi range, 1/4" NPT male port	1	0.21	\$89.00	CD12M-0B-070-A1		
PSD25-0P-5800H	Pressure switch, DC, PNP NO/NC, 290 to 5800 psi range, 1/4" NPT male port	1	0.21	\$89.00	CD12M-0B-070-C1 (order separately - see Proximity Sensor section for cable specs)		
	Accessory						
PSD-CV	Transparent plastic protective cap for PSD series	1	0.01	\$3.00	PSD Series Sensors		
Note: Cheek the chemical	compatibility of the cancar's watted parts with the medium to be measured				-		

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

	ise PSD25 Series Technical Specifications
Operating Voltage	9.6 to 32 VDC
Connection Pin Material	Gold-plated
Output Maximum Load Current	500 mA - See Setting and Operation Guide on following page.
Current Consumption	< 25 mA
Switching Frequency	100 Hz
Setting Accuracy of Switch Points	< ± 2.5% of full range (limit point calibration)
Repeatability	< ± 0.5% of full range
Temperature Drift	$<\pm$ 0.5%, of full temperature range/10 K;32 to 176°F (0 to 80°C).
Housing Material	PBT (Pocan); PC (Makrolon); FPM (Viton); stainless steel (316S12)
Materials (wetted parts)	Stainless steel (316S12)
Operating Temperature	–13 to 176°F (–25 to 80°C)
Medium Temperature	–13 to 176°F (–25 to 80°C)
Storage Temperature	-40 to 212°F (-40 to 100°C)
Protection	IP 67
Protection Class	III
Insulation Resistance	> 100 MΩ (500 VDC)
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	10 V/m
EN 61000-4-4 Burst	2 kV
EN 61000-4-6 HF Conducted	10 V

Applications (Type of Pressure: Relative Pressure, Liquids and Gases)							
Part Number	Setpoint Scale	Resetpoint Scale	Permissible Overload Pressure	Bursting Pressure			
	bar (PSI)	bar (PSI)	bar (PSI)	bar (PSI)			
PSD25-0P-5800H	20 to 400 (290 to 5800)	12 to 392(175 to 5685)	600 (8700)	1600 (23200)			
PSD25-0P-1450H	5 to 100 (75 to1450)	3 to 98 (50 to 1420)	200 (2900)	1000 (14500)			
PSD25-0P-0145H	0.5 to 10 (7.5 to 145)	0.3 to 9.8 (5 to 142)	25 (362)	300 (4350)			

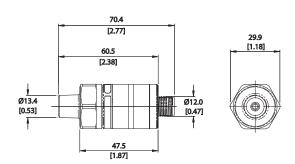
Note: Full vacuum permisible



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!

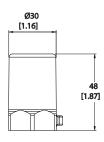
## **Dr**Sense PSD25 Series Pressure Switches

#### **Switch Dimensions**



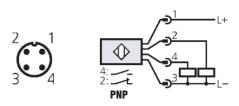
Note: tightening torque 25 Nm (18.4 lb-ft)

#### **Switch Cover Dimensions**



Dimensions shown mm [inches]

#### **PSD25 Wiring Diagrams**



**Cable Assembly Wiring Colors:** 

Pin 1 - Brown

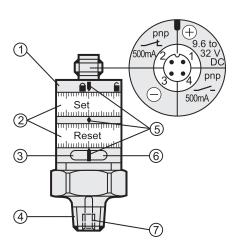
Pin 2 - White

Pin 3 - Blue

Pin 4 - Black

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

### **Setting and Operation**



- 1. locking ring
- setting rings (manually adjustable after unlocking)
- 3. LED green: supply voltage O. K.
- 4. process connection 1/4" NPT; tightening torque 25 Nm
- setting marks
- 6. LED yellow: Set value reached, OUT1 = ON / OUT2 = OFF
- 7. internal thread M5
- Minimum distance between Set and Reset = 2% of the final value of the measuring range.
- To obtain the setting accuracy: Set both rings to the minimum value, then set the requested values.

### **Or** Sense MPS25 Series Mechanical Pressure **Switches**



The ProSense MPS25 series mechanical pressure switches are designed for the toughest applications where conventional pressure switch designs often don't measure up. These cost effective switches, depending on the pressure range, have either an all welded 316 stainless steel sealed diaphragm actuator design or a direct acting 316 stainless steel piston design with a Buna-N O-ring. The rugged 316 stainless steel enclosure provides uncompromising protection and long life in difficult environments. The robust design is resistant to vibration and shock, and provides reliable operation over a wide operating temperature range. Pressure ranges from vacuum to 7500 psig are available along with a ¼ inch NPT male threaded process connection and a precision snap-acting SPDT, 3 Amp, mechanically operated switch output. Choose from either an integral 6-foot (1.5m) cable with ½ inch NPT male conduit connection or a DIN 175301-803C L-connector.

#### **Applications**

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



\* UL only applies to the MPS25 series units with integral cable

#### **Features**

- Compact size
- · 316 stainless steel enclosure
- · All stainless welded diaphragm or stainless piston and Buna-N O-ring
- Pressure ranges from -15 psi vacuum to 7500 psi
- Tamper resistant field adjustment
- \*Integral 6-foot cable with 1/2 inch NPT male conduit connection or DIN form C electrical connections
- 1/4 inch NPT male process connection
- · Wide operating temperature range
- Precision snap-acting SPDT, 3 Amp mechanically operated
- UL\*, CSA, CE and RoHS compliant
- · 3-year warranty

	MPS25 Series Mechanical Pressure Swite	hes				
Part Number	Description	Actuator Type	Electrical Connection	Pcs/ Pkg	Wt(lb)	Price
MPS25-1C-DV15A	Pressure switch, -15 psi vacuum to 15 psi adjustable range, 1/4" NPT male port, 3A SPDT switch output			1	0.9	\$89.00
MPS25-1C-D30A	Pressure switch, 6 to 30 psi adjustable range, 1/4" NPT male port, 3A SPDT switch output	316 stainless steel welded diaphragm		1	0.9	\$89.00
MPS25-1C-D60A	Pressure switch, 8 to 60 psi adjustable range, 1/4" NPT male port, 3A SPDT switch output	worded diapriragini		1	0.9	\$89.00
MPS25-1C-D100A	Pressure switch, 10 to 100 psi adjustable range, 1/4" NPT male port, 3A SPDT switch output		1/2" NPT male conduit connec-	1	0.9	\$89.00
MPS25-1C-P200A	Pressure switch, 40 to 200 psi adjustable range, 1/4" NPT male port, 3A SPDT switch output		tion, integral 6-foot (1.5 meter)	1	0.9	\$89.00
MPS25-1C-P500A	Pressure switch, 50 to 500 psi adjustable range, 1/4" NPT male port, 3A SPDT switch output		4 conductor cable with 18 AWG leads	1	0.9	\$89.00
MPS25-1C-P1000A	Pressure switch, 100 to 1000 psi adjustable range, 1/4" NPT male port, 3A SPDT switch output	316 stainless steel		1	0.9	\$89.00
MPS25-1C-P2000A	Pressure switch, 200 to 2000 psi adjustable range, 1/4" NPT male port, 3A SPDT switch output	Buna-N O-ring		1	0.9	\$89.00
MPS25-1C-P5000A	Pressure switch, 500 to 5000 psi adjustable range, 1/4" NPT male port, 3A SPDT switch output			1	0.9	\$89.00
MPS25-1C-P7500A	Pressure switch, 750 to 7500 psi adjustable range, 1/4" NPT male port, 3A SPDT switch output			1	0.9	\$89.00
MPS25-1C-DV15D	Pressure switch, -15 psi vacuum to 15 psi adjustable range, 1/4" NPT male port, 3A SPDT switch output	·		1	0.5	\$82.00
MPS25-1C-D30D	Pressure switch, 6 to 30 psi adjustable range, 1/4" NPT male port, 3A SPDT switch output	316 stainless steel welded diaphragm		1	0.5	\$82.00
MPS25-1C-D60D	Pressure switch, 8 to 60 psi adjustable range, 1/4" NPT male port, 3A SPDT switch output	wordod diapriragini		1	0.5	\$82.00
MPS25-1C-D100D	Pressure switch, 10 to 100 psi adjustable range, 1/4" NPT male port, 3A SPDT switch output			1	0.5	\$82.00
MPS25-1C-P200D	Pressure switch, 40 to 200 psi adjustable range, 1/4" NPT male port, 3A SPDT switch output		DIN 175301-803C L-Connector	1	0.5	\$82.00
MPS25-1C-P500D	Pressure switch, 50 to 500 psi adjustable range, 1/4" NPT male port, 3A SPDT switch output		(8mm)	1	0.5	\$82.00
MPS25-1C-P1000D	Pressure switch, 100 to 1000 psi adjustable range, 1/4" NPT male port, 3A SPDT switch output	316 stainless steel		1	0.5	\$82.00
MPS25-1C-P2000D	Pressure switch, 200 to 2000 psi adjustable range, 1/4" NPT male port, 3A SPDT switch output	Buna-N O-ring		1	0.5	\$82.00
MPS25-1C-P5000D	Pressure switch, 500 to 5000 psi adjustable range, 1/4" NPT male port, 3A SPDT switch output			1	0.5	\$82.00
MPS25-1C-P7500D	Pressure switch, 750 to 7500 psi adjustable range, 1/4" NPT male port, 3A SPDT switch output			1	0.5	\$82.00

Drives

Soft Starters

Motors

Transmission

Motion: Servos

Motor Controls

Sensors: Proximity

Sensors: Photoelectric

Encoders

Sensors: Current

Sensors:

Pushbuttons and Lights

Stacklights

Relays and

Pneumatics

Directional Control

Cylinders

Valves

Pneumatics

Pneumatics Air Fittings

# **Proper MPS25 Series Mechanical Pressure**Switches

ProS	ense MPS25 Series General Specifications
Setpoint	Field adjustable (factory default 50% of full scale)
Setpoint Repeatability	$\pm$ 2% of range (Additional setpoint shift of $\pm$ 2% of range per 40°F from initial setpoint set at 70°F typical)
Vibration	Passed ML-STD-202G
Shock	75G's 10 milliseconds 3-axis
Piston Actuator	Stainless steel with Buna-N O-ring, 200 to 7500 psi
Mechanical Life Piston Design	> 1,000,000 operations typical
Diaphragm Actuator	316L SS, up to 100 psi
Mechanical Life Diaphragm Design	> 400,000 operations typical
Enclosure Material	316L SS
Enclosure Rating	NEMA 6, IP 67
Pressure Connection	1/4" NPT Male
Electrical Output	SPDT 3A @ 125 VAC / 2A @ 30 VDC resistive
Electrical Termination	1/2" NPT Male conduit connection or Micro DIN 175301-803C with mating connector
Agency Approvals	UL (#E320431) cable version only, CSA, CE, RoHS

MPS25 Series Mechanical Pressure Switch Performance Characteristics									
Part Number	Setpoint Adjustability		Setpoint Repeatability			Deadband*			
rait Nullibei	psi	bar, kg/cm²	kPa	psi	bar, kg/cm²	kPa	psi	bar, kg/cm²	kPa
MPS25-1C-DV15x	-15/15	-1/1	-100/100	±0.6	±0.04	±4	1-5	0.07-0.35	7-35
MPS25-1C-D30x	6-30	0.4-2	4-200	±0.6	±0.04	±4	1-5	0.07-0.35	7-35
MPS25-1C-D60x	8-60	0.6-4	60-400	±1.2	±0.08	±8	2-10	0.14-0.70	14-70
MPS25-1C-D100x	10-100	0.7-7	70-700	±2	±0.14	±14	3-15	0.2-1.0	20-100
MPS25-1C-P200x	40-200	2.8-14	280-1400	±4	±0.28	±28	3-30	0.2-2.0	20-200
MPS25-1C-P500x	50-500	3.5-35	350-3500	±10	±0.70	±70	20-100	1.4-7.0	140-700
MPS25-1C-P1000x	100-1000	7-70	700-7000	±20	±1.40	±140	25-150	1.7-10	170-1000
MPS25-1C-P2000x	200-2000	14-140	1400-14000	±40	±2.8	±280	30-300	2-20	200-2000
MPS25-1C-P5000x	500-5000	35-350	3500-35000	±100	±7.0	±700	75-750	5-50	500-5000
MPS25-1C-P7500x	750-7500	50-500	5000-50000	±150	±10.0	±1000	110-1100	7.5-75	750-7500

<sup>\*</sup> Linear over setpoint (For example, a 30 psi switch has a range of 6-30 psi, so the deadband at 6 psi setpoint is 1psi and at a 30 psi setpoint it is 5 psi., additionally the MPS25-1C-DV15x psi switch has a range of -15 to +15 psi for this switch the deadband at -15 psi setpoint is 1 psi and at +15 psi setpoint it is 5 psi.)

Material & Temperature						
Ranges Wetted Temperature Material Range						
Up to 100#	SS	-40-100°C (-40-212°F)				
200#	SS, BUNA	-28-100°C (-18.4-212°F)				
500# to 7500#	SS, BUNA	-40-100°C (-40-212°F)				

Proof Pressure						
Ranges (listed in psi)	psi	bar, kg/cm²	kPa			
Up to 100#	1000	70	7000			
200#	2000	140	14000			
500 to 2000#	8000	500	55000			
5000 to 75000#	15000	1000	100000			

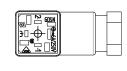
Burst Pressure						
Ranges (listed in psi)	psi	bar, kg/cm²	kPa			
Up to 100#	>9500	>655	>65500			
200#	>10000	>700	>70000			
500 to 2000#	>30000	>2100	>210000			
5000 to 7500#	>50000	>3500	>350000			

### **Electrical Connections**



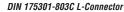
Wire Color / Function				
Wire Color	Function			
Red	Normally Closed			
White	Common			
Blue	Normally Open			
Green	Ground			





- 1 COMMON
- 2 NORMALLY CLOSED
- 3 NORMALLY OPEN
- 4 GROUND

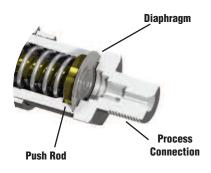
1/2" NPT male conduit connector with 6-foot (1.5m) integral cable

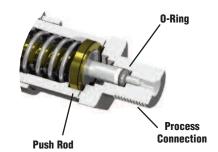


## **Drose MPS25 Series Mechanical Pressure Switches**

#### **Actuator Design**

The MPS25 series actuator responds to changes in pressure and operates the internal micro switch in response to these changes. The actuator is normally exposed to the process media and must be chemically compatible with it. The MPS25 series is available with a welded stainless steel diaphragm (no O-ring) in pressure ranges up to 100 psi. A stainless steel piston with Buna-N O-ring is available for pressure ranges from 200 to 7500 psi.



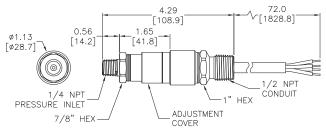


**Diaphragm Actuator Type** Up to 100 psi

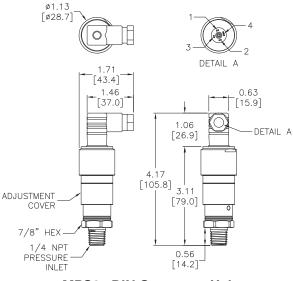
**Piston Actuator Type** 200 to 7500 psi

#### **Dimensions**

#### inches [mm]



**MPS25 Cable Units** 



#### **MPS25 DIN Connector Units**

DIN Connector Specifications				
Number of contacts	3 + PE			
Cable glands	PG 7			
Conductor size max.	0.75 mm <sup>2</sup> / 18AWG			
Type of termination	Screw			
Suitable cables	4.5 mm to 6mm			
Standard DIN	EN 175 301-803-C			

Company Information

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Pneumatics: Directional Control Valves

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Pneumatics:

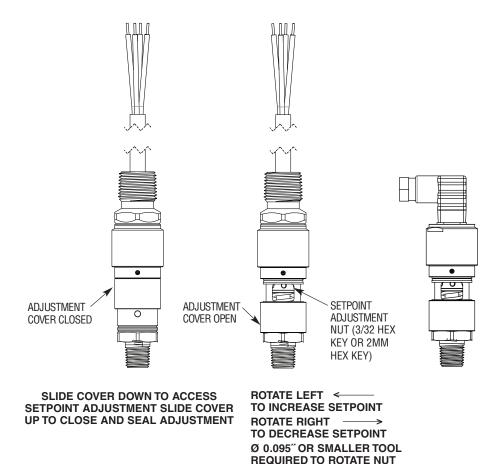
Pneumatics Air Fittings

## **Properties Mechanical Pressure**Switches

#### Field Adjustable Setpoint

The MPS25 series switches have a field adjustable setpoint. To adjust the setpoint, follow the instructions in the diagram. The pressure switch operates as follows:

The Normally Open contact will close when the pressure is raised from 0 psi to the setpoint. The reset point is then measured from the setpoint, reducing the pressure until the Normally Open contact opens.



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#### Automation Direct

## Orsense PTD25 Series Pressure Transmitters



Drives

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Motor Controls

Sensors: Proximity

Encoders

Sensors: Current

Sensors:

Pushbuttons and Lights Stacklights



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  $\frac{1}{4}$  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)	Price			
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	\$125.00			
PTD25-10-0100WCH	Pressure transmitter, 0 to 10 V output, 0 to 100 inches wc* range, 1/4" NPT male port	1	0.48	\$125.00			
PTD25-10-0015H	Pressure transmitter, 0 to 10 V output, 0 to 15 psi range, 1/4" NPT male port	1	0.48	\$125.00			
PTD25-10-0030H	Pressure transmitter, 0 to 10 V output, 0 to 30 psi range, 1/4" NPT male port	1	0.48	\$125.00			
PTD25-10-0100H	Pressure transmitter, 0 to 10 V output, 0 to 100 psi range, 1/4" NPT male port	1	0.48	\$125.00			
PTD25-10-0200H	Pressure transmitter, 0 to 10 V output, 0 to 200 psi range, 1/4" NPT male port	1	0.48	\$125.00			
PTD25-10-0500H	Pressure transmitter, 0 to 10 V output, 0 to 500 psi range, 1/4" NPT male port	1	0.48	\$125.00			
PTD25-10-1000H	Pressure transmitter, 0 to 10 V output, 0 to 1000 psi range, 1/4" NPT male port	1	0.48	\$125.00			
PTD25-10-3000H	Pressure transmitter, 0 to 10 V output, 0 to 3000 psi range, 1/4" NPT male port	1	0.48	\$125.00			
PTD25-10-5000H	Pressure transmitter, 0 to 10 V output, 0 to 5000 psi range, 1/4" NPT male port	1	0.48	\$125.00			
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	\$125.00			
PTD25-20-0100WCH	Pressure transmitter, 4 to 20 mA output, 0 to 100 inches wc* range, 1/4" NPT male port	1	0.48	\$125.00			
PTD25-20-0015H	Pressure transmitter, 4 to 20 mA output, 0 to 15 psi range, 1/4" NPT male port	1	0.48	\$125.00			
PTD25-20-0030H	Pressure transmitter, 4 to 20 mA output, 0 to 30 psi range, 1/4" NPT male port	1	0.48	\$125.00			
PTD25-20-0100H	Pressure transmitter, 4 to 20 mA output, 0 to 100 psi range, 1/4" NPT male port	1	0.48	\$125.00			
PTD25-20-0200H	Pressure transmitter, 4 to 20 mA output, 0 to 200 psi range, 1/4" NPT male port	1	0.48	\$125.00			
PTD25-20-0500H	Pressure transmitter, 4 to 20 mA output, 0 to 500 psi range, 1/4" NPT male port	1	0.48	\$125.00			
PTD25-20-1000H	Pressure transmitter, 4 to 20 mA output, 0 to 1000 psi range, 1/4" NPT male port	1	0.48	\$125.00			
PTD25-20-3000H	Pressure transmitter, 4 to 20 mA output, 0 to 3000 psi range, 1/4" NPT male port	1	0.48	\$125.00			
PTD25-20-5000H	Pressure transmitter, 4 to 20 mA output, 0 to 5000 psi range, 1/4" NPT male port	1	0.48	\$125.00			

\*wc = water column

Pneumatics: Air Prep Pneumatics: Directional Control

Pneumatics: Cylinders

Valves

Pneumatics: Tubing

Pneumatics: Air Fittings

> ppendix ook 2

## **PTD25 Pressure Transmitters**

ProSense PT	D25 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	$< \pm 0.15\%$ 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		
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 se	rvice	

ProSense PTD25 Series Tec	hnical Specifications			
Technical Specifications PTD25-10-xxxxx				
Operating Voltage PTD25-10-xxxx 16 to 32 VDC1				
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 Specification	s PTD25-20-xxxxx			
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] $\Omega$ For example: [(24 VDC - 9.6) x 50] = 720 $\Omega$			
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				



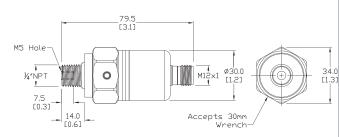
WARNING! AVOID STATIC AND DYNAMIC OVERPRESSURE EXCEEDING THE GIVEN OVERLOAD PRESSURE. EXCEEDING THE BURSTING PRESSURE FOR EVEN A SHORT TIME CAN CAUSE DESTRUCTION OF THE UNIT AND POSSIBLE INJURIES!

## **Or** Sense PTD25 Pressure Transmitters

Applications (Type of Pressure: Relative Pressure, Liquids and Gases)						
Part Number		Permissible Overload Pressure	Bursting			
	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			
	inH2O	inH2O	inH2O			
PTD25-10-0100WCH PTD25-20-0100WCH	0 10 100	4015	12043			

### Dimensions

#### mm [inches]

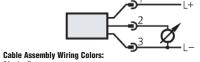


inH2O = Inches of Water (represents Water Column)

All PTD25 series transmitters can withstand vacuum down to -14.5  $\operatorname{psi}$ 

#### PTD25-10 Wiring Diagrams

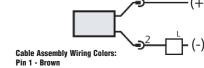




Pin 1 - Brown Pin 2 - White Pin 3 - Blue Pin 4 - Black See Proximity Sensor section for cable specs

#### PTD25-20 Wiring Diagrams





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.

#### Pressure Units Conversion Chart

			Pressure Conversion Table: Multiplication Factors						
	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/in² (psi)	Lb/ft <sup>2</sup>	mm of Hg torr	Pascals
Atmos 1	1	9.86923 x 10 <sup>-1</sup>	3.34207 x 10 <sup>-2</sup>	2.458 x 10 <sup>-3</sup>	9.678x 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>
<b>Bars</b> 1	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) 2	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) 4	106.8	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	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/in²(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> 2	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 7	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	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

ook 2 (14.1)

Drives

Soft Starters

Motors

Power Transmission

Motion: Servos and Steppers

Motor Controls

Sensors: Proximity

Sensors: Photoelectric

Sensors: Encoders

Sensors: Limit Switches

Sensors: Current

Sensors:

Sensors:

Sensors: Level

Sensors: Flow Switches

Pushbuttons and Lights

Stacklights

Signal Devices

Process

Relays and Timers

Pneumatics: Air Prep

Pneumatics: Directional Control

Pneumatics Cylinders

Valves

Pneumatics: Tubing

Pneumatics: Air Fittings

Appendix Book 2

## Orsense SPT25 Series Pressure Transmitters



The ProSense SPT25 pressure transmitter series is engineered to meet many industrial, commercial, and OEM pressure measurement applications. The all stainless steel welded thin film sensing element provides very fast response time and is compatible with many different media sensing applications. With a robust design resistant to vibration, shock, and EMI/RFI, the SPT25 series provides high accuracy over a wide compensated temperature range. Pressure sensing ranges from vacuum to 5000 psi are available along with a ½ inch NPT male threaded process connection. Choose from linear outputs of 4-20 mA or 0-10VDC with electrical connections of either a DIN 175301-803C L-connector or 6.6 foot (2 m) integral shielded cable.

#### **Applications**

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

#### **Features**

- · All stainless steel welded sensing element
- · Fast response time
- Pressure sensing ranges from vacuum to 5000 psi
- 1/4 inch NPT male threaded process connection
- Output options: 4-20 mA or 0-10 VDC
- Integral 6.6 foot shielded cable or DIN form C electrical connections
- · Made in the USA
- CE marked
- 3-year warranty

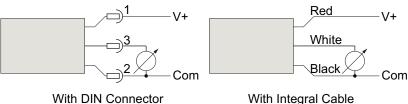
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	ProSense SPT25 Series Pressure Transmitters (Shielded Cable)						
Part Number	Description	Electrical Connection	Input Voltage	Wt(lb)	Price		
SPT25-20-V30A	Pressure transmitter, 4 to 20 mA output, -14.7 vacuum to 30 psi range, 1/4" NPT male port				\$115.00		
SPT25-20-0030A	Pressure transmitter, 4 to 20 mA output, 0 to 30 psi range, 1/4" NPT male port				\$115.00		
SPT25-20-0060A	Pressure transmitter, 4 to 20 mA output, 0 to 60 psi range, 1/4" NPT male port				\$115.00		
SPT25-20-0100A	Pressure transmitter, 4 to 20 mA output, 0 to 100 psi range, 1/4" NPT male port				\$115.00		
SPT25-20-0150A	Pressure transmitter, 4 to 20 mA output, 0 to 150 psi range, 1/4" NPT male port				\$115.00		
SPT25-20-0200A	Pressure transmitter, 4 to 20 mA output, 0 to 200 psi range, 1/4" NPT male port				\$115.00		
SPT25-20-0300A	Pressure transmitter, 4 to 20 mA output, 0 to 300 psi range, 1/4" NPT male port		9 - 36 VDC		\$115.00		
SPT25-20-0500A	Pressure transmitter, 4 to 20 mA output, 0 to 500 psi range, 1/4" NPT male port				\$115.00		
SPT25-20-1000A	Pressure transmitter, 4 to 20 mA output, 0 to 1000 psi range, 1/4" NPT male port				\$115.00		
SPT25-20-1500A	Pressure transmitter, 4 to 20 mA output, 0 to 1500 psi range, 1/4" NPT male port				\$115.00		
SPT25-20-2000A	Pressure transmitter, 4 to 20 mA output, 0 to 2000 psi range, 1/4" NPT male port				\$115.00		
SPT25-20-3000A	Pressure transmitter, 4 to 20 mA output, 0 to 3000 psi range, 1/4" NPT male port	Integral 6.6 ft (2m)		0.38	\$115.00		
SPT25-20-5000A	Pressure transmitter, 4 to 20 mA output, 0 to 5000 psi range, 1/4" NPT male port				\$115.00		
SPT25-10-V30A	Pressure transmitter, 0 to 10 V output, -14.7 vacuum to 30 psi range, 1/4" NPT male port	shielded cable		0.30	\$115.00		
SPT25-10-0030A	Pressure transmitter, 0 to 10 V output, 0 to 30 psi range, 1/4" NPT male port				\$115.00		
SPT25-10-0060A	Pressure transmitter, 0 to 10 V output, 0 to 60 psi range, 1/4" NPT male port				\$115.00		
SPT25-10-0100A	Pressure transmitter, 0 to 10 V output, 0 to 100 psi range, 1/4" NPT male port				\$115.00		
SPT25-10-0150A	Pressure transmitter, 0 to 10 V output, 0 to 150 psi range, 1/4" NPT male port				\$115.00		
SPT25-10-0200A	Pressure transmitter, 0 to 10 V output, 0 to 200 psi range, 1/4" NPT male port				\$115.00		
SPT25-10-0300A	Pressure transmitter, 0 to 10 V output, 0 to 300 psi range, 1/4" NPT male port		14 - 36 VDC		\$115.00		
SPT25-10-0500A	Pressure transmitter, 0 to 10 V output, 0 to 500 psi range, 1/4" NPT male port				\$115.00		
SPT25-10-1000A	Pressure transmitter, 0 to 10 V output, 0 to 1000 psi range, 1/4" NPT male port				\$115.00		
SPT25-10-1500A	Pressure transmitter, 0 to 10 V output, 0 to 1500 psi range, 1/4" NPT male port				\$115.00		
SPT25-10-2000A	Pressure transmitter, 0 to 10 V output, 0 to 2000 psi range, 1/4" NPT male port				\$115.00		
SPT25-10-3000A	Pressure transmitter, 0 to 10 V output, 0 to 3000 psi range, 1/4" NPT male port				\$115.00		
SPT25-10-5000A	Pressure transmitter, 0 to 10 V output, 0 to 5000 psi range, 1/4" NPT male port				\$115.00		

## **Dr**Sense SPT25 Series Pressure Transmitters

ProSense SPT25 Series Pressure Transmitters (DIN Connector)						
Part Number	Description	Electrical Connection	Input Voltage	Wt(lb)	Price	
SPT25-20-V30D	Pressure transmitter, 4 to 20 mA output, -14.7 vacuum to 30 psi range, 1/4" NPT male port				\$109.00	
SPT25-20-0030D	Pressure transmitter, 4 to 20 mA output, 0 to 30 psi range, 1/4" NPT male port					\$109.00
SPT25-20-0060D	Pressure transmitter, 4 to 20 mA output, 0 to 60 psi range, 1/4" NPT male port				\$109.00	
SPT25-20-0100D	Pressure transmitter, 4 to 20 mA output, 0 to 100 psi range, 1/4" NPT male port				\$109.00	
SPT25-20-0150D	Pressure transmitter, 4 to 20 mA output, 0 to 150 psi range, 1/4" NPT male port				\$109.00	
SPT25-20-0200D	Pressure transmitter, 4 to 20 mA output, 0 to 200 psi range, 1/4" NPT male port				\$109.00	
SPT25-20-0300D	Pressure transmitter, 4 to 20 mA output, 0 to 300 psi range, 1/4" NPT male port		9 - 36 VDC		\$109.00	
SPT25-20-0500D	Pressure transmitter, 4 to 20 mA output, 0 to 500 psi range, 1/4" NPT male port				\$109.00	
SPT25-20-1000D	Pressure transmitter, 4 to 20 mA output, 0 to 1000 psi range, 1/4" NPT male port				\$109.00	
SPT25-20-1500D	Pressure transmitter, 4 to 20 mA output, 0 to 1500 psi range, 1/4" NPT male port	DIN 175301-803C L-connector			\$109.00	
SPT25-20-2000D	Pressure transmitter, 4 to 20 mA output, 0 to 2000 psi range, 1/4" NPT male port				\$78.75	
SPT25-20-3000D	Pressure transmitter, 4 to 20 mA output, 0 to 3000 psi range, 1/4" NPT male port					\$109.00
SPT25-20-5000D	Pressure transmitter, 4 to 20 mA output, 0 to 5000 psi range, 1/4" NPT male port					\$109.00
SPT25-10-V30D	Pressure transmitter, 0 to 10 V output, -14.7 vacuum to 30 psi range, 1/4" NPT male port			0.30	\$109.00	
SPT25-10-0030D	Pressure transmitter, 0 to 10 V output, 0 to 30 psi range, 1/4" NPT male port				\$109.00	
SPT25-10-0060D	Pressure transmitter, 0 to 10 V output, 0 to 60 psi range, 1/4" NPT male port				\$109.00	
SPT25-10-0100D	Pressure transmitter, 0 to 10 V output, 0 to 100 psi range, 1/4" NPT male port	NPT male port			\$109.00	
SPT25-10-0150D	Pressure transmitter, 0 to 10 V output, 0 to 150 psi range, 1/4" NPT male port				\$109.00	
SPT25-10-0200D	Pressure transmitter, 0 to 10 V output, 0 to 200 psi range, 1/4" NPT male port				\$109.00	
SPT25-10-0300D	Pressure transmitter, 0 to 10 V output, 0 to 300 psi range, 1/4" NPT male port		14 - 36 VDC		\$109.00	
SPT25-10-0500D	Pressure transmitter, 0 to 10 V output, 0 to 500 psi range, 1/4" NPT male port				\$109.00	
SPT25-10-1000D	Pressure transmitter, 0 to 10 V output, 0 to 1000 psi range, 1/4" NPT male port				\$109.00	
SPT25-10-1500D	Pressure transmitter, 0 to 10 V output, 0 to 1500 psi range, 1/4" NPT male port				\$109.00	
SPT25-10-2000D	Pressure transmitter, 0 to 10 V output, 0 to 2000 psi range, 1/4" NPT male port	1			\$109.00	
SPT25-10-3000D	Pressure transmitter, 0 to 10 V output, 0 to 3000 psi range, 1/4" NPT male port	]			\$109.00	
SPT25-10-5000D	Pressure transmitter, 0 to 10 V output, 0 to 5000 psi range, 1/4" NPT male port	1			\$109.00	

### 0 to 10 VDC Output Wiring Diagram

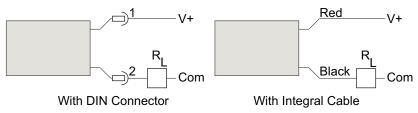


With	Integral	Cable
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#### **Shielded Cable Models Wire Designation** Wire Color 0 - 10 VDC Output | 4 - 20 mA Output Red Black Output Com White Output None Shield Drain Wire Shield Drain Wire

\* Where shielded wiring is being used; Connect the drain wire to the guard terminal on the read out device or measuring instrument if available. In all other cases connect to the power supply negative terminal.

#### 4 to 20 mA Output Wiring Diagrams



DIN Fo	DIN Form C Models Pin Designation				
Pin No.	0 - 10 VDC Output	4 - 20 mA Output			
1	V+	V+			
2	Com	Output			
3	Output	None			
4	Case Ground	Case Ground			

Pneumatics: Directional Control

Valves

Pneumatics

Pneumatics Air Fittings

Terms and Conditions

**ePR-13** 

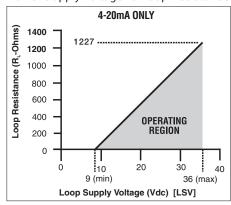
## **Propense SPT25 Series Pressure Transmitters**

ProSense SPT25	Series General Specifications		
Housing Material	20% Glass Reinforced Nylon, Fire retardant to UL94 V1 / 304 Series Stainless steel		
Materials (wetted parts)**	304 Series Stainless steel / 17-4PH Stainless Steel		
Operating Temperature	-40 to 257°F (-40 to 125°C)		
Medium Temperature	-40 to 257°F (-40 to 125°C)		
Storage Temperature	-40 to 257°F (-40 to 125°C)		
Protection	IP 67 for cabled models IP 65 For DIN connector models		
Accuracy*	± 0.50% of full range		
Temperature Coefficient	0.15% of full range / 10°F (0.25% of full range / 10°C)		
Reference Temperature	70°F ± 1°F (21°C ± 1°C)		
Compensated Temperature	-4 to 185°F (-20 to 85°C)		
Insulation Resistance	Greater than 100 megohms at 100 VDC		
Shock Resistance	100 gs, 6 ms		
Vibration Resistance	Random vibration (20 g) over temperature range (-40° to 125°C). Exceeds typical MIL. STD. requirements		
Drop Test	Withstands 1 meter on concrete 3 axis		
Response Time	Less than 1 msec		
Warm-up time	Less than 500 msec		
Position Effect	Less than ±0.01% span, typical		
Insulation Breakdown Voltage	100 VAC		
Reverse Polarity & Miswired Protected	Yes		
Durability	Tested to 50 million cycles		
Humidity	0 to 100% R.H., no effect		
Stability	Less than ±0.25% full range / year		
Agency Approvals	CE		
*Note - Includes non-linearity, hy	steresis & non-repeatability.		

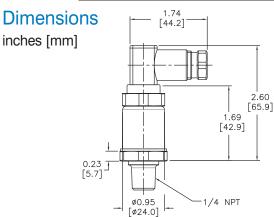
DIN Connector Specifications		
Number of contacts 3 + PE		
Cable glands	PG 7	
Conductor size max.	0.75 mm <sup>2</sup> / 18AWG	
Type of termination	of termination Screw	
Suitable cables	cables 4.5 mm to 6mm	
<b>Standard DIN</b> EN 175 301-803-C		

ProSense SPT25	Series Technical Specifications			
Technical Specifications SPT25-20-xxxx				
Operating Voltage 9 – 36 VDC				
Analog Output	4 – 20 mA			
Maximum Load	Determine Maximum Loop Resistances $\frac{V_L - 9 \text{ VDC}}{0.022 \text{ amps}} = R_L$ For example [(24 VDC $- 9 \text{ VDC}$ ) / 0.022 amps] = 681 $\Omega$			
Technical Specifications	SPT25-10-xxxx			
Operating Voltage	14 – 36 VDC			
Current Consumption	4 mA			
Minimum Load	10 kΩ			

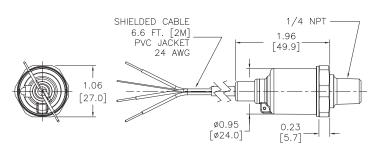




ProSense SPT25 Proof & Burst Pressures				
Proof Burst				
500 psi & below	200% full scale	1000% full scale		
1000 – 2000 psi	200% full scale	500% full scale		
3000 psi	200% full scale	500% full scale		
5000 psi	150% full scale	500% full scale		







**Shielded Cable Models** 

Book 2 (14.1)

### Or Sense DPTA Series Differential Air **Pressure Transmitters**



The ProSense DPTA differential pressure transmitter series is precision engineered for accurate low differential pressure measurement of air and non-condensing, non-corrosive gases in industrial, commercial, and OEM applications. Its highly reliable, ultra-thin single silicon crystal diaphragm capacitive sensor provides inherent repeatability and stability with no glues or other organics to contribute to drift or mechanical degradation over time. The DPTA series is available in ranges from 0.1 inches w.c. to 25 inches w.c. to measure positive, negative, and bi-directional pressures with the ability to withstand 15 psi overpressure without damage or calibration shift. The easily accessible brass barbed pressure ports, removable terminal blocks, and rugged ABS housing capable of 35 mm DIN rail or panel mounting make installation quick and easy.

#### **Applications**

- HVAC duct static pressure
- · Air filter monitoring
- Building pressurization
- Isolation and clean rooms
- Fume hoods
- Furnace, oven, dryer draft pressure
- · Air flow measurement

#### **Features**

- · Highly stable capacitive sensing element
- · Positive, negative, and bi-directional pressure measurement
- Pressure ranges from 0.1"w.c. to 25"w.c.
- Accuracy is +/-1% of full range maximum
- High overpressure rating of 15 psi without damage or calibration shift
- Rugged ABS housing capable of DIN rail or panel mounting
- LED loop power status indicator
- · Made in the USA
- CE marked



	• 3-year warranty						
	ProSense DPTA Series Differential Air Pressure Transmitters						
Part Number	Description	Electrical Connection	Input Voltage	Wt(lb)	Price		
DPTA-20-P1	Differential Pressure transmitter, 4 to 20 mA output, 0 to 0.1 in. water column range, 1/4" brass barbed connections				\$110.00		
DPTA-20-P1B	Differential Pressure transmitter, 4 to 20 mA output, -0.1 to +0.1 water column range, 1/4" brass barbed connections				\$110.00		
DPTA-20-P25	Differential Pressure transmitter, 4 to 20 mA output, 0 to 0.25 in. water column range, 1/4" brass barbed connections				\$110.00		
DPTA-20-P25B	Differential Pressure transmitter, 4 to 20 mA output, -0.25 to +0.25 in. water column range, 1/4" brass barbed connections				\$110.00		
DPTA-20-P5	Differential Pressure transmitter, 4 to 20 mA output, 0 to 0.5 in. water column range, 1/4" brass barbed connections				\$110.00		
DPTA-20-P5B	Differential Pressure transmitter, 4 to 20 mA output, -0.5 to +0.5 in. water column range, 1/4" brass barbed connections				\$110.00		
DPTA-20-01	Differential Pressure transmitter, 4 to 20 mA output, 0 to 1.0 in. water column range, 1/4" brass barbed connections				\$105.00		
DPTA-20-01B	Differential Pressure transmitter, 4 to 20 mA output, -1.0 to +1.0 in. water column range, 1/4" brass barbed connections				\$105.00		
DPTA-20-02	Differential Pressure transmitter, 4 to 20 mA output, 0 to 2.0 in. water column range, 1/4" brass barbed connections	_			\$105.00		
DPTA-20-02B	Differential Pressure transmitter, 4 to 20 mA output, -2.0 to +2.0 in. water column range, 1/4" brass barbed connections	Screw Terminals	12 - 36 VDC	0.16	\$105.00		
DPTA-20-03	Differential Pressure transmitter, 4 to 20 mA output, 0 to 3.0 in. water column range, 1/4" brass barbed connections	Tommalo	VDO		\$105.00		
DPTA-20-03B	Differential Pressure transmitter, 4 to 20 mA output, -3.0 to +3.0 in. water column range, 1/4" brass barbed connections				\$105.00		
DPTA-20-05	Differential Pressure transmitter, 4 to 20 mA output, 0 to 5.0 in. water column range, 1/4" brass barbed connections				\$105.00		
DPTA-20-05B	Differential Pressure transmitter, 4 to 20 mA output, -5.0 to +5.0 in. water column range, 1/4" brass barbed connections				\$105.00		
DPTA-20-10	Differential Pressure transmitter, 4 to 20 mA output, 0 to 10.0 in. water column range, 1/4" brass barbed connections				\$105.00		
DPTA-20-10B	Differential Pressure transmitter, 4 to 20 mA output, -10.0 to +10.0 in. water column range, 1/4" brass barbed connections	ns			\$105.00		
DPTA-20-15	Differential Pressure transmitter, 4 to 20 mA output, 0 to 15.0 in. water column range, 1/4" brass barbed connections				\$105.00		
DPTA-20-15B	Differential Pressure transmitter, 4 to 20 mA output, -15.0 to +15.0 in. water column range, 1/4" brass barbed connections				\$105.00		
DPTA-20-25	Differential Pressure transmitter, 4 to 20 mA output, 0 to 25.0 in. water column range, 1/4" brass barbed connections				\$105.00		

Company Information

Drives

Soft Starters

Motors

Transmission

Motion: Servos

Motor Controls

Sensors: Proximity

Sensors: Photoelectric

Encoders

Sensors: Limit Switches

Sensors: Current

Sensors

Sensors: Flow Switches

Pushbuttons and Lights

Stacklights

Process

Relays and Timers

Pneumatics:

Pneumatics: Directional Control Valves

Cylinders

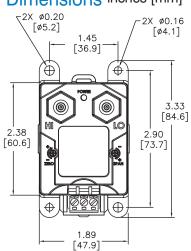
Pneumatics:

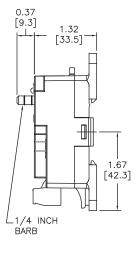
Pneumatics Air Fittings

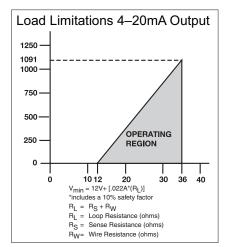
# **Pressure Transmitters**Pressure Transmitters

ProSens	ProSense DPTA Series Specifications				
Operating Voltage	12 – 36 VDC				
Output Range*	4 - 20 mA (2-wire)				
Supply Current*	21.5 mA Max.				
Maximum Load	$ \frac{V_L - 12 \text{ VDC}}{0.022 \text{ amps}} = R_L $ For example $ [(24 \text{ VDC} - 12 \text{ VDC}) / 0.022 \text{ amps}] = 545 \Omega $				
Enclosure	NEMA Type 1 Fire-retardant ABS (meets UL 95-5VA)				
Pressure Connections	1/4" brass barbed fittings				
Weight	0.16 lb				
Media	Clean, dry and non-corrosive gas				
Mounting	Threaded fastener and 35mm DIN rail mount				
Reference Temperature	70°F ± 2°F (21°C ± 1°C)				
Temperature Coefficients - Zero & Span	±0.03% full range / °F				
Compensated Range	35 to 130°F (2 to 54°C)				
Operating Temperature	0 to 160°F (-18 to 71°C)				
Storage Temperature	-40 to 180°F (-40 to 82°C)				
Humidity	10 to 95% R.H., non-condensing				
Stability	Less than ≤0.25% full range / year				
Accuracy	±1% maximum. Includes non-linearity, hysteresis, nonrepeatability, zero offset and span setting errors.				
Response Time	250 msec				
Proof Pressure	15 psid				
Burst Pressure	25 psid				
Max. Static Line Pressure	15 psi				
Electrical Connection	Euro style pluggable terminal block accepts 12-26 gauge wire				
Terminal Screw Torque	4 lbs in (0.5 Nm)				
Reverse Wiring Protected	Yes				
External Zero Adjustment	±5% full range				
External Span Adjustment	±5% full range				
Agency Approvals	CE, RoHS				
* Output signal is independa	nt of power supply changes.				

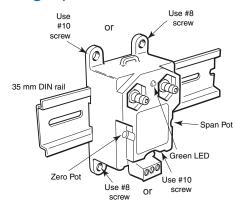
#### **Dimensions** inches [mm]





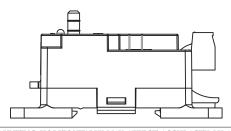


#### **Mounting Options**





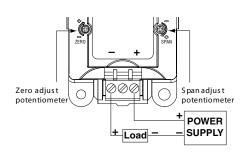
NOTE: PROSENSE DPTA SERIES TRANSMITTER SHOULD BE MOUNTED IN A VERTICAL AND UPRIGHT POSITION AS SHOWN ABOVE.





Mounting horizontally may affect accuracty by an additional 1%.

#### Wiring Diagram



Book 2 (14.1) **ePR-16**Pressure Sensors and Gauges

## Need new controls?

Spend Less. Do more



#### **Machine Control**



**Basic Process** 



Motion



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Whether replacing or starting from scratch on a control system, why not consider the Do-more PLC? We took the best ideas for practical product design and created the Do-more H2 series - an incredibly powerful controller at an incredible bargain.

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- Up to 256 I/O in one base, and thousands more with optional Ethernet-connected I/O
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## **Dr**Sense Digital Pressure Switch / Transmitter



#### Overview

- 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)
- · Air, non-corrosive/non-flammable gases only
- 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



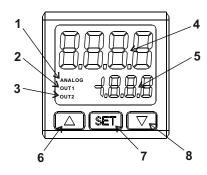


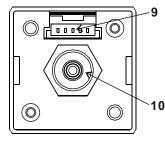


ProSense QPS Digital Pressure Switch / Transmitter							
Part Number	Description	Pcs/Pkg	Wt (lb)	Price			
QPSL-AP-42	Digital pressure switch/transmitter -14.5 to 14.5 psi, 2 PNP out, 4-20 mA out, cable included	1	0.24	\$69.00			
QPSL-AN-42	Digital pressure switch/transmitter -14.5 to 14.5 psi, 2 NPN out, 4-20 mA out, cable included	1	0.24	\$69.00			
QPSH-AP-42	Digital pressure switch/transmitter -14.5 to 145 psi, 2 PNP out, 4-20 mA out, cable included	1	0.24	\$69.00			
QPSH-AN-42	Digital pressure switch/transmitter -14.5 to 145 psi, 2 NPN out, 4-20 mA out, cable included	1	0.24	\$69.00			

ProSense QPS Digital Pressure Switch / Transmitter Specifications					
Model		QPSL-AP-42	QPSL-AN-42	QPSH-AP-42	QPSH-AN-42
Pressure Range		-14.5 to +14.5 psi -14.5 to		to +145 psi	
Maximum Pressul	re (Proof)	29	psi	2	17psi
Maximum Vacuun	n		-14.	5 psi	
Pressure Accuracy	/		± 3% of	full scale	
Temperature Influ	ence @ 25°C		± 2% of	full scale	
Fluid Measured			Air, Non-corrosive ga	s, Non-flammable gas	
Input Power			10.8 to 2	26.4 VDC	
Power Consumption	on		260mA r	naximum	
	Output Type	2-PNP	2-NPN	2-PNP	2-NPN
Digital Outputs	Maximum Current		100	)mA	
Digital Outputs	Response Time	2ms, 4ms, 10ms, 30ms, 50ms, 100ms, 250ms, 500ms, 1,000ms, 5,000ms selectable			
	Residual Voltage		1.5	VDC	
	Output Type	4-20 mA			
Analog Outputs	Maximum Output Load Resistance	400Ω			
	Linear Accuracy	$<\pm$ 2% of full scale			
Process Connection	on	1/8" NPT outer / M5 inner bore (Nickel Plated Brass)			
Cable		Included with each unit	t, 2 meter (6.6 feet), 5 cond Replacement c	uctor, 26AWG, PVC jacket able : QPS-CBL	, and 50mm pigtail leads
IP Rating		IP 40			
Case Materials		Case = ABS Plastic, Lens = Polycarbonate			
Shock Immunity		10 ~ 500 Hz, 10mm 3 axes for 2 hours			
Vibration Immunit		Max. 100m / s2 3 axes 6 directions, 3 times each			
Operating Temper		0°C to +50°C (32°F to 122°F)			
Storage Temperat	ure	-20°C to +65°C (-4°F to 149°F)			
Altitude		< 2,000m			
Ambient Humidity		35% to 80% (non-condensing)			
Approvals		cULus (E157382), CE, RoHS			

### **Dr** Sense Digital Pressure Switch / **Transmitter**



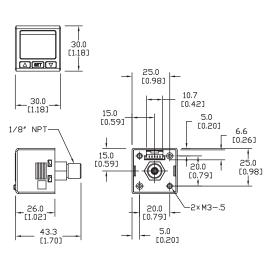


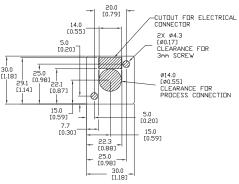
#### Display, KeyPad, Connections

- 1 Analog output indicator
- 2 Digital output 1 indicator
- 3 Digital output 2 indicator
- 4 Pressure Value (PV)/parameter display (8 mm digits)
- 5 Setpoint Value (SV)/setup item display (4 mm digits)
- 6 Increment UP button
- 7 SET or Enter button
- 8 Increment DOWN button
- 9 Cable connection
- 10 Pressure connection

#### **Dimensions**

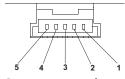
#### mm [inches]





#### SURFACE MOUNT TEMPLATE

#### Cable Connection **Terminals**



- 1 Positive power supply input (brown)
- 2 Digital output 1 signal (black)
- 3 Digital output 2 signal (white)
- 4 Analog output signal (orange)
- 5 Negative power supply input (blue)

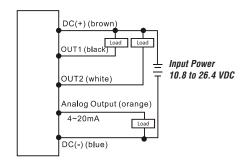




#### Wiring

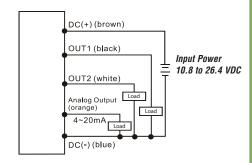
#### QPSL-AN-42 **QPSH-AN-42**

Outputs: NPN discrete 4-20mA analog



#### QPSL-AP-42 QPSH-AP-42

Outputs: PNP discrete 4-20mA analog



Company Information

Drives

Soft Starters

Motors

Transmission

Motion: Servos

Motor Controls

Sensors: Proximity

Sensors: Photoelectric

Encoders

Sensors: Current

Sensors: Level

Sensors: Flow Switches

Pushbuttons and Lights

Stacklights

Process

Relays and

Pneumatics:

Pneumatics: Directional Control Valves

Pneumatics: Cylinders

Pneumatics:

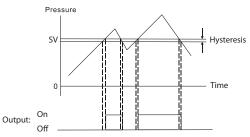
Pneumatics: Air Fittings

Appendix Book 2

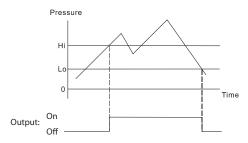
## **Drose Digital Pressure Switch /**Transmitter

#### **Operating Modes:**

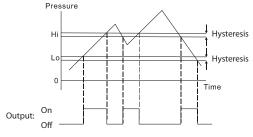
**Easy Mode:** When the measured pressure is greater than pressure setpoint plus the hysteresis setting (SV+hysteresis), the output will change state. When the measured pressure is less than the pressure setpoint (<SV), the output will change state. Each digital output can be individually set.



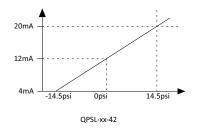
**Hysteresis Mode:** When the measured pressure is greater than the Hi setpoint, the output will change state. When the measured pressure is less than the Lo setpoint, the output will change state. Each digital output can be individually set.

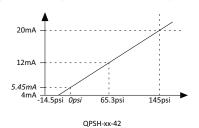


Window Mode: The output will change state when the measured pressure increases to the Lo setpoint plus the hysteresis setting (Lo+hysteresis) and will change state again when the pressure increases to the Hi setpoint plus the hysteresis setting (Hi+hysteresis). When the pressure decreases to the Hi setpoint the output will change state and will change state again when the pressure decreases to the Lo setpoint.



Analog Output (4-20mA): The analog output is directly proportional to the process pressure over the full range of the device. For example if the process pressure is 0 psi the 4-20 mA output of a QPSL will be approximately 12 mA or for the QPSH the pressure at 12 mA would be 65.3 psi and for 0 psi the output would be 5.45mA. The analog output is enabled as the factory default. It can be disabled with the "Analog Output Enable" parameter in Pro Setup Mode.





B00K 2 (14.1)

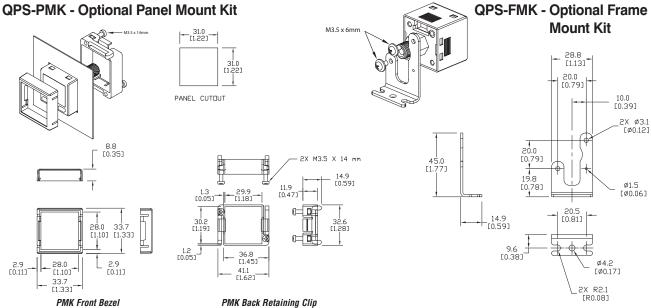
## **Dressure Switch /**Transmitter Accessories

ProSense QPS Digital Pressure Switch / Transmitter Accessories					
Part Number	Description	Pcs/Pkg	Wt (lb)	Price	
QPS-PMK	Panel mount kit for QPS series	1	0.1	\$1.50	
QPS-FMK	Bracket mount kit for QPS series	1	0.1	\$1.00	
QPS-CBL	Replacement cable for QPS series digital pressure switch and transmitter, 2 meters (6.6 feet)	1	0.1	\$20.00	

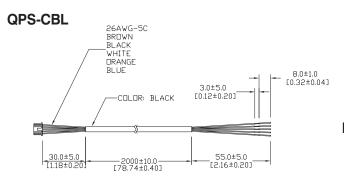


#### **Dimensions**

### mm [inches]



#### Note: See the NITRA Pneumatics section for Push-to-Connect fittings and tubing



Note: Cable included with each QPS series switch/transmitter

Company Information

Drives

Soft Starters

Motors

Transmission

Motion: Servos and Steppers

Motor Controls

Sensors: Proximity

Encoders

Sensors: Current

Sensors:

Pushbuttons and Lights

Stacklights

Relays and Timers

Pneumatics: Air Prep

Pneumatics: Directional Control Valves

Cylinders

Pneumatics

Pneumatics Air Fittings

## Or Sense Pressure Gauges



#### **Bourdon Tube Pressure Gauges**

ProSense mechanical dial pressure gauges are available in a variety of configurations for use in most pneumatic, hydraulic, HVAC, plumbing, industrial and commercial applications. These high quality gauges use Bourdon tube sensing elements and do not require any external power sources to operate other than the media being sensed. Cases are available in durable steel or stainless steel and in either dry or liquid filled to dampen vibration and pulsations. Brass wetted parts are suitable for air, oil, or water applications while stainless steel wetted parts are available for corrosive applications. Dual marked dial faces (psi/kPa or inHg/kPa) are available in pressure ranges from vacuum up to 6000 psi.

The Bourdon tube pressure gauge applies the principle that a flattened tube will change to a more circular cross-section when pressurized. These tubes are then bent into a C-shape with one end crimped close and the other connected to the process. When the pressure inside the tube becomes greater than the ambient pressure the tube tries to straighten; this elongation is converted to a rotational motion with the use of a pinion gear attached to the pointer.





The bourdon tubes are calibrated at the factory for a specific range known as gauge pressure\*. This pressure is relative to ambient atmospheric pressure.

#### Pressure Gauge Terms:

- Atmospheric Pressure: The weight of a column of air measuring one square inch from sea level to the top of the atmosphere. Sea level pressure = 29.92 inHg/101.325 kPa/14.696 psi/1.0132 bar
- Absolute Pressure: Zero (0) in reference to a perfect vacuum "Absolute Pressure" = gauge pressure (+) atmospheric pressure.
- \*Gauge Pressure: Zero (0) in reference to "Atmospheric Pressure". "Gauge Pressure" = absolute pressure (-) atmospheric pressure.
- Differential Pressure: Is the difference in pressure between two measuring points.

#### Gauge Accuracy and Grade

Gauge accuracy and grade categorized by ASME (ANSI) Standard B40.1					
Gauge Accuracy	ANSI Grade				
±5% Full Scale	D				
±3% lower ¼ Scale; ±2% middle ½ scale; ±3% upper ¼ scale	В				
±2% lower ¼ Scale; ±1% middle ½ scale; ±2% upper ¼ scale	А				
±1% Full Scale	1A				
±0.5% Full Scale	2A				
±0.25% Full Scale	3A				

#### **Gauge Selection Considerations**

#### **Environment and Application**

As the Bourdon tube is in direct contact with the medium being measured, the characteristics of the medium must be considered. If the medium is corrosive, stainless steel internals and casing should be chosen over brass. Brass is more suitable for general applications. The effects of moisture and weather conditions may also be harmful to the gauge and should be considered when selecting a gauge. Liquid filled gauges help prevent moisture build-up. Medium that will leave a deposit, clog or solidify in the Bourdon tube should be avoided.

For applications that produce harmful pulsation, vibration or pressure spikes, a liquid filled gauge will minimize the effects of vibration and provide a more accurate pressure reading.

#### **Gauge Size**

ProSense gauges are available with dial sizes of 1.5, 2 or 2.5 inches.

#### Connection

ProSense gauges offer lower and center back connections. The standard threads are  $^{1}/_{8}$ " and  $^{1}/_{4}$ " NPT.

#### Accuracy

The degree of accuracy required should be determined to ensure that the proper gauge is used. ProSense gauges offer accuracies of  $\pm$ 1.5% or  $\pm$ 3-2-3% (ANSI/ASME Grade B). Generally, the more critical the application, the higher the accuracy required.

#### **Gauge Mounting**

ProSense pressure gauges can be mounted in a variety of ways. For direct stem mount, we offer lower and center back connections. Bear in mind that if a piece of equipment produces heavy vibration making pressure reading difficult due to needle fluctuations, consider a liquid-filled gauge or remote mounting.

#### **Pressure Range**

It is important to select a pressure range that is approximately twice the normal operating pressure of the media. The maximum operating pressure should not exceed 75% of the full scale range. If a gauge is not selected considering these criteria, it may result in fatigue of the Bourdon tube.

#### **Temperature Range**

The normal temperature ranges for dry gauges are between -40°C to 65°C (-40°F to 150°F). The normal temperature ranges for glycerin-filled gauges are -20°C to 65°C (-4°F to 150°F). It is important to know the normal operating temperature of the environment for proper gauge use.

ePR-22 1 - 8 0 0 - 6 3 3 - 0 4 0 5 Pressure Sensors and Gauges

### **Dr**Sense Steel Case / Brass Wetted **Pressure Gauges**

**Lower Mount** 

#### **Center Back Mount**



#### **Features**

- Economical, all-purpose pressure
- Friction bezel rings
- · Dual scale (psi/kPa)
- · Brass wetted parts for use with air, oil, water and non-corrosive liquids
- ±3-2-3% accuracy ASME/ANSI Grade B
- 5 year warranty

#### **Applications**

· Plumbing, heating, air conditioning, pneumatic, hydraulic, water tanks, air compressors, OEM, general purpose

ProSense 1.5" Steel Case / Brass Wetted Pressure Gauges						
Part Number	Description	Pcs/Pkg	Wt(lb)	Price		
G15-BDV-8LB	Gauge, 1.5 in., steel case, dry, -30 to 0 inHg/-100 to 0 kPa vacuum, brass-1/8 NPT, lower mount	1	0.20	\$6.25		
G15-BD30-8LB	Gauge, 1.5 in., steel case, dry, 0-30 PSI/0-200 kPa, brass-1/8 NPT, lower mount	1	0.20	\$6.25		
G15-BD60-8LB	Gauge, 1.5 in., steel case, dry, 0-60 PSI/0-400 kPa, brass-1/8 NPT, lower mount	1	0.20	\$6.25		
G15-BD100-8LB	Gauge, 1.5 in., steel case, dry, 0-100 PSI/0-700 kPa, brass-1/8 NPT, lower mount	1	0.20	\$6.25		
G15-BD160-8LB	Gauge, 1.5 in., steel case, dry, 0-160 PSI/0-1,100 kPa, brass-1/8 NPT, lower mount	1	0.20	\$6.25		
G15-BD200-8LB	Gauge, 1.5 in., steel case, dry, 0-200 PSI/0-1,400 kPa, brass-1/8 NPT, lower mount	1	0.20	\$6.25		
G15-BDV-8CB	Gauge, 1.5 in., steel case, dry, -30 to 0 inHg/-100 to 0 kPa vacuum, brass-1/8 NPT, center back mount	1	0.20	\$6.25		
G15-BD30-8CB	Gauge, 1.5 in., steel case, dry, 0-30 PSI/0-200 kPa, brass-1/8 NPT, center back mount	1	0.20	\$6.25		
G15-BD60-8CB	Gauge, 1.5 in., steel case, dry, 0-60 PSI/0-400 kPa, brass-1/8 NPT, center back mount	1	0.20	\$6.25		
G15-BD100-8CB	Gauge, 1.5 in., steel case, dry, 0-100 PSI/0-700 kPa, brass-1/8 NPT, center back mount	1	0.20	\$6.25		
G15-BD160-8CB	Gauge, 1.5 in., steel case, dry, 0-160 PSI/0-1,100 kPa, brass-1/8 NPT, center back mount	1	0.20	\$6.25		
G15-BD200-8CB	Gauge, 1.5 in., steel case, dry, 0-200 PSI/0-1,400 kPa, brass-1/8 NPT, center back mount	1	0.20	\$6.25		

	ProSense 2" Steel Case / Brass Wetted Pressure Gauges					
Part Number	Description	Pcs/Pkg	Wt(lb)	Price		
G20-BDV-4LB	Gauge, 2.0 in., steel case, dry, -30 to 0 inHg/-100 to 0 kPa vacuum, brass-1/4 NPT, lower mount	1	0.20	\$6.50		
G20-BD30-4LB	Gauge, 2.0 in., steel case, dry, 0-30 PSI/0-200 kPa, brass-1/4 NPT, lower mount	1	0.20	\$6.50		
G20-BD60-4LB	Gauge, 2.0 in., steel case, dry, 0-60 PSI/0-400 kPa, brass-1/4 NPT, lower mount	1	0.20	\$6.50		
G20-BD100-4LB	Gauge, 2.0 in., steel case, dry, 0-100 PSI/0-700 kPa, brass-1/4 NPT, lower mount	1	0.20	\$6.50		
G20-BD160-4LB	Gauge, 2.0 in., steel case, dry, 0-160 PSI/0-1,100 kPa, brass-1/4 NPT, lower mount	1	0.20	\$6.50		
G20-BD200-4LB	Gauge, 2.0 in., steel case, dry, 0-200 PSI/0-1,400 kPa, brass-1/4 NPT, lower mount	1	0.20	\$6.50		
G20-BDV-4CB	Gauge, 2.0 in., steel case, dry, -30 to 0 inHg/-100 to 0 kPa vacuum, brass-1/4 NPT, center back mount	1	0.20	\$6.50		
G20-BD30-4CB	Gauge, 2.0 in., steel case, dry, 0-30 PSI/0-200 kPa, brass-1/4 NPT, center back mount	1	0.20	\$6.50		
G20-BD60-4CB	Gauge, 2.0 in., steel case, dry, 0-60 PSI/0-400 kPa, brass-1/4 NPT, center back mount	1	0.20	\$6.50		
G20-BD100-4CB	Gauge, 2.0 in., steel case, dry, 0-100 PSI/0-700 kPa, brass-1/4 NPT, center back mount	1	0.20	\$6.50		
G20-BD160-4CB	Gauge, 2.0 in., steel case, dry, 0-160 PSI/0-1,100 kPa, brass-1/4 NPT, center back mount	1	0.20	\$6.50		
G20-BD200-4CB	Gauge, 2.0 in., steel case, dry, 0-200 PSI/0-1,400 kPa, brass-1/4 NPT, center back mount	1	0.20	\$6.50		

	ProSense 2.5" Steel Case / Brass Wetted Pressure Gauges			
Part Number	The state of the s	Pcs/Pkg	Wt(lb)	Price
G25-BDV-4LB	Gauge, 2.5 in., steel case, dry, -30 to 0 inHg/-100 to 0 kPa, vacuum, brass-1/4 NPT, lower mount	1	0.30	\$6.75
G25-BD30-4LB	Gauge, 2.5 in., steel case, dry, 0-30 PSI/0-200 kPa, brass-1/4 NPT, lower mount	1	0.30	\$6.75
G25-BD60-4LB	Gauge, 2.5 in., steel case, dry, 0-60 PSI/0-400 kPa, brass-1/4 NPT, lower mount	1	0.30	\$6.75
G25-BD100-4LB	Gauge, 2.5 in., steel case, dry, 0-100 PSI/0-700 kPa, brass-1/4 NPT, lower mount	1	0.30	\$6.75
G25-BD160-4LB	Gauge, 2.5 in., steel case, dry, 0-160 PSI/0-1,100 kPa, brass-1/4 NPT, lower mount	1	0.30	\$6.75
G25-BD200-4LB	Gauge, 2.5 in., steel case, dry, 0-200 PSI/0-1,400 kPa, brass-1/4 NPT, lower mount	1	0.30	\$6.75
G25-BD300-4LB	Gauge, 2.5 in., steel case, dry, 0-300 PSI/0-2,000 kPa, brass-1/4 NPT, lower mount	1	0.30	\$6.75
G25-BD600-4LB	Gauge, 2.5 in., steel case, dry, 0-600 PSI/0-4,200 kPa, brass-1/4 NPT, lower mount	1	0.30	\$6.75
G25-BD1000-4LB	Gauge, 2.5 in., steel case, dry, 0-1000 PSI/0-7,000 kPa, brass-1/4 NPT, lower mount	1	0.30	\$6.75
G25-BDV-4CB	Gauge, 2.5 in., steel case, dry, -30 to 0 inHg/-100 to 0 kPa vacuum, brass-1/4 NPT, center back mount	1	0.30	\$6.75
G25-BD30-4CB	Gauge, 2.5 in., steel case, dry, 0-30 PSI/0-200 kPa, brass-1/4 NPT, center back mount	1	0.30	\$6.75
G25-BD60-4CB	Gauge, 2.5 in., steel case, dry, 0-60 PSI/0-400 kPa, brass-1/4 NPT, center back mount	1	0.30	\$6.75
G25-BD100-4CB	Gauge, 2.5 in., steel case, dry, 0-100 PSI/0-700 kPa, brass-1/4 NPT, center back mount	1	0.30	\$6.75
G25-BD160-4CB	Gauge, 2.5 in., steel case, dry, 0-160 PSI/0-1,100 kPa, brass-1/4 NPT, center back mount	1	0.30	\$6.75
G25-BD200-4CB	Gauge, 2.5 in., steel case, dry, 0-200 PSI/0-1,400 kPa, brass-1/4 NPT, center back mount	1	0.30	\$6.75

Company Information

Drives

Soft Starters Motors

Transmission

Motion: Servos and Steppers

Motor Controls

Sensors: Proximity

Sensors: Photoelectric

Encoders

Sensors:

Pushbuttons and Lights

Stacklights

Pneumatics: Air Prep

Pneumatics: Directional Control

Valves

Cylinders

Pneumatics:

Pneumatics Air Fittings

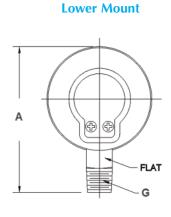
# **Pressure Gauges**Steel Case / Brass Wetted Pressure Gauges

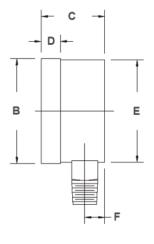
ProSer	ProSense Steel Case / Brass Wetted Gauges Specifications						
Dial Size	1.5" [40 mm]	2.0" [50 mm]	2.5" [63 mm]				
Case		Steel, Painted Black					
Lens		Polycarbonate					
Ring		Steel, Painted Black					
Socket		Brass					
Connection	1/8" NPT	1/4" NPT	1/4" NPT				
Fill Liquid		None					
Bourdon Tube	Phosphor Bronze						
Movement	Brass						
Pointer		Aluminum, Painted Black					
Welding		Silver Alloy					
Over Pressure Limit		125% of full scale					
Working Pressure	Maximum 75% of full scale value						
Ambient/Process Temperature	-40 °F to 150 °F (-40 °C to 65 °C)						
Accuracy	±3-2-3% ANSI/ASME Grade B						
Enclosure Rating		IP52					



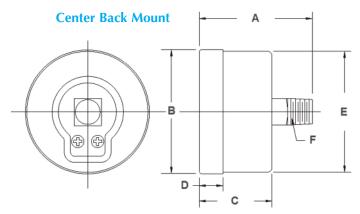
WARNING: CHECK THE CHEMICAL COMPATIBILITY OF THE GAUGE'S WETTED PARTS WITH THE MEDIUM TO BE MEASURED. Use a suitable thread sealant such as Teflon® tape. Always tighten with an open end or adjustable wrench on the wrench flats. Never use any part of the pressure gauge to tighten other than the wrench flats that are on the gauge socket. Failure to do so will severely damage the pressure gauge.

#### **Dimensions**





Dimensions - Lower Mount Gauges					
Dial	1.5" [40 mm]	2.0" [50 mm]	2.5" [63 mm]		
Α	2.300" [58.4 mm]	2.992" [76.0 mm]	3.189" [81.0 mm}		
В	1.653" [42.0 mm}	2.190" [55.6 mm]	2.488" [63.2 mm]		
С	1.000" [25.4 mm]	1.161" [29.5 mm]	1.102" [28.0 mm]		
D	0.300" [7.6 mm]	0.378" [9.6 mm]	0.394" [10.0 mm]		
Ε	1.617" [41.0 mm]	2.126" [54.0 mm]	2.441" [62.0 mm]		
F	0.315" [8.0 mm]	0.394" [10.0 mm]	0.433" [11.0 mm]		
G	1/8" NPT	1/4" NPT	1/4" NPT		



Dimer	Dimensions - Center Back Mount Gauges					
Dial	1.5" [40 mm]	2.0" [50 mm]	2.5" [63 mm]			
A	1.515" [38.5 mm]	1.850" [47.0 mm]	1.850" [47.0 mm}			
В	1.660" [42.1 mm}	2.070" [52.5 mm]	2.500" [63.4 mm]			
С	0.975" [24.6 mm]	1.079" [27.4 mm]	1.079" [27.4 mm]			
D	0.320" [8.1 mm]	0.394" [10 mm]	0.394" [10.0 mm]			
Ε	1.620" [41.1 mm]	2.008" [51.0 mm]	2.421" [61.5 mm]			
F	1/8" NPT	1/4" NPT	1/4" NPT			

## Orsense Stainless Steel Case / Brass **Wetted Pressure Gauges**

**Liquid Filled Case Lower Mount** 





#### **Features**

- Brass wetted parts for use with air, oil, water and non-corrosive liquids
- Restricted orifice to dampen pressure surges
- Crimp-on bezel
- Dual scale (psi/kPa)
- Glycerin filled case to reduce needle fluctuations due to vibration
- ±1.5% of full scale value accuracy
- 5 year warranty

#### **Applications**

 Ideal for pumps, compressors, hydraulic presses, machinery, pneumatic equipment and motors in harsh environments

Part Number	ProSense 2.5" Stainless Steel Case / Brass Wetted Glycerin Filled Pressure G	Pcs/Pkg	Wt(lb)	Price
G25-SLV-4LB	Gauge, 2.5 in., SS Case, liquid fill, -30 to 0 inHg vacuum/-100 to 0 kPa vacuum, brass-1/4 NPT, lower mount	1	0.5	\$11.25
G25-SL30-4LB	Gauge, 2.5 in., SS Case, liquid fill, 0-30 PSI/0-200 kPa, brass-1/4 NPT, lower mount	1	0.5	\$11.25
G25-SL60-4LB	Gauge, 2.5 in., SS Case, liquid fill, 0-60 PSI/0-420 kPa, brass-1/4 NPT, lower mount	1	0.5	\$11.25
G25-SL100-4LB	Gauge, 2.5 in., SS Case, liquid fill, 0-100 PSI/0-700 kPa, brass-1/4 NPT, lower mount	1	0.5	\$11.25
G25-SL160-4LB	Gauge, 2.5 in., SS Case, liquid fill, 0-160 PSI/0-1,100 kPa, brass-1/4 NPT, lower mount	1	0.5	\$11.25
G25-SL200-4LB	Gauge, 2.5 in., SS Case, liquid fill, 0-200 PSI/0-1,400 kPa, brass-1/4 NPT, lower mount	1	0.5	\$11.25
G25-SL300-4LB	Gauge, 2.5 in., SS Case, liquid fill, 0-300 PSI/0-2,000 kPa, brass-1/4 NPT, lower mount	1	0.5	\$11.25
G25-SL600-4LB	Gauge, 2.5 in., SS Case, liquid fill, 0-600 PSI/0-4,200 kPa, brass-1/4 NPT, lower mount	1	0.5	\$11.25
G25-SL1000-4LB	Gauge, 2.5 in., SS Case, liquid fill, 0-1000 PSI/0-7,000 kPa, brass-1/4 NPT, lower mount	1	0.5	\$11.25
G25-SL1500-4LB	Gauge, 2.5 in., SS Case, liquid fill, 0-1500 PSI/0-10,000 kPa, brass-1/4 NPT, lower mount	1	0.5	\$11.25
G25-SL2000-4LB	Gauge, 2.5 in., SS Case, liquid fill, 0-2000 PSI/0-14,000 kPa, brass-1/4 NPT, lower mount	1	0.5	\$11.25
G25-SL3000-4LB	Gauge, 2.5 in., SS Case, liquid fill, 0-3000 PSI/0-21,000 kPa, brass-1/4 NPT, lower mount	1	0.5	\$11.25
G25-SL6000-4LB	Gauge, 2.5 in., SS Case, liquid fill, 0-6000 PSI/0-42,000 kPa, brass-1/4 NPT, lower mount	1	0.5	\$11.25
G25-SLV-4CB	Gauge, 2.5 in., SS Case, liquid fill, -30 to 0 inHg vacuum/-100 to 0 kPa vacuum, brass-1/4 NPT, center back mount	1	0.5	\$11.25
G25-SL30-4CB	Gauge, 2.5 in., SS Case, liquid fill, 0-30 PSI/0-200 kPa, brass-1/4 NPT, center back mount	1	0.5	\$11.25
G25-SL60-4CB	Gauge, 2.5 in., SS Case, liquid fill, 0-60 PSI/0-420 kPa, brass-1/4 NPT, center back mount	1	0.5	\$11.25
G25-SL100-4CB	Gauge, 2.5 in., SS Case, liquid fill, 0-100 PSI/0-700 kPa, brass-1/4 NPT, center back mount	1	0.5	\$11.25
G25-SL160-4CB	Gauge, 2.5 in., SS Case, liquid fill, 0-160 PSI/0-1,100 kPa, brass-1/4 NPT, center back mount	1	0.5	\$11.25
G25-SL200-4CB	Gauge, 2.5 in., SS Case, liquid fill, 0-200 PSI/0-1,400 kPa, brass-1/4 NPT, center back mount	1	0.5	\$11.25
G25-SL300-4CB	Gauge, 2.5 in., SS Case, liquid fill, 0-300 PSI/0-2,000 kPa, brass-1/4 NPT, center back mount	1	0.5	\$11.25
G25-SL600-4CB	Gauge, 2.5 in., SS Case, liquid fill, 0-600 PSI/0-4,200 kPa, brass-1/4 NPT, center back mount	1	0.5	\$11.25
G25-SL1000-4CB	Gauge, 2.5 in., SS Case, liquid fill, 0-1000 PSI/0-7,000 kPa, brass-1/4 NPT, center back mount	1	0.5	\$11.25
G25-SL1500-4CB	Gauge, 2.5 in., SS Case, liquid fill, 0-1500 PSI/0-10,000 kPa, brass-1/4 NPT, center back mount	1	0.5	\$11.25
G25-SL2000-4CB	Gauge, 2.5 in., SS Case, liquid fill, 0-2000 PSI/0-14,000 kPa, brass-1/4 NPT, center back mount	1	0.5	\$11.25
G25-SL3000-4CB	Gauge, 2.5 in., SS Case, liquid fill, 0-3000 PSI/0-21,000 kPa, brass-1/4 NPT, center back mount	1	0.5	\$11.25
G25-SL6000-4CB	Gauge, 2.5 in., SS Case, liquid fill, 0-6000 PSI/0-42,000 kPa, brass-1/4 NPT, center back mount	1	0.5	\$11.25

Company Information

Drives

Soft Starters

Motors

Transmission

Motion: Servos and Steppers

Motor Controls

Sensors: Proximity

Sensors: Photoelectric

Encoders

Sensors: Current

Sensors:

Pushbuttons and Lights

Stacklights

Relays and Timers

Pneumatics: Air Prep

Pneumatics: Directional Control Valves

Pneumatics:

Cylinders

Pneumatics Air Fittings

# **Pressure Gauges**Stainless Steel Case / Brass Wetted Pressure Gauges

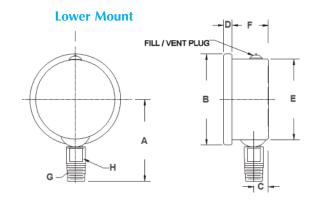
ProSense Stainless Ste	el Case / Brass Wetted Glycerin-filled Gauges Specifications		
Dial Size	2.5" [63.5 mm]		
Case	AISI 304 SS		
Lens	Polycarbonate		
Ring	AISI 304 SS, Crimp-On		
Socket	Brass		
Connection	1/4" NPT		
Fill Liquid	Glycerin		
Bourdon Tube	Phosphor Bronze C-shaped for pressures up to and including 600 psi (4,147 kPa), AISI 316 SS C-shaped for 1000 psi (6,895 kPa), AISI 316 SS spiral for pressures above 1000 psi (6,895 kPa)		
Movement	OT 59 brass		
Pointer	Aluminum, anodized black		
Welding	Tin/cooper alloy for pressures up to 600 psi (4,147 kPa), 316 SS TIG Argon arc for pressures 600 psi (4,147 kPa) and above		
Over Pressure Limit	125% of full scale up to 1,400 psi (9,653 kPa), 115% of full scale over 1,400 psi (9,653 kPa)		
Gasket Material	Silicone rubber for socket; EPDM for lens, filling plug and blow-out vent		
Working Pressure	Maximum 75% of full scale value		
Ambient/Process Temperature	-4 °F to 150 °F (-20 °C to 65 °C)		
Accuracy	±1.5% of full scale value		
Enclosure Rating	IP65		



Warning: CHECK THE CHEMICAL COMPATIBILITY OF THE GAUGE'S WETTED PARTS WITH THE MEDIUM TO BE MEASURED. Use a suitable thread sealant such as Teflon® tape. Always tighten with an open end or adjustable wrench on the wrench flats. Never use any part of the pressure gauge to tighten other than the wrench flats that are on the gauge socket. Failure to do so will severely damage the pressure gauge.

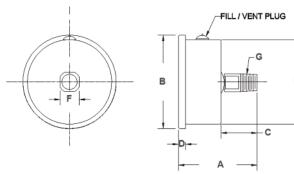
Due to pressure buildur, some gauges (usually lower pressure ranges such as vacuum, up to 100 psi) may reflect a reading that is slightly "off zero". To properly "vent" the pressure gauge to atmosphere, make a small hole in the fill plug after you have installed the instrument.

#### **Dimensions**



Dimensions - Lower Mount Gauge		
Α	2.190" [55.6 mm}	
В	2.700" [68.5 mm]	
С	0.433" [11.0 mm]	
D	0.250" [6.3 mm]	
Ε	2.440" [61.9 mm]	
F	1.035" [26.3 mm]	
G	1/4" NPT	
Н	0.551" [14.0 mm]	

#### **Center Back Mount**



<b>Dimensions - Center Back Mount Gauge</b>		
A	2.264" [57.5 mm}	
В	2.7" [68.5 mm]	
С	1.175" [29.8 mm]	
D	0.210" [5.3 mm]	
Ε	2.445" [62 mm]	
F	0.551" [14.0 mm]	
G	1/4" NPT	

### Orsense Stainless Steel Case / Stainless **Steel Wetted Pressure Gauges**

**Dry and Liquid Filled Cases Lower Mount Center Back Mount** 





#### **Features**

- Stainless steel wetted parts for use with air, oil, water and corrosive liquids
- Restricted orifice to dampen pressure surges
- Crimp-on bezel
- · Dual scale (psi/kPa)
- Dry or glycerin filled case to reduce needle fluctuations due to vibration
- ±1.5% of full scale value accuracy
- 5 year warranty

• Ideal for pumps, compressors, hydraulic presses, machinery, in harsh environments

A	p	рі	ıca	τιο	ns

pneumatic equipment and motors

ProSense 2.5" All Stainless Steel Pressure Gauges				
Part Number	Description	Pcs/Pkg	Wt(lb)	Price
G25-SDV-4LS	Gauge, 2.5 in., SS Case, dry, -30 to 0 inHg/-100 to 0 kPa vacuum, SS-1/4 NPT, lower mount	1	0.4	\$24.75
G25-SD30-4LS	Gauge, 2.5 in., SS Case, dry, 0-30 PSI/0-200 kPa, SS-1/4 NPT, lower mount	1	0.4	\$24.75
G25-SD60-4LS	Gauge, 2.5 in., SS Case, dry, 0-60 PSI/0-420 kPa, SS-1/4 NPT, lower mount	1	0.4	\$24.75
G25-SD100-4LS	Gauge, 2.5 in., SS Case, dry, 0-100 PSI/0-700 kPa, SS-1/4 NPT, lower mount	1	0.4	\$24.75
G25-SD160-4LS	Gauge, 2.5 in., SS Case, dry, 0-160 PSI/0-1,100 kPa, SS-1/4 NPT, lower mount	1	0.4	\$24.75
G25-SD200-4LS	Gauge, 2.5 in., SS Case, dry, 0-200 PSI/0-1,400 kPa, SS-1/4 NPT, lower mount	1	0.4	\$24.75
G25-SD300-4LS	Gauge, 2.5 in., SS Case, dry, 0-300 PSI/0-2,000 kPa, SS-1/4 NPT, lower mount	1	0.4	\$24.75
G25-SD600-4LS	Gauge, 2.5 in., SS Case, dry, 0-600 PSI/0-4,200 kPa, SS-1/4 NPT, lower mount	1	0.4	\$24.75
G25-SD1000-4LS	Gauge, 2.5 in., SS Case, dry, 0-1000 PSI/0-7,000 kPa, SS-1/4 NPT, lower mount	1	0.4	\$24.75
G25-SDV-4CS	Gauge, 2.5 in., SS Case, dry, -30 to 0 inHg/-100 to 0 kPa vacuum, SS-1/4 NPT, center back mount	1	0.4	\$24.75
G25-SD30-4CS	Gauge, 2.5 in., SS Case, dry, 0-30 PS/0-200 kPa, SS-1/4 NPT, center back mount	1	0.4	\$24.75
G25-SD60-4CS	Gauge, 2.5 in., SS Case, dry, 0-60 PSI/0-420 kPa, SS-1/4 NPT, center back mount	1	0.4	\$24.75
G25-SD100-4CS	Gauge, 2.5 in., SS Case, dry, 0-100 PSI/0-700 kPa, SS-1/4 NPT, center back mount	1	0.4	\$24.75
G25-SD160-4CS	Gauge, 2.5 in., SS Case, dry, 0-160 PSI/0-1,100 kPa, SS-1/4 NPT, center back mount	1	0.4	\$24.75
G25-SD200-4CS	Gauge, 2.5 in., SS Case, dry, 0-200 PSI/0-1,400 kPa, SS-1/4 NPT, center back mount	1	0.4	\$24.75

Pi	oSense 2.5" All Stainless Steel Steel Glycerin Filled Pressure Gauge	S		
Part Number	Description	Pcs/Pkg	Wt(lb)	Price
G25-SLV-4LS	Gauge, 2.5 in., SS Case, liquid fill, -30 to 0 inHg/-100 to 0 kPa vacuum, SS-1/4 NPT, lower mount	1	0.5	\$26.00
G25-SL30-4LS	Gauge, 2.5 in., SS Case, liquid fill, 0-30 PSI/0-200 kPa, SS-1/4 NPT, lower mount	1	0.5	\$26.00
G25-SL60-4LS	Gauge, 2.5 in., SS Case, liquid fill, 0-60 PSI/0-420 kPa, SS-1/4 NPT, lower mount	1	0.5	\$26.00
G25-SL100-4LS	Gauge, 2.5 in., SS Case, liquid fill, 0-100 PSI/0-700 kPa, SS-1/4 NPT, lower mount	1	0.5	\$26.00
G25-SL160-4LS	Gauge, 2.5 in., SS Case, liquid fill, 0-160 PSI/0-1,100 kPa, SS-1/4 NPT, lower mount	1	0.5	\$26.00
G25-SL200-4LS	Gauge, 2.5 in., SS Case, liquid fill, 0-200 PSI/0-1,400 kPa, SS-1/4 NPT, lower mount	1	0.5	\$26.00
G25-SL300-4LS	Gauge, 2.5 in., SS Case, liquid fill, 0-300 PSI/0-2,000 kPa, SS-1/4 NPT, lower mount	1	0.5	\$26.00
G25-SL600-4LS	Gauge, 2.5 in., SS Case, liquid fill, 0-600 PSI/0-4,200 kPa, SS-1/4 NPT, lower mount	1	0.5	\$26.00
G25-SL1000-4LS	Gauge, 2.5 in., SS Case, liquid fill, 0-1000 PSI/0-7,000 kPa, SS-1/4 NPT, lower mount	1	0.5	\$26.00
G25-SLV-4CS	Gauge, 2.5 in., SS Case, liquid fill, -30 to 0 inHg/-100 to 0 kPa vacuum, SS-1/4 NPT, center back mount	1	0.5	\$26.00
G25-SL30-4CS	Gauge, 2.5 in., SS Case, liquid fill, 0-30 PSI/0-200 kPa, SS-1/4 NPT, center back mount	1	0.5	\$26.00
G25-SL60-4CS	Gauge, 2.5 in., SS Case, liquid fill, 0-60 PSI/0-420 kPa, SS-1/4 NPT, center back mount	1	0.5	\$26.00
G25-SL100-4CS	Gauge, 2.5 in., SS Case, liquid fill, 0-100 PSI/0-700 kPa, SS-1/4 NPT, center back mount	1	0.5	\$26.00
G25-SL160-4CS	Gauge, 2.5 in., SS Case, liquid fill, 0-160 PSI/0-1,100 kPa, SS-1/4 NPT, center back mount	1	0.5	\$26.00
G25-SL200-4CS	Gauge, 2.5 in., SS Case, liquid fill, 0-200 PSI/0-1,400 kPa, SS-1/4 NPT, center back mount	1	0.5	\$26.00

Company Information

Drives

Soft Starters Motors

Transmission

Motion: Servos and Steppers

Motor Controls

Sensors: Proximity

Sensors: Photoelectric

Encoders

Sensors

Pushbuttons

and Lights Stacklights

Process

Relays and Timers

Pneumatics: Air Prep

Pneumatics: Directional Control

Cylinders

Valves

Pneumatics:

Pneumatics Air Fittings

# **Or** Sense Stainless Steel Case / Stainless Steel Wetted Pressure Gauges

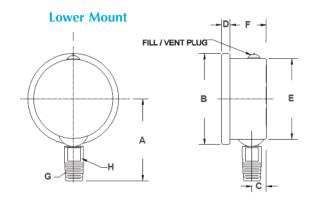
ProSen	ProSense All Stainless Steel Gauges Specifications		
Dial Size	2.5" [63 mm]		
Case	AISI 304 SS		
Lens	Polycarbonate		
Ring	AISI 304 SS, Crimp-On		
Socket	AISI 316 SS		
Connection	1/4" NPT		
Fill Liquid	Dry = None / Liquid Fill = Glycerin		
Bourdon Tube	AISI 316 SS C-shaped for pressures up to 1000 psi (6,895 kPa)		
Movement	Brass		
Pointer	Aluminum, anodized black		
Welding	316 SS TIG Argon arc		
Over Pressure Limit	125% of full scale		
Gasket Material	Silicone rubber for socket; EPDM for lens, filling plug and blow-out vent (Liquid fill models)		
Working Pressure	Maximum 75% of full scale value		
Ambient/Process Temperature	<b>mperature</b> -4 °F to 150 °F (-20 °C to 65 °C)		
Accuracy	±1.5% of full scale value		
Enclosure Rating	IP65		



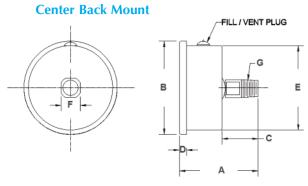
WARNING: CHECK THE CHEMICAL COMPATIBILITY OF THE GAUGE'S WETTED PARTS WITH THE MEDIUM TO BE MEASURED. Use a suitable thread sealant such as Teflon® tape. Always tighten with an open end or adjustable wrench on the wrench flats. Never use any part of the pressure gauge to tighten other than the wrench flats that are on the gauge socket. Failure to do so will severely damage the pressure gauge.

Due to pressure buildur, some gauges (usually lower pressure ranges such as vacuum, up to 100 psi) may reflect a reading that is slightly "off zero". To properly "vent" the pressure gauge to atmosphere, make a small hole in the fill plug after you have installed the instrument.

#### **Dimensions**



<b>Dimensions - Lower Mount Gauge</b>		
Α	2.190" [55.6 mm}	
В	2.700" [68.5 mm]	
С	0.433" [11.0 mm]	
D	0.250" [6.3 mm]	
Ε	2.440" [61.9 mm]	
F	1.035" [26.3 mm]	
G	1/4" NPT	
Н	0.551" [14.0 mm]	



<b>Dimensions - Center Back Mount Gauge</b>			
A	2.264" [57.5 mm}		
В	2.7" [68.5 mm]		
С	1.175" [29.8 mm]		
D	0.210" [5.3 mm]		
Ε	2.445" [62 mm]		
F	0.551" [14.0 mm]		
G	1/4" NPT		