

prosense® 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 (psig/kPa)
- Dry or glycerin filled case to reduce needle fluctuations due to vibration
- $\pm 1.5\%$ of full scale value accuracy
- 5 year warranty

Applications

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



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	\$0803:
G25-SD30-4LS	Gauge, 2.5 in., SS Case, dry, 0-30 psig/0-200 kPa, SS-1/4 NPT, lower mount	1	0.4	\$;07,?:
G25-SD60-4LS	Gauge, 2.5 in., SS Case, dry, 0-60 psig/0-420 kPa, SS-1/4 NPT, lower mount	1	0.4	\$0801:
G25-SD100-4LS	Gauge, 2.5 in., SS Case, dry, 0-100 psig/0-700 kPa, SS-1/4 NPT, lower mount	1	0.4	\$;07,y:
G25-SD160-4LS	Gauge, 2.5 in., SS Case, dry, 0-160 psig/0-1,100 kPa, SS-1/4 NPT, lower mount	1	0.4	\$;07,]:
G25-SD200-4LS	Gauge, 2.5 in., SS Case, dry, 0-200 psig/0-1,400 kPa, SS-1/4 NPT, lower mount	1	0.4	\$;07,,::
G25-SD300-4LS	Gauge, 2.5 in., SS Case, dry, 0-300 psig/0-2,000 kPa, SS-1/4 NPT, lower mount	1	0.4	\$;07,#::
G25-SD600-4LS	Gauge, 2.5 in., SS Case, dry, 0-600 psig/0-4,200 kPa, SS-1/4 NPT, lower mount	1	0.4	\$;07,,::
G25-SD1000-4LS	Gauge, 2.5 in., SS Case, dry, 0-1000 psig/0-7,000 kPa, SS-1/4 NPT, lower mount	1	0.4	\$;07,v:
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	\$0802:
G25-SD30-4CS	Gauge, 2.5 in., SS Case, dry, 0-30 psig/0-200 kPa, SS-1/4 NPT, center back mount	1	0.4	\$;07,!::
G25-SD60-4CS	Gauge, 2.5 in., SS Case, dry, 0-60 psig/0-420 kPa, SS-1/4 NPT, center back mount	1	0.4	\$0800:
G25-SD100-4CS	Gauge, 2.5 in., SS Case, dry, 0-100 psig/0-700 kPa, SS-1/4 NPT, center back mount	1	0.4	\$;07,x:
G25-SD160-4CS	Gauge, 2.5 in., SS Case, dry, 0-160 psig/0-1,100 kPa, SS-1/4 NPT, center back mount	1	0.4	\$;07,z:
G25-SD200-4CS	Gauge, 2.5 in., SS Case, dry, 0-200 psig/0-1,400 kPa, SS-1/4 NPT, center back mount	1	0.4	\$;07,[:

ProSense 2.5" All Stainless Steel Steel Glycerin Filled Pressure Gauges

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	\$-080i:
G25-SL30-4LS	Gauge, 2.5 in., SS Case, liquid fill, 0-30 psig/0-200 kPa, SS-1/4 NPT, lower mount	1	0.5	\$080d:
G25-SL60-4LS	Gauge, 2.5 in., SS Case, liquid fill, 0-60 psig/0-420 kPa, SS-1/4 NPT, lower mount	1	0.5	\$080g:
G25-SL100-4LS	Gauge, 2.5 in., SS Case, liquid fill, 0-100 psig/0-700 kPa, SS-1/4 NPT, lower mount	1	0.5	\$0806:
G25-SL160-4LS	Gauge, 2.5 in., SS Case, liquid fill, 0-160 psig/0-1,100 kPa, SS-1/4 NPT, lower mount	1	0.5	\$0808:
G25-SL200-4LS	Gauge, 2.5 in., SS Case, liquid fill, 0-200 psig/0-1,400 kPa, SS-1/4 NPT, lower mount	1	0.5	\$080a:
G25-SL300-4LS	Gauge, 2.5 in., SS Case, liquid fill, 0-300 psig/0-2,000 kPa, SS-1/4 NPT, lower mount	1	0.5	\$080b:
G25-SL600-4LS	Gauge, 2.5 in., SS Case, liquid fill, 0-600 psig/0-4,200 kPa, SS-1/4 NPT, lower mount	1	0.5	\$080e:
G25-SL1000-4LS	Gauge, 2.5 in., SS Case, liquid fill, 0-1000 psig/0-7,000 kPa, SS-1/4 NPT, lower mount	1	0.5	\$0804:
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	\$080h:
G25-SL30-4CS	Gauge, 2.5 in., SS Case, liquid fill, 0-30 psig/0-200 kPa, SS-1/4 NPT, center back mount	1	0.5	\$080c:
G25-SL60-4CS	Gauge, 2.5 in., SS Case, liquid fill, 0-60 psig/0-420 kPa, SS-1/4 NPT, center back mount	1	0.5	\$;080f:
G25-SL100-4CS	Gauge, 2.5 in., SS Case, liquid fill, 0-100 psig/0-700 kPa, SS-1/4 NPT, center back mount	1	0.5	\$0805:
G25-SL160-4CS	Gauge, 2.5 in., SS Case, liquid fill, 0-160 psig/0-1,100 kPa, SS-1/4 NPT, center back mount	1	0.5	\$0807:
G25-SL200-4CS	Gauge, 2.5 in., SS Case, liquid fill, 0-200 psig/0-1,400 kPa, SS-1/4 NPT, center back mount	1	0.5	\$0809:

pro^{sense}® Stainless Steel Case / Stainless Steel Wetted Pressure Gauges

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 psig (6,895 kPa)
Movement	Brass
Wetted Parts	AISI 316 SS
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	Dry: -40°F to 250°F (-40°C to 120°C) Glycerin filled: -4°F to 150°F (-20°C to 65°C)
Accuracy	±1.5% of full scale value
Enclosure Rating	IP65

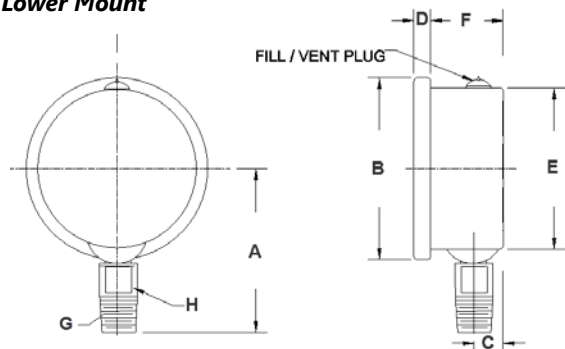


Warning: CHECK THE CHEMICAL COMPATIBILITY OF THE GAUGE'S WETTED PARTS WITH THE MEDIUM TO BE MEASURED. Use a suitable thread sealant such as Teflon® tape. Always tighten with an open end or adjustable wrench on the wrench flats. Never use any part of the pressure gauge to tighten other than the wrench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

Due to pressure buildup, some gauges (usually lower pressure ranges such as vacuum, up to 100 psig) 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

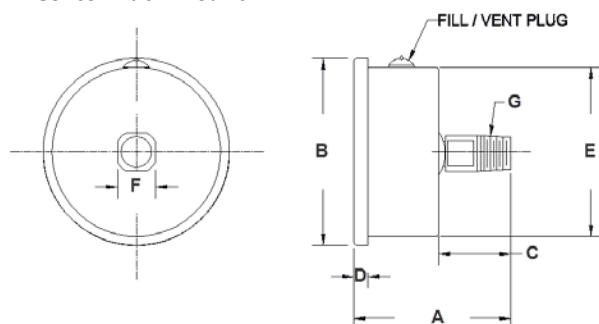
Lower Mount



Dimensions - Lower Mount Gauge

A	2.190" [55.6 mm]
B	2.700" [68.5 mm]
C	0.433" [11.0 mm]
D	0.250" [6.3 mm]
E	2.440" [61.9 mm]
F	1.035" [26.3 mm]
G	1/4" NPT
H	0.551" [14.0 mm]

Center Back Mount



Dimensions - Center Back Mount Gauge

A	2.264" [57.5 mm]
B	2.7" [68.5 mm]
C	1.175" [29.8 mm]
D	0.210" [5.3 mm]
E	2.445" [62 mm]
F	0.551" [14.0 mm]
G	1/4" NPT

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

proSense® 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 (psig/kPa or inHg/kPa) are available in pressure ranges from vacuum up to 6000 psig.

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 psig / 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	B
±2% lower ¼ Scale; ±1% middle ½ scale; ±2% upper ¼ scale	A
±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 +/- 1.5% or +/- 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.

Click on the thumbnail or go to <https://www.automationdirect.com/VID-PR-0002> for a short video on ProSense Dial Pressure Gauges

