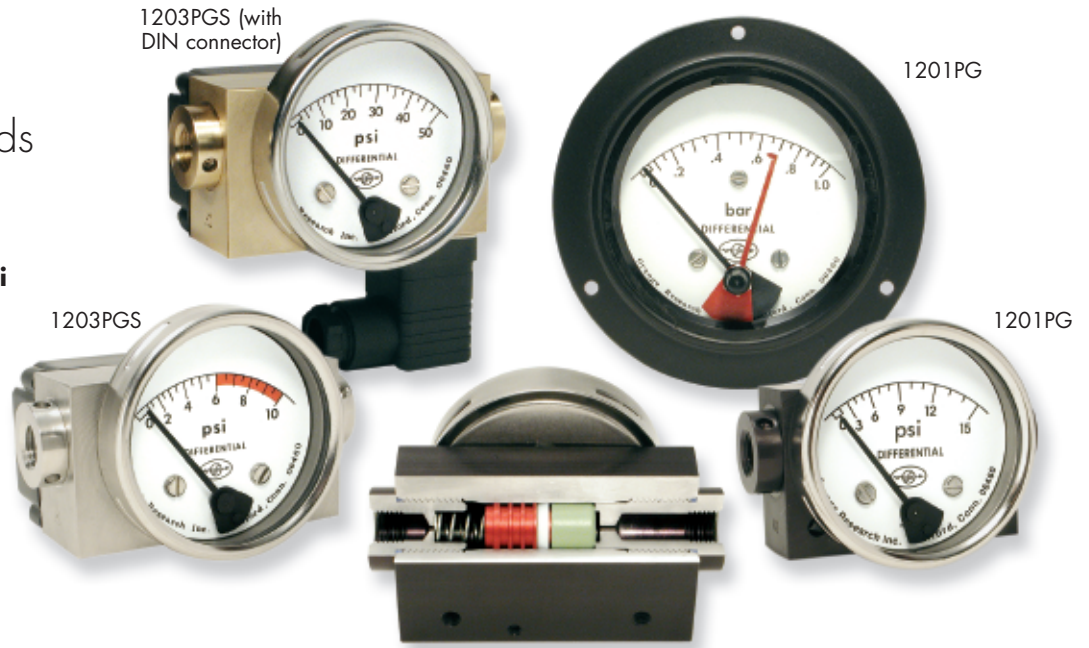


0-5 to 0-1000 psid
Piston Sensor for Liquids

Features

- Heavy duty — to 10,000 psi line pressure
- Weatherproof design and rugged construction
- Gauge, switch and transmitter versions
- Popular in filtration and flow measurements



Our piston sensor models are for liquid applications where durability and long life are required. Their simple design has fewer parts to wear out and also keeps the price low.

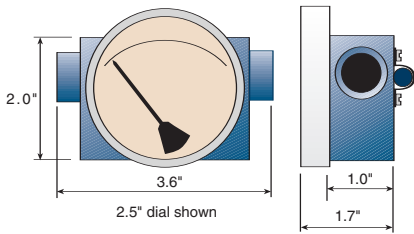
A magnet attached to the dial pointer shaft follows a spring-loaded sensor magnet that moves as differential pressure changes. In this way the DP displacement of the

sensor is translated to our easy-to-read 2.5 to 6-inch diameter dials.

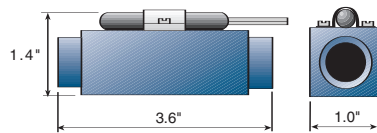
Select from a variety of options such as follower pointers, red arcs and mounting brackets along with switch, relay or transmitter outputs. See page 5 for a complete list of standard options.

Dimensions

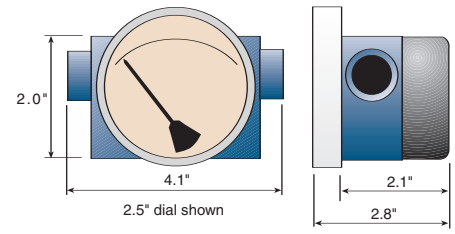
Detailed drawings on website.



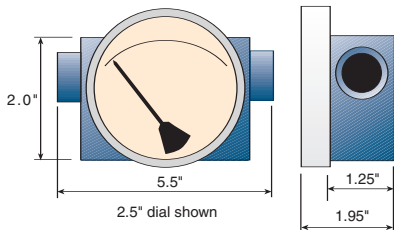
1201PGS



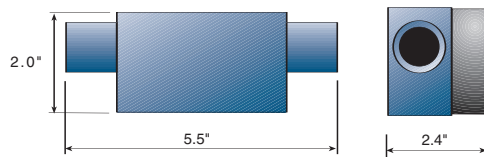
1201PS



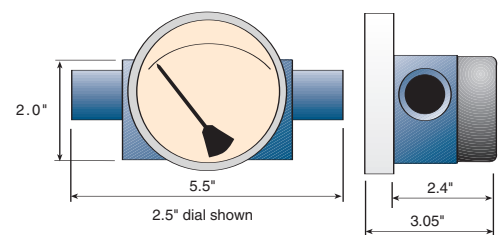
1203PGS



1301PG



1303PS



1303PGS

Specifications (Detailed Specification Sheets on Website)

Model	Differential pressure range	Maximum line pressure/temperature	Accuracy (F.S.) (Ascending)	Porting (Many porting types available)	Electrical Available**
1201PG/PGS/PS PG = Piston Gauge PGS = Piston Gauge-Switch PS = Piston Switch	0-5 to 0-150 psid (0-0.33 to 0-10 bar)	3000 psig (200 bar) 200°F (93°C)	2%	1/4" NPT	1 switch no enclosure
1202PG PG = Piston Gauge	0-5 to 0-150 psid (0-0.33 to 0-10 bar)	5000 psig (340 bar) 200°F (93°C)	2%	1/4" NPT	Not available
1203PGS/PS/PGT/PT PGS = Piston Gauge-Switch PS = Piston Switch PGT = Piston Gauge-Transmitter PT = Piston Transmitter	0-5 to 0-150 psid (0-0.33 to 0-10 bar)	5000 psig (340 bar) 200°F (93°C)	2%	1/4" NPT	1 or 2 switches 1 relay transmitter Class 1 Div. 2/NEMA 4X For Class 1 Div. 1, see pg. 26
1206PG* PG = Piston Gauge	0-5 to 150 psid (0-0.33 to 0-10 bar)	10,000 psig (680 bar) 200°F (93°C)	2%	1/4" NPT	1 or 2 switches, 1 relay NEMA 4X
1301PG PG = Piston Gauge	0-100 to 0-1000 psid (0-7 to 0-67 bar)	5000 psig (340 bar) 200°F (93°C)	2%	1/4" NPT	Not available
1303PGS/PS/PGT/PT PGS = Piston Gauge-Switch PS = Piston Switch PGT = Piston Gauge-Transmitter PT = Piston Transmitter	0-100 to 0-1000 psid (0-7 to 0-67 bar)	5,000 psig (340 bar) 200°F (93°C)	2%	1/4" NPT	1 or 2 switches 1 relay transmitter Class 1 Div. 2/NEMA 4X For Class 1 Div. 1, see pg. 26
1306PG* PG = Piston Gauge	0-100 to 0-1000 psid (0-7 to 0-67 bar)	10,000 psig (680 bar) 200°F (93°C)	2%	1/4" NPT	1 or 2 switches, 1 relay NEMA 4X

*PS and PGS transmitter versions available

**NEMA 4X switch models have a 1/2 inch NPT conduit port as standard. A DIN 43650A-PG11 with mating connector is optional, rated IP65 & NEMA 4X

How to Order

Select from each of the applicable categories to construct a model number. Use the model number when ordering or obtaining additional information and pricing from Orange Research or your local distributor.

Reordering? You must supply the Part Number from your instrument label.

Sample Model Number

1201PGS - 1A - 2.5B - A 0-5 psid, 1, 3, E

1201PGS	1A	2.5B	A	0-5 psid	1, 3, E
Model	Pressure Body	Dial Case	Switch	Range	Options (more on pg. 5)
1201PG	<i>In-line ports:</i>	2.5B = 2.5" basic	A = SPST, N.O.	0-5, 0-8,	1 = 1/2" NPT
1201PGS	1A = aluminum	3.5B = 3.5" basic	B = SPST, N.C.	0-10, 0-15,	2 = plastic lens
1201PS	1C = 316 stainless steel	4.5B = 4.5" basic	C = SPDT	0-20, 0-25,	3 = liquid filled (glycerine)
1202PG	1E = brass	6B = 6.0" basic	A-A = 2 ea. - A	0-30, 0-35,	4 = follower pointer
1203PS	<i>Change "1" above to "4" for back ports; to "5" for bottom ports</i>	<i>Change "B" to "F" above for flanged dial case</i>	B-B = 2 ea. - B	0-40, 0-50,	5 = Teflon coated magnet/spring
1203PGS			C-C = 2 ea. - C	0-60, 0-80,	6 = red arc (specify range)
1206PG			R2 = relay	0-100, 0-125, 0-150	7 = dual scale (specify both)
1301PG	<i>Back/bottom ports N/A on 1203 or 1300 series; Brass N/A on 1300 series</i>		T1 = transmitter	psid	8 = high temperature
1303PS					
1303PGS					
1306PG				<i>1300 series ranges to 1000 psid</i>	Special Seals (Buna-N standard): E = EPDM V = Viton F = Fluorosilicone T = Teflon
<i>More models above</i>					

Optional Features



- Dual Scale**
- Combine two equivalent scales
 - Internationally understood



- High Temperature**
- Handle hostile conditions
 - Up to 450°F – model & material dependent



- Follower Pointer**
- Indicate worst condition
 - Track off-hours problems
 - Trace filter blowout
 - Great for field use



- Liquid Level Scale**
- Measure level in tanks
 - No sensor in fluid
 - Great for cryogenics
 - Specify S.G. & tank height



- Red or Multicolor Arc**
- Easy-to-read
 - Eliminate errors
 - Recognize alarm conditions



- Square Root Scale - Flow**
- Use w/venturi & orifice plates
 - Cheaper than large flowmeters
 - Specify DP & flow rate



- Liquid Filled Dial**
- Reduce vibration errors
 - Slow fluctuations
 - Avoid damage from spikes
 - Eliminate condensation

More Options

Gauge:

- Plastic lens
- Shatterproof lens
- Lexan plastic dial case (3.5 inch dial only)
- Artwork/Logo

Electronics:

- See pages 26-27 for Switch, Relay and Transmitter options

Process

connections:

- 1/2 inch NPT
- 1/8 inch NPT
- BSP
- MS
- Reverse pressure ports

Elastomers: (o-rings or diaphragms)

- Viton
- EPDM
- Fluorosilicone
- Teflon (o-rings only)

Mounting Brackets:

- See page 4

Miscellaneous:

- Teflon coated magnet and spring
- Calibrate on steel
- Clean for oxygen service
- Stainless steel or paper tag
- Top bleed ports

Certifications:

- Certificate of Conformance
- Certificate of Accuracy
- NACE Certification to MR0175
- Material Certification

Common Differential Pressure Ranges

In. H ₂ O	psid	mm H ₂ O	kg/cm ² (bar)	kPa	Additional standard psid ranges available
0-5	–	0-125	–	–	0-200 0-700
0-10	–	0-150	–	–	0-250 0-750
0-15	–	0-400	–	–	0-300 0-800
0-20	–	0-500	–	–	0-400 0-900
0-25	–	0-640	–	–	0-500 0-1000
0-30	0-1	0-720	0-.07	0-7	0-600
0-40	–	0-1000	0-.10	0-10	Compound ranges
0-50	–	0-1200	0-.12	0-12	Series 1518
0-60	0-2	0-1500	0-.15	0-15	8-0-8 psid
0-80	0-3	0-2000	0-.20	0-20	10-0-10
0-100	–	0-2500	0-.25	0-25	15-0-15
0-150	0-5	–	0-.32	0-32	20-0-20
0-200	–	0-5000	0-.50	0-50	25-0-25
	0-8		0-.60	0-60	30-0-30
	0-10		0-.70	0-70	50-0-50
	0-15		0-1	0-100	Series 1835
	0-20		0-1.4	0-140	1-0-1 psid
	0-25		0-1.8	0-180	2-0-2
	0-30		0-2	0-200	3-0-3
	0-35		0-2.5	0-250	5-0-5
	0-40		0-2.8	0-280	8-0-8
	0-50		0-3.6	0-360	5-0-5" H ₂ O
	0-60		0-4	0-400	10-0-10
	0-80		0-5.6	0-560	15-0-15
	0-100		0-7	0-700	20-0-20
	0-125		0-9	0-900	25-0-25
	0-150		0-10	0-1000	30-0-30
					50-0-50
					100-0-100