WINTERS Instruments

PRODUCT CATALOGUE

www.winters.com

WINTERS INSTRUMENTS

MANUFACTURER OF INDUSTRIAL INSTRUMENTATION

Why Winters

1. Large and deep product offering
Allows access to many new and different customers

2. High quality products
Worry-free installations with an extremely low defect rate of **0.17%**

3. Five year warranty
Covering all instrumentation

4. Servicing all market segments
Covering both the industrial and commercial markets

5. High field support presence
A large number of Regional Sales Managers providing global coverage

6. Distributed globally
Global distribution in over 90 countries through 8 Winters sales and service offices

7. Distributor training events
Ensuring our partners are fully equipped to promote, sell and support our instrumentation

8. Engineering team
Responding to technical RFQs and providing application know-how

9. Regular 3rd party factory audits
Customers and agencies verifying standards and certifications

10. Approvals
Adhering to higher standards: 3A, RoHS, CE, CRN, CSA, FM, ISO 9001, UL

11. Distributor portal
All of our Winters tools at your convenience

12. Global AMLs
Easier acceptance into industrial and commercial projects

13. StabiliZR®
Gauge dampening technology without glycerin filling

14. Strong R&D
Numerous new product launches

15. Platinum service
Front of the line service

16. UPC labelled product and packaging
Fast and simple product identification

17. Comprehensive website and App
Embracing mobile technology

18. Canada's Best Managed Companies Program Winner Since 2017
Recognition for innovation and sustained performance re-enforces Winters' commitment to continuous improvement

StabilZR®
WINTERS
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Specified, Installed and Trusted - We're There

Aerospace & Transport

Air Canada	Canada
Canadian National Railway	Canada
US Air Force	USA

Automotive

Chrysler	Canada
General Motors (Paint Plant)	Canada
Hainan Automobile Group	China
Honda	Canada
Nissan	USA
Toyota	USA/Canada

Food & Beverage / Pharmaceutical

Catalent Pharma Solutions	USA
Coca-Cola	Puerto Rico
Heinz	Canada
Kellogg's	Canada

Government

Department of Defence	Canada
US Coast Guard	USA
US Defense Department	USA
US Navy	USA

HVAC

American University of Beirut	Lebanon
BCE Place	Canada
Burj Khalifa	UAE
Palm Jumairah	UAE
Pearl Qatar	Qatar
Princess Noura University	Saudi Arabia

Industrial

DuPont	USA
Jordan Bomine Plant	Jordan

Mining

Diavik Diamond Mine	Canada
Peñaquito Polymetallic Mine	Mexico
Teck Cominco	Canada

Oil & Gas

Devon Energy	Canada
Devon (Jackfish)	Canada
Saudi Aramco	Saudi Arabia
Shell Oil (Motiva)	USA
Suncor Energy	Canada
Suncor (Millennium)	Canada

Petrochemical

Fushun Petrochemical Company	China
Irving Oil Refinery	Canada
Nanjing DSM Petrochemical	China
Sinopec	China

Power Generation

Dayawan Nuclear Power Plant	China
Georgia Power	USA
Jebel Ali Power Station	UAE
Ontario Hydro	Canada
Ras Abu Fontas Power and Desalination	Qatar
Takoradi Thermal Power Station	Ghana
Wasit Power Station	UAE
Williams Energy Refinery	Canada

Pulp & Paper

Harmack & Neucel	Canada
Irving Paper	Canada
Tembec	Canada

Water / Waste Water Treatment

Ashbridges Bay	Canada
Capital Region	Canada
Chelmsford, MA Water Treatment Plant	USA
Dallas Water Treatment Plant	USA
Hartford Dist. Water Pollution Control Facility	USA
SEWA Sarjah	UAE

5-Year Warranty

A 5-year warranty applies to all instrumentation and instrumentation accessories.

Winters Instruments' products are warranted for a stated period of time (see above) after date of purchase against manufacturing and materials defects. Any product which is found by Winters to be defective will be replaced at Winters' discretion. Winters' product warranty does not cover product defects resulting from improper product selection, misuse or misapplication except as specifically set forth in this warranty. Winters Instruments makes no representation or Warranty of any kind, whether expressed or implied, to Purchaser or any other person with respect to any of the products. Without limiting the generality of the preceding sentence,
winters instruments disclaims the implied Warranties of merchantability and fitness for a particular purpose. Any liability from Winters to Purchaser or any other person or entity pursuant to this Warranty, whether for a claim in tort, for breach of contract or otherwise, shall not exceed the purchase price of the Product giving rise to such
liability. Winters shall in no event have any liability to Purchaser or any other
person or entity for any consequential, indirect, punitive or special damages
(including, without limitation, lost profits) pursuant to this Warranty or pursuant to its sale of the Products, even if the possibility of such damages could have been foreseen by Winters Instruments.

Winters Platinum Service

An expedited service that moves orders to the front of the line.

Both manufacturing and service orders will be expedited through our system. Orders manufactured in North America will be completed within **48 hours** and non-North American manufactured orders will be completed within **two weeks**.

Platinum Service applies to most products. Contact Winters or a Winters distributor for more details.

Winters Platinum Service is available for new and existing orders. All Platinum Service orders must be approved by a Winters representative prior to a purchase order being issued (as order size and parts availability may preclude an order from Platinum Service). Purchase orders issued more than 3 weeks after original quote may no longer qualify for Platinum Service. Changes made to Platinum Service orders already placed may void the service. If a Platinum Service order is not shipped in the time quoted the premium fee may be waived by Winters. Freight is not included.

Repairs

Features:

- Full repair service for pressure & temperature instruments and diaphragm seals
- Non-Winters products can also be repaired

Applications:

- Where cost savings justify repairing rather than replacing

How to order:

Please contact our customer service department for your repair order code. Send in your product (freight prepaid) to your nearest Winters location. A written estimate will be faxed or emailed to you before any work is done.

Test Certificates

Features:

- Winters will certify the accuracy of a pressure gauge, thermometer or pressure switch with a National Standards Council test certificate
- Certificates are traceable to the National Institute of Standards and Technology (NIST)
- Certificates may be registered online for renewal reminders

Applications:

- Where a formal test certificate is required
- For certification with the ISO 9000 process

How to order:

Please contact our customer service department for your order code.

Custom Dials

Customize Your Instrumentation

- Available for all makes and models of pressure and temperature instrumentation
- All colours are available
- All dials are custom manufactured to meet your specifications
- Available on new or repaired instruments
- Available for dry or liquid-filled instruments
- Emergency same-day custom dial manufacturing is available

Available Options:

- Colour safety zones
- Warning identification
- Tons on Ram scales
- Feet of Water scales
- Bar scales
- Kg/cm² scales
- Receiver gauge scales
- mm of H_2O scales
- Custom logos

More available. Please call us with your requirements.

Applicable to OEM Requirements

- Where easy-to-read, highly visible warning zones are required
- Non-standard custom measurement scales
- Replacement of damaged or outdated dials
- For time-sensitive dial requirements

WinBRIGHT Dials (Available on PFP, PFP-ZR, PPC, PPC-ZR Series Gauges):

- WBYG option for the reflective, fluorescent yellow-green dial
- WBY option for the reflective, fluorescent yellow dial
- WBFY option for the fluorescent yellow dial
- WBO option for the reflective orange dial
- WBW option for the reflective white dial
- WBG option for the glow-in-the-dark white dial

Quick Tips:

- Review our pressure gauge, thermometer and diaphragm seal selection guides
- Take a moment to review and learn how to read our order code matrix
- If options are available and required, attach the option suffix code to the end of the product order code
- If a scale change is required (i.e. change from standard offering to bar scale), attach the scale code to the end of the product order code

Order Code Matrix (for standard, in stock products):

Each product series has an order code matrix listed after the product specifications. Locate the column of order codes that lists your desired dial size, connection size, connection location and wetted material. Then follow that column downward until it intersects with the row of your choice.

Example:

Order Codes

Dial Size	3.5" (90mm)		4" (100mm)	4.5" (115mm)		6" (150mm)	
Case Material	Steel		Steel	Aluminum		Steel	Aluminum
Connection	Bottom	Centre Back	Centre Back	Bottom	Lower Back	Bottom	Lower Back
30" Hg Vac/kPa	**P1S234**	*P1S560*	P1S460	P1S410	*P1S430*	P1S250	P1S475
30"/0/15 psi/kPa	P1S230	*P1S568*	P1S468	P1S411	*P1S431*	P1S251C	P1S476
30"/0/30 psi/kPa	[illegible]	*P1S569*	P1S469	**P1S412**	*P1S432*	P1S252C	P1S477
30"/0/60 psi/kPa	**P1S232**	*P1S570*	P1S470	P1S413	*P1S433*	P1S259C	P1S478
30"/0/100 psi/kPa	P1S233	*P1S571*	P1S471	P1S414	*P1S434*	P1S253C	[illegible]
30"/0/160 psi/kPa	**P1S229**	*P1S572*	P1S472	P1S416	*P1S436*	[illegible]	
30"/0/200 psi/kPa	-	*P1S573*	-	[illegible]			
30"/0/300 psi/kPa	P1S227	*P1S574*	[illegible]				
0/15 psi/kPa	**P1S228**						
0/30 psi/kPa							

Scale Codes

R1 = psi
R2 = kPa
R3 = kg/cm^2
R4 = cm of H_2O
R5 = ft of H_2O
R6 = in of Hg
R7 = mm of Hg
R8 = in of H_2O
R9 = oz/in^2
R10 = atmosphere
R11 = bar
R12 = mbar
R13 = MPa
R14 = mH_2O
R15 = mmH_2O
R16 = Pa

If a scale change is required (i.e. change from standard offering to bar scale), attach the scale code to the end of the product order code

Options

Some options include:

Maximum Indicating Pointer	Stainless Steel Tag
Front Flange	Safety Glass
Back Flange	Capillary
U-Clamp	Thermowell Cap and Chain
Red Hand Setpoint	StabiliZR® Movement
Rubber Boot	Filling

More options available. See individual catalogue pages or call us with your requirements.

BECOME A WINTERS PRODUCT GENIUS WITH JUST ONE DOWNLOAD

- Instantly ID any Winters product in the field with the built-in scanner
- Easily compare Winters' products to competitor offerings
- Find authorized Winters distributors near you in an instant
- Detailed specs on Winters' products and their related accessories at your fingertips
- And much... much more!

GET IT ON Google Play

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MECHANICAL

WINTERS
Instruments
Excellence Since 1953
PCT-LF SERIES
PEM-LF SERIES
PBQ-LF SERIES
LEAD FREE
kPa
psi
inHg
www.winters.com

Pressure Gauge Selection Guide

Catalogue Page	Series	Dial Size									Ranges (Pressure)							Case Material							Wetted Parts								Connection Size						Connection Location			Accuracy								
		1.5" & under	2"	2.5"	3.5"	4"	4.5"	6"	8.5"	10"	30" Hg Vac	Compound	15" H_2O - 200" H_2O	15" H_2O Vac - 200" H_2O Vac	15 - 300 psi	400 - 600 psi	1,000 - 5,000 psi	6,000 - 20,000 psi	Steel	Plastic	Phenolic	Stainless Steel	Fluid-fillable Case	Brass	Aluminum	Aluminum	Brass	Lead Free Brass	Stainless Steel	Carbon Steel	1/8" NPT	1/4" NPT	7/16"-20 SAE	1/2" NPT	3/4" NPT	Tri-Clamp®	Bottom Mount	Centre Back	Lower Back	In Line	5% of full scale value	3-2-3% (Grade B)	2.5% of full scale value	2% of full scale value	2-1-2% (Grade A)	1.5% of full scale value	1% (Grade 1A)	0.75% of full scale value	0.5% and better (2A - 4A)	RoHS compliant
108	DPG Digital Pressure Gauge			X							X	X			X	X	X	X		X									X			X					X										X			X
33	P1S 100 Series Gauge				X	X	X	X			X	X			X	X	X		X						X		X					X					X	X	X								X			
36	P3S 300 Series Gauge						X	X	X	X	X	X			X	X	X	X							X		X		X			X		X			X		X										X	
72	P9S 90 Series Gauge	X	X	X	X						X	X			X	X			X								X				X	X					X	X							X					
75	P9U 90 Series Gauge	X	X	X	X						X				X	X			X								X				X	X						X							X					
95	PAG 3A Premium Pharmaceutical & Sanitary Gauge			X		X					X	X			X	X						X	X						X							X	X	X	X									X		X
109	PAM Ammonia Gauge			X	X	X		X	X	X	X	X							X			X	X		X				X			X					X	X	X			X				X	X		X	X
39	PBC Forged Brass Case Gauge			X		X					X	X			X	X	X	X					X	X			X					X		X			X	X							X	X			
42	PCC Colour Coded Gauge					X					X	X			X	X	X	X		X			X				X		X			X		X			X									X			
100	PCG Compressed Gas Gauge	X	X												X	X	X		X								X			X	X						X	X				X					X			
44	PCT Contractor Gauge						X				X	X			X	X	X					X					X					X					X										X			
44	PCT-LF Lead Free Contractor Gauge						X				X	X			X	X	X					X						X				X					X										X			
83	PDT Differential Gauge						X	X							X	X									X		X		X			X					X		X								X			
85	PDX Duplex Gauge						X	X							X	X									X		X		X			X					X		X								X			
78	PEM Economy Gauge	X	X	X		X					X	X			X	X	X		X		X						X				X	X					X	X				X								
78	PEM-LF Lead Free Economy Gauge	X	X	X		X					X	X			X	X	X		X		X							X			X	X					X	X				X								
18	PEM-ZR Economy StabiliZR® Gauge	X	X	X		X					X	X			X	X	X		X		X						X				X	X					X	X				X								
118	PET Economy Test Gauge		X	X											X				X								X								X		X					X								
118	PET-LF Lead Free Economy Test Gauge			X											X				X									X							X		X					X								
81	PEU Economy Panel Mounted Gauge	X	X	X							X				X				X								X				X	X						X					X								
87	PFD WinAIR Differential Gauge					X						X	X	X											X	X					X						X													
112	PFE Sprinkler Gauge				X										X					X								X				X					X			X		X			X						
113	PFG Refrigeration Gauge			X		X		X			X	X			X	X			X	X											X	X					X	X						X			X			
45	PFP Premium Stainless Steel Liquid Filled Gauge			X		X	X	X			X	X			X	X	X	X				X	X				X		X			X		X			X	X	X							X	X			X
51	PFP Premium Stainless Steel Liquid Filled Gauge for Panel Mounting			X							X	X			X	X	X	X				X	X						X			X							X							X				X
21	PFP-ZR Premium Stainless Steel StabiliZR® Gauge			X		X		X			X	X			X	X	X	X				X							X			X		X			X	X	X							X	X			X
53	PFQ Stainless Steel Liquid Filled Gauge	X	X	X		X					X	X			X	X	X	X				X	X				X		X		X	X	X	X			X	X					X			X			X	
53	PFQ-LF Lead Free Stainless Steel Liquid Filled Gauge			X		X					X	X			X	X	X	X				X						X				X					X	X								X			
25	PFQ-ZR Stainless Steel StabiliZR® Gauge			X							X	X			X	X	X	X				X					X					X					X	X									X			
115	PLP Low Pressure Gauge			X		X	X	X					X	X					X			X			X		X		X			X					X	X				X								
64	PN2 NACE Gauge - MR0175-2002					X		X			X	X			X	X	X	X				X	X						X			X		X			X	X									X			X
28	PN2-ZR NACE StabiliZR® Gauge - MR0175-2002					X					X	X			X	X	X	X				X							X					X			X										X			X
11	PPC Process Gauge						X				X	X			X	X	X	X			X		X				X		X			X		X			X		X										X	X
30	PPC-ZR StabiliZR® Process Gauge						X				X	X			X	X	X	X			X						X		X			X		X			X		X										X	X
91	PPD Piston (High Static Pressure Differential)			X	X		X								X					X					X		X		X			X		X			X	X		X			X							
13	PRC Receiver Gauge						X								X						X						X		X			X		X			X		X										X	
92	PRD Rolling Diaphragm (High Static Pressure Differential)			X											X					X									X			X								X	X									
102	PRL Regulator Gauge	X	X								X				X	X	X					X							X		X	X					X	X					X							X
66	PSC Safety Case Gauge					X	X	X			X	X			X	X	X					X	X						X			X					X										X		X	X
93	PSD Small Convoluted Diaphragm (High Static Pressure Differential)			X	X		X								X					X					X		X		X		X	X					X	X		X			X							
14	PSG Schaeffer Gauge					X		X					X		X							X							X					X			X									X				
104	PSP Spiral Tube Gauge	X													X	X	X							X			X				X						X					X								
97	PSQ 3A Quality Sanitary Gauge			X		X					X	X			X	X	X					X							X							X	X	X	X							X	X			X
68	PTG Test Gauge					X		X			X				X	X	X	X				X					X		X			X		X			X												X	
16	PTR Tamper Resistant Process Gauge						X								X	X	X				X								X					X			X										X			
70	PTS Tube Stub Gauge			X							X	X			X	X	X					X	X						X			X					X	X								X			
94	PVD Convoluted Diaphragm (High Static Pressure Differential)				X		X						X							X					X		X		X			X					X	X		X	X			X						
106	PWL Welding Gauge	X	X	X											X	X	X							X			X				X	X					X					X								

Note: When selecting a pressure gauge, always refer to ASME B40.100 (2013)

1. Optional Hinged Case
2. Optional Flush Mounting Ring

RoHS compliant

Note: RoHS applies to SS and Monel® internals only

Description & Features:

- Solid phenolic front and polypropylene pressure relief back safety case
- Field liquid-fillable (bottom connection only)
- ±0.5% accuracy
- Stainless steel full rotary movement for longer life
- Micrometer adjustable pointer for ease in calibration
- Under and overload stops
- 316L stainless steel, brass, Monel® wetted parts
- Restricted orifice standard on dual scale (optional on single scale)
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Ideally suited for process, chemical, petroleum and power industries
- Suitable for non-clogging corrosive media
- Used where operator safety is a requirement
- Processes where pulsation and vibration exist (with liquid filling)

Specifications	Stainless Steel Internals	Brass Internals
Dial	4.5” (115mm) white aluminum with black and red markings	4.5” (115mm) white aluminum with black and red markings
Case	Black phenolic with pressure relief back, solid front, integral back flange	Black phenolic with pressure relief back, solid front, integral back flange
Solid Wall	Phenolic	Phenolic
Pressure Relief Back	Polypropylene	Polypropylene
Window	Polycarbonate	Polycarbonate
Ring	Phenolic	Phenolic
Pointer	Aluminum, anodized black, micrometer adjustable	Aluminum, anodized black, micrometer adjustable
Socket	316L SS	OT 58 brass
Connection	1/4” NPT or 1/2” NPT standard, bottom or back	1/4” NPT or 1/2” NPT standard, bottom or back
Bourdon Tube	316L SS, drawn seamless	Phosphor bronze
Movement	304 SS with under and overload stops	304 SS with under and overload stops
Gasket Materials	Dry & glycerin filled gauges: Black NBR Silicone filled gauges: Brown NBR	Dry & glycerin filled gauges: Black NBR Silicone filled gauges: Brown NBR
Welding	TIG	Silver alloy
Over-pressure Limit	25% for pressures below 1,500 psi (10,341 kPa), 15% for pressures 1,500 psi to 8,700 psi (10,341 kPa to 59,984 kPa), 10% for pressures above 8,700 psi (59,984 kPa)	25% for pressures below 1,500 psi (10,341 kPa), 15% for pressures 1,500 psi to 8,700 psi (10,341 kPa to 59,984 kPa), 10% for pressures above 8,700 psi (59,984 kPa)
Working Pressure	Maximum 75% of full scale value	Maximum 75% of full scale value
Ambient Temperature	Dry: -40°F to 250°F (-40°C to 120°C) Glycerin Filled: -4°F to 150°F (-20°C to 65°C)	Dry: -40°F to 250°F (-40°C to 120°C) Glycerin Filled: -4°F to 150°F (-20°C to 65°C)
Process Temperature	-40°F to 250°F (-40°C to 120°C)	-40°F to 150°F (-40°C to 65°C)
Accuracy	±0.5% ANSI/ASME Grade 2A	±0.5% ANSI/ASME Grade 2A
Enclosure Rating	IP65	IP65
Warning (brass internals only)	N/A	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Monel® is a registered trademark of Inco Alloys International

Single Scale Order Codes (products in bold are normally stock in North America)

Connection	1/4" Bottom	1/4" Back (LB)	1/2" Bottom	1/2" Back (LB)
Socket, Tube	SS			
30" Hg Vac	PPC5040R6	PPC5340R6	PPC5060R6	PPC5460R6
30"/0/15 psi	PPC5130R1	PPC5330R1	PPC5140R1	PPC5440R1
30"/0/30 psi	PPC5131R1	PPC5331R1	**PPC5141R1**	PPC5441R1
30"/0/60 psi	PPC5132R1	PPC5332R1	PPC5142R1	PPC5442R1
30"/0/100 psi	PPC5133R1	PPC5333R1	PPC5143R1	PPC5443R1
30"/0/160 psi	PPC5134R1	PPC5334R1	PPC5144R1	PPC5444R1
30"/0/200 psi	PPC5135R1	PPC5335R1	PPC5145R1	PPC5445R1
30"/0/300 psi	PPC5136R1	PPC5336R1	PPC5146R1	PPC5446R1
0/15 psi	PPC5041R1	PPC5341R1	PPC5061R1	PPC5461R1
0/30 psi	PPC5042R1	PPC5342R1	**PPC5062R1**	PPC5462R1
0/60 psi	PPC5043R1	PPC5343R1	**PPC5063R1**	PPC5463R1
0/100 psi	**PPC5044R1**	PPC5344R1	**PPC5064R1**	PPC5464R1
0/160 psi	PPC5045R1	PPC5345R1	**PPC5065R1**	PPC5465R1
0/200 psi	PPC5046R1	PPC5346R1	**PPC5066R1**	PPC5466R1
0/300 psi	PPC5047R1	PPC5347R1	**PPC5067R1**	PPC5467R1
0/400 psi	PPC5048R1	PPC5348R1	**PPC5068R1**	PPC5468R1
0/600 psi	PPC5049R1	PPC5349R1	**PPC5069R1**	PPC5469R1
0/800 psi	PPC5058R1	PPC5358R1	**PPC5078R1**	PPC5478R1
0/1,000 psi	PPC5050R1	PPC5350R1	**PPC5070R1**	PPC5470R1
0/1,500 psi	PPC5051R1	PPC5351R1	**PPC5071R1**	PPC5471R1
0/2,000 psi	PPC5052R1	PPC5352R1	**PPC5072R1**	PPC5472R1
0/3,000 psi	PPC5053R1	PPC5353R1	**PPC5073R1**	PPC5473R1
0/5,000 psi	PPC5054R1	PPC5354R1	**PPC5074R1**	PPC5474R1
0/6,000 psi	PPC5199R1	-	PPC5178R1	-
0/10,000 psi	PPC5055R1	PPC5355R1	PPC5075R1	PPC5475R1
0/15,000 psi	PPC5056R1	PPC5356R1	PPC5076R1	PPC5476R1
0/20,000 psi	PPC5057R1	PPC5357R1	PPC5077R1	PPC5477R1

Note: Restrictor screws are not standard on single scale gauges

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.

Option suffix:
FMR = Flush mounting ring
G = Glycerin (bottom connection only)
HCSF = Solid front hinged case (back connection only)
MAXI45 = 4.5" (115mm) Maxi pointer
MS = Monel® tube and socket
REST = Restrictor Screw (psi only)
SG-T-45 = Tempered Safety Glass
SF45 = Silicone fill (bottom connection only)

For Win**BRIGHT** dial options refer to Custom Dials

Dual Scale Order Codes (products in bold are normally stock in North America)

Connection	1/4" Bottom	1/4" Back (LB)	1/4" Bottom	1/4" Back (LB)	1/2" Bottom	1/2" Back (LB)	1/2" Bottom	1/2" Back (LB)
Socket, Tube	Brass		SS		Brass		SS	
30" Hg Vac/kPa	PPC5080	PPC5280	PPC5040	PPC5340	-	-	PPC5060	PPC5460
30"/0/15 psi/kPa	PPC5120	PPC5220	PPC5130	PPC5330	-	-	PPC5140	PPC5440
30"/0/30 psi/kPa	PPC5121	PPC5221	PPC5131	PPC5331	-	-	PPC5141	PPC5441
30"/0/60 psi/kPa	PPC5122	PPC5222	PPC5132	PPC5332	-	-	PPC5142	PPC5442
30"/0/100 psi/kPa	PPC5123	PPC5223	PPC5133	PPC5333	-	-	PPC5143	PPC5443
30"/0/160 psi/kPa	PPC5124	PPC5224	PPC5134	PPC5334	-	-	PPC5144	PPC5444
30"/0/200 psi/kPa	PPC5125	PPC5225	PPC5135	PPC5335	-	-	PPC5145	PPC5445
30"/0/300 psi/kPa	PPC5126	PPC5226	PPC5136	PPC5336	-	-	PPC5146	PPC5446
0/15 psi/kPa	**PPC5081**	PPC5281	PPC5041	PPC5341	-	-	**PPC5061**	PPC5461
0/30 psi/kPa	**PPC5082**	PPC5282	PPC5042	PPC5342	-	-	**PPC5062**	PPC5462
0/60 psi/kPa	**PPC5083**	PPC5283	PPC5043	PPC5343	-	-	**PPC5063**	PPC5463
0/100 psi/kPa	**PPC5084**	PPC5284	**PPC5044**	PPC5344	-	-	**PPC5064**	PPC5464
0/160 psi/kPa	**PPC5085**	PPC5285	**PPC5045**	PPC5345	-	-	**PPC5065**	PPC5465
0/200 psi/kPa	**PPC5086**	PPC5286	**PPC5046**	PPC5346	-	-	**PPC5066**	PPC5466
0/300 psi/kPa	**PPC5087**	PPC5287	**PPC5047**	PPC5347	-	-	**PPC5067**	PPC5467
0/400 psi/kPa	PPC5088	PPC5288	PPC5048	PPC5348	-	-	PPC5068	PPC5468
0/600 psi/kPa	**PPC5089**	PPC5289	PPC5049	PPC5349	-	-	**PPC5069**	PPC5469
0/800 psi/kPa	PPC5099	PPC5299	PPC5058	PPC5358	PPC5188	PPC5198	PPC5078	PPC5478
0/1,000 psi/kPa	PPC5098	PPC5298	PPC5050	PPC5350	PPC5090	PPC5290	**PPC5070**	PPC5470
0/1,500 psi/kPa	-	-	PPC5051	PPC5351	PPC5091	PPC5291	PPC5071	PPC5471
0/2,000 psi/kPa	-	-	PPC5052	PPC5352	PPC5092	PPC5292	PPC5072	PPC5472
0/3,000 psi/kPa	-	-	PPC5053	PPC5353	PPC5093	PPC5293	PPC5073	PPC5473
0/5,000 psi/kPa	-	-	PPC5054	PPC5354	PPC5094	PPC5294	PPC5074	PPC5474
0/6,000 psi/kPa	PPC5199	-	PPC5158	-	PPC5398	-	PPC5178	-
0/10,000 psi/kPa	-	-	PPC5055	PPC5355	PPC5095	PPC5295	PPC5075	PPC5475
0/15,000 psi/kPa	-	-	PPC5056	PPC5356	PPC5096	PPC5296	PPC5076	PPC5476
0/20,000 psi/kPa	-	-	PPC5057	PPC5357	PPC5097	PPC5297	PPC5077	PPC5477

4.5” Bottom Connection

4.5” Back Connection

PRC Receiver Gauge

Description & Features:

- High quality gauge designed to work with a pneumatic transmitter or controller
- 3-15 psi with a variety of receiver ranges
- 316 stainless steel or brass wetted parts
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Works in conjunction with valves and transmitters to indicate changes in pressure, temperature, flow, level, or other measured proportional variables

Order Codes

Connection	1/4” Bottom	1/4” Back	1/4” Bottom	1/4” Back
Socket, Tube	Brass		SS	
3/15 psi/0-100%	PRC5081REC	PRC5281REC	PRC5041REC	PRC5341REC
3/27 psi/0-100%	PRC5082REC	PRC5283REC	PRC5042REC	PRC5342REC

PSG Schaeffer Gauge

Description & Features:

- A combination pressure gauge and diaphragm seal forming one unique instrument that measures low pressures where protection from the process media is required
- Bottom connection only
- All stainless steel construction
- A variety of materials available
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Used for low pressure corrosive media where diaphragm seal protection is needed
- Processes where low or high temperature will affect seal fill fluid

Specifications	
Dial	4” (100mm), 6” (150mm) white aluminum with black markings
Case	304 SS
Upper Flange	SS (neck and base movements)
Lower Flange	316L SS bottom connection
Lens	Acrylic
Connection	1/2” NPTM bottom (female optional)
Diaphragm Element	316 SS, 316 SSI PTFE lined, (Tantalum option)
Movement	All SS - Push rod / connecting link and segment
Pointer	Adjustable pointer - aluminum
Wetted Parts	316 SS (other materials available upon request)
Ambient Temperature	-13°F to 150°F (-25°C to 65°C)
Process Temperature	212°F (100°C) Maximum
Accuracy	±1.5% of full scale value
Enclosure Rating	IP54

Single Scale Order Codes

Dial Size	4” (100mm)	6” (150mm)
Connection	1/2” Bottom	
0/10” water/oz	PSG40105R8	PSG60105R1
0/30” water/oz	PSG40305R1	PSG60305R1
0/60” water/oz	PSG40605R1	PSG60605R1
0/100” water/oz	PSG401005R1	PSG601005R1
0/160” water/oz	PSG401605R1	PSG601605R1
0/200” water/oz	PSG402005R1	PSG602005R1
0/300” water/oz	PSG403005R1	PSG603005R1
0/10 psi	PSG4105R1	PSG6105R1
0/15 psi	PSG4155R1	PSG6155R1
0/30 psi	PSG4305R1	PSG6305R1
0/60 psi	PSG4605R1	PSG6605R1
0/100 psi	PSG41005R1	PSG61005R1
0/160 psi	PSG41605R1	PSG61605R1
0/200 psi	PSG42005R1	PSG62005R1
0/300 psi	PSG43005R1	PSG63005R1

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes. **For options, attach suffix to end of order code: i.e. PSG41005R1-SG-4 for SAFETY GLASS.**

Option suffix:
SG-4 = 4” (100mm) Safety glass lens
SG-6 = 6” (150mm) Safety glass lens

Dual Scale Order Codes

Dial Size	4" (100mm)	6" (150mm)
Connection	1/2" Bottom	
0/10" water/oz	PSG40105	PSG60105
0/30" water/oz	PSG40305	PSG60305
0/60" water/oz	PSG40605	PSG60605
0/100" water/oz	PSG401005	PSG601005
0/160" water/oz	PSG401605	PSG601605
0/200" water/oz	PSG402005	PSG602005
0/300" water/oz	PSG403005	PSG603005
0/10 psi/kPa	PSG4105	PSG6105
0/15 psi/kPa	PSG4155	PSG6155
0/30 psi/kPa	PSG4305	PSG6305
0/60 psi/kPa	PSG4605	PSG6605
0/100 psi/kPa	PSG41005	PSG61005
0/160 psi/kPa	PSG41605	PSG61605
0/200 psi/kPa	PSG42005	PSG62005
0/300 psi/kPa	PSG43005	PSG63005

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes. **For options, attach suffix to end of order code: i.e. PSG41005-SG-4 for SAFETY GLASS.**

Option suffix:
SG-4 = 4" (100mm) Safety glass lens
SG-6 = 6" (150mm) Safety glass lens

For pressure ranges greater than 0-10 psi/kPa

Case Dia.	Flange Dia.	A	B	C	D	E
4" / 100 mm	4" / 100 mm	4.43" / 112	3.90" / 99	2.16" / 55	6.99" / 177	3.86" / 98
6" / 150 mm	4" / 100 mm	6.10" / 155	5.51" / 140	2.20" / 56	6.99" / 177	3.86" / 98

For pressure ranges less than and equal to 10 psi/kPa

Case Dia.	Flange Dia.	A	B	C	D	E
4" / 100 mm	6" / 150 mm	4.43" / 112	3.90" / 99	2.16" / 55	6.99" / 177	6.10" / 155
6" / 150 mm	6" / 150 mm	6.10" / 155	5.51" / 140	2.20" / 56	6.99" / 177	6.10" / 155

PTR Tamper Resistant Process Gauge

Description & Features:

- Solid front, pressure relief back, welded to a 316L stainless steel one-piece diaphragm seal body
- 316L stainless steel diaphragm for use on most corrosive media
- Permanently enclosed silicone filled system
- Field-fillable gauge
- Orifice restrictor available for severe pulsation
- Pin stop at 6 o'clock available
- ASME B40.100 compliant
- CRN registered
- 5 year warranty on gauge and seal

Applications:

- Process industry where tamper-resistant gauge/seal is required to protect against maintenance errors in the field
- Suited for installations in process, oil and gas, petrochemical and chemical industries
- Tamper resistant construction controls leaks and protects against field errors

Specifications - Gauge	
Dial	4.5" (115mm) white aluminum with black and red markings
Case	Black phenolic with pressure relief back, solid front, integral back flange
Solid Wall	Phenolic
Pressure Relief Back	Polypropylene
Window	Polycarbonate
Ring	Phenolic
Pointer	Aluminum, anodized black, micrometer adjustable
Socket	316L SS
Bourdon Tube	316L SS, drawn seamless
Movement	304 SS with protective under and overload stops
Gasket Materials	Silicone (FKM option)
Welding	TIG
Over-pressure Limit	25% for pressures up to 1,450 psi (9,998 kPa), 15% for pressures 1,451 psi to 5,000 psi (9,998 kPa to 34,474 kPa)
Working Pressure	Maximum 75% of full scale value
Ambient Temperature	Dry: -40°F to 250°F (-40°C to 120°C)
Process Temperature	Silicone Filled: -49°F to 302°F (-45°C to 150°C)
Accuracy	±1% ANSI/ASME Grade A
Enclosure Rating	IP65

Specifications - Seal	
Housing	AISI 316 SS
Diaphragm	AISI 316L SS, welded
Minimum Operating Pressure	15 psi (103 kPa)
Maximum Operating Pressure	2,500 psi to 5,000 psi (17,237 kPa to 34,474 kPa)
Process Connection	1/2" NPTM
System Fill	Silicone oil KF96 50CS

Order Codes

Connection	1/2” Bottom
Socket, Tube	**SS**
0/15 psi	PTR5061R1
0/30 psi	PTR5062R1
0/60 psi	PTR5063R1
0/100 psi	PTR5064R1
0/160 psi	PTR5065R1
0/200 psi	PTR5066R1
0/300 psi	PTR5067R1
0/400 psi	PTR5068R1
0/600 psi	PTR5069R1
0/1,000 psi	PTR5070R1
0/1,500 psi	PTR5071R1
0/2,000 psi	PTR5072R1
0/3,000 psi	PTR5073R1
0/5,000 psi	PTR5074R1

Other ranges and connection sizes (3/4” NPTM, 1” NPTM, 1/2” NPTF) available upon request. Other fills available. Pin stop at 6 o’clock position available. **For options, attach suffix to end of order code: i.e. PTR5070-SF45 for SILICONE-FILLED GAUGE CASE.**

Option suffix:

G = Glycerin-filled gauge case
RS = Orifice restrictor for severe pulsation
SF45 = Silicone-filled gauge case
SG-45 = Safety glass
TAG = Stainless steel tagging
TC = NIST test certificate of calibration
ZR = StabiliZR® movement

PEM-ZR Economy StabiliZR® Gauge

STABILIZR® power

Description & Features:

- StabiliZR® dampened movement minimizes effects of pulsation and vibration
- Most economical, all-purpose pressure gauge
- 1.5” (40mm) to 4” (100mm) sizes
- Friction bezel rings
- Black steel case
- Brass wetted parts
- ±3-2-3% accuracy
- ASME B40.100 compliant (EN837-1 available)
- CRN registered
- 5 year warranty

Applications:

- General purpose gauge for plumbing, heating, air conditioning, pneumatic, hydraulic, water tanks and air compressors
- Suitable for non-clogging and non-corroding media

Specifications	
Dial	1.5” (40mm), 2” (50mm), 2.5” (63mm), 4” (100mm) white aluminum with black and red markings
Case	Steel, painted black (plastic available)
Lens	1.5” (40mm), 2” (50mm), 2.5” (63mm): Acrylic 4” (100mm): Glass
Ring	1.5” (40mm), 2” (50mm): Steel, painted black 2.5” (63mm), 4” (100mm): Steel, chrome plated
Socket	Brass
Connection	1/8” NPT or 1/4” NPT standard
Bourdon Tube	Phosphor bronze
Movement	Brass, StabiliZR® dampened movement (silicone in sealed chamber)
Pointer	Aluminum, black
Welding	Silver alloy
Over-pressure Limit	25% of full scale value
Working Pressure	Maximum 75% of full scale value
Ambient Temperature	-76°F to 200°F (-60°C to 93°C)
Process Temperature	-40°F to 150°F (-40°C to 65°C)
Accuracy	±3-2-3% ANSI/ASME Grade B
Enclosure Rating	IP52
Warning	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Order Codes (products in bold are normally stock in North America)

Dial Size	1.5” (40mm)		2” (50mm)				2.5” (63mm)		4” (100mm)
Connection	1/8” Bottom	1/8” Back (CB)	1/8” Bottom	1/8” Back (CB)	1/4” Bottom	1/4” Back (CB)	1/4” Bottom	1/4” Back (CB)	1/4” Bottom
Case Material	Steel						Steel		
30” Hg Vac/kPa	PEM1297ZR	PEM1397ZR	PEM195ZR	PEM1424ZR	PEM135ZR	PEM1428ZR	PEM210ZR	PEM1431ZR	PEM220ZR
30”/0/15 psi/kPa	-	-	-	-	-	-	PEM152ZR	-	-
30”/0/30 psi/kPa	-	-	-	-	-	-	PEM153ZR	-	-
30”/0/60 psi/kPa	-	-	-	-	-	-	PEM154ZR	-	-
30”/0/100 psi/kPa	-	-	-	-	-	-	PEM155ZR	-	-
0/15 psi/kPa	PEM1299ZR	PEM1399ZR	PEM196ZR	PEM1425ZR	PEM136ZR	PEM1429ZR	PEM211ZR	PEM1436ZR	PEM295ZR
0/30 psi/kPa	PEM1300ZR	PEM1400ZR	PEM206ZR	PEM1402ZR	PEM199ZR	PEM1403ZR	PEM212ZR	PEM1437ZR	PEM221ZR
0/60 psi/kPa	PEM1301ZR	PEM1401ZR	PEM207ZR	PEM1404ZR	PEM201ZR	PEM1405ZR	PEM213ZR	PEM1438ZR	PEM222ZR
0/100 psi/kPa	PEM1320ZR	PEM1420ZR	PEM208ZR	PEM1406ZR	PEM202ZR	PEM1407ZR	PEM214ZR	PEM1439ZR	PEM223ZR
0/160 psi/kPa	PEM1321ZR	PEM1421ZR	PEM197ZR	PEM1408ZR	PEM203ZR	**PEM1409ZR**	PEM215ZR	PEM1440ZR	PEM224ZR
0/200 psi/kPa	PEM1322ZR	PEM1422ZR	PEM209ZR	PEM1426ZR	PEM204ZR	PEM1410ZR	PEM216ZR	PEM1441ZR	PEM225ZR
0/300 psi/kPa	PEM1323ZR	PEM1423ZR	PEM198ZR	PEM1427ZR	PEM205ZR	PEM1411ZR	PEM217ZR	PEM1442ZR	PEM226ZR
0/400 psi/kPa	-	-	-	-	-	PEM1414ZR	PEM219ZR	PEM3412ZR	PEM227ZR
0/600 psi/kPa	-	-	-	-	-	PEM1412ZR	PEM218ZR	PEM3413ZR	-
0/1,000 psi/kPa	-	-	-	-	-	-	PEM290ZR	-	-
0/3,000 psi/kPa	-	-	-	-	-	-	PEM291ZR	-	-
0/5,000 psi/kPa	-	-	-	-	-	-	PEM292ZR	-	-

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.
For options, attach suffix to end of order code: i.e. PEM1399ZR-GL15 for 1.5” GLASS LENS.

Option suffix:
EN = EN837-1 compliant
GL15 = Glass lens for 1.5” (40mm) dial
GL2 = Glass lens for 2” (50mm) dial
GL25 = Glass lens for 2.5” (63mm) dial

1.5” Bottom Connection

1.5” Back Connection

2” Bottom Connection

2” Back Connection

2.5” Bottom Connection

2.5” Back Connection

4” Bottom Connection

RoHS compliant

STABILIZR® power

Description & Features:

- StabiliZR® dampened movement minimizes effects of pulsation and vibration as effectively as liquid filled gauges
- Restrictor screw standard on dual scale (optional on single scale)
- Stainless steel case
- Under and overload stops (4” and 6”)
- Back, bottom or panel mounted
- 316L SS wetted parts
- ASME B40.100 compliant (EN837-1 available)
- CRN registered
- 5 year warranty

Applications:

- Outdoor and severe ambient and process conditions
- Use where harmful vibration and pulsation are present
- Hydraulic equipment, oil field equipment, pumps, compressors and process industries

Specifications	
Dial	2.5” (63mm), 4” (100mm), 6” (150mm) white aluminum with black and red markings
Case	AISI 304 SS (dry)
Lens	Polycarbonate
Ring	AISI 304 SS bayonet
Socket	316L SS
Connection	2.5” (63mm): 1/4” NPT 4” (100mm), 6” (150mm): 1/4”, 1/2” NPT
Bourdon Tube	316L SS
Movement	304 SS, (under and overload stops 4” and 6”) and StabiliZR® dampened movement (silicone in sealed chamber)
Pointer	2.5” (63mm): Aluminum, anodized black 4” (100mm), 6” (150mm): Aluminum, anodized black, micrometer adjustable
Welding	Laser welded socket to case
Over-pressure Limit	25% for pressures up to 1,450 psi (9,998 kPa), 15% for pressures over 1,450 psi (9,998 kPa)
Lens Ring Gasket	Buna N
Ambient Temperature	-76°F to 200°F (-60°C to 93°C)
Process Temperature	-40°F to 250°F (-40°C to 120°C)
Working Pressure	Maximum 75% of full scale value
Accuracy	2.5” (63mm): ±1.5% of full scale value 4” (100mm), 6” (150mm): ±1% ANSI/ASME Grade 1A
Enclosure Rating	NEMA 4X/IP66, EN60529-1 (IEC529-1)

Single Scale Order Codes (products in bold are normally stock in North America)

Dial Size	2.5" (63mm)		4" (100mm)				6" (150mm)	
Connection	1/4" Bottom	1/4" Back (CB)	1/4" Bottom	1/4" Back (LB)	1/2" Bottom	1/2" Back (LB)	1/4" Bottom	1/2" Bottom
30" Hg Vac	PFP820ZRR6	PFP840ZRR6	PFP640ZRR6	PFP1090ZRR6	PFP655ZRR6	-	PFP1078ZRR6	PFP2326ZRR6
30"/0/15 psi	PFP860ZRR1	PFP870ZRR1	PFP1036ZRR1	PFP1244ZRR1	PFP1044ZRR1	-	PFP1079ZRR1	PFP2327ZRR1
30"/0/30 psi	PFP861ZRR1	PFP871ZRR1	PFP1037ZRR1	PFP1245ZRR1	PFP1045ZRR1	-	PFP1052ZRR1	PFP2328ZRR1
30"/0/60 psi	PFP862ZRR1	PFP872ZRR1	PFP1038ZRR1	PFP1246ZRR1	PFP1046ZRR1	-	PFP1053ZRR1	PFP2329ZRR1
30"/0/100 psi	PFP863ZRR1	PFP873ZRR1	PFP1039ZRR1	PFP1247ZRR1	PFP1047ZRR1	-	PFP1054ZRR1	PFP2330ZRR1
30"/0/150 psi	PFP864ZRR1	PFP874ZRR1	PFP1040ZRR1	PFP1248ZRR1	PFP1048ZRR1	-	PFP1055ZRR1	PFP2331ZRR1
30"/0/200 psi	PFP866ZRR1	PFP876ZRR1	PFP1042ZRR1	PFP1249ZRR1	PFP1050ZRR1	-	PFP1057ZRR1	PFP2332ZRR1
30"/0/300 psi	PFP867ZRR1	PFP877ZRR1	PFP1043ZRR1	PFP1250ZRR1	PFP1051ZRR1	-	PFP1058ZRR1	PFP2333ZRR1
0/15 psi	PFP821ZRR1	PFP921ZRR1	PFP641ZRR1	PFP1091ZRR1	PFP656ZRR1	-	PFP1059ZRR1	PFP2334ZRR1
0/30 psi	PFP822ZRR1	PFP922ZRR1	PFP642ZRR1	PFP1092ZRR1	PFP657ZRR1	-	PFP1060ZRR1	PFP2335ZRR1
0/60 psi	PFP823ZRR1	PFP923ZRR1	PFP643ZRR1	PFP1093ZRR1	PFP658ZRR1	-	PFP1061ZRR1	PFP2336ZRR1
0/100 psi	PFP824ZRR1	PFP924ZRR1	PFP644ZRR1	PFP1094ZRR1	PFP659ZRR1	-	PFP1062ZRR1	PFP2337ZRR1
0/160 psi	PFP825ZRR1	PFP925ZRR1	PFP645ZRR1	PFP1095ZRR1	PFP660ZRR1	-	PFP1063ZRR1	PFP2338ZRR1
0/200 psi	PFP826ZRR1	PFP926ZRR1	PFP646ZRR1	PFP1096ZRR1	PFP661ZRR1	-	PFP1064ZRR1	PFP2339ZRR1
0/300 psi	PFP827ZRR1	PFP927ZRR1	PFP647ZRR1	PFP1097ZRR1	PFP662ZRR1	-	PFP1065ZRR1	PFP2340ZRR1
0/400 psi	PFP880ZRR1	PFP881ZRR1	PFP650ZRR1	PFP1251ZRR1	PFP666ZRR1	-	PFP1077ZRR1	PFP2341ZRR1
0/600 psi	PFP828ZRR1	PFP928ZRR1	PFP648ZRR1	PFP1098ZRR1	PFP663ZRR1	-	PFP1066ZRR1	PFP2342ZRR1
0/1,000 psi	PFP829ZRR1	PFP929ZRR1	PFP649ZRR1	PFP1099ZRR1	PFP664ZRR1	-	PFP1067ZRR1	PFP1080ZRR1
0/1,500 psi	PFP834ZRR1	PFP934ZRR1	-	PFP1252ZRR1	PFP665ZRR1	PFP1190ZRR1	PFP1068ZRR1	PFP1081ZRR1
0/2,000 psi	PFP830ZRR1	PFP930ZRR1	-	PFP1253ZRR1	PFP667ZRR1	PFP1191ZRR1	PFP1069ZRR1	PFP1082ZRR1
0/3,000 psi	PFP831ZRR1	PFP931ZRR1	-	PFP1254ZRR1	PFP668ZRR1	PFP1192ZRR1	PFP1070ZRR1	PFP1083ZRR1
0/5,000 psi	PFP832ZRR1	PFP852ZRR1	-	PFP1255ZRR1	PFP669ZRR1	PFP1193ZRR1	PFP1072ZRR1	PFP1085ZRR1
0/6,000 psi	PFP836ZRR1	PFP851ZRR1	-	PFP1259ZRR1	PFP675ZRR1	PFP1197ZRR1	-	PFP1089ZRR1
0/10,000 psi	PFP833ZRR1	PFP853ZRR1	-	PFP1256ZRR1	PFP670ZRR1	PFP1194ZRR1	PFP1073ZRR1	PFP1086ZRR1
0/15,000 psi	PFP835ZRR1	PFP855ZRR1	-	PFP1257ZRR1	PFP671ZRR1	PFP1195ZRR1	PFP1074ZRR1	PFP1087ZRR1
0/20,000 psi	PFP837ZRR1	-	-	PFP1258ZRR1	PFP672ZRR1	PFP1196ZRR1	PFP1075ZRR1	PFP1088ZRR1

Note: Restrictor screws are not standard on single scale gauges

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes. **For options, attach suffix to end of order code: i.e. PFP660ZRR1-4FF for FRONT FLANGE.**

Option suffix:

25BF = 2.5" (63mm) Back flange
25BOOT = 2.5" (63mm) Black rubber boot
25FF = 2.5" (63mm) Front flange
25SS = 2.5" (63mm) 316 SS case
25UC = 2.5" (63mm) U-Clamp
4BF = 4" (100mm) Back flange
4FF = 4" (100mm) Front flange
4SS = 4" (100mm) SS case
4UC-P = 4" (100mm) U-Clamp premium
6BF = 6" (150mm) Back flange
6SS = 6" (150mm) SS case
EN = EN837-1 compliant
MAXI25 = 2.5" (63mm) Maximum adjustable pointer
MAXI4 = 4" (100mm) Maximum adjustable pointer
RSP4 = 4" (100mm) Red set pointer
RSP6 = 6" (150mm) Red set pointer
SG25 = 2.5" (63mm) Safety glass lens
SG-4 = 4" (100mm) Safety glass lens
SG-6 = 6" (150mm) Safety glass lens

For Win**BRIGHT** dial options refer to Custom Dials

Dual Scale Order Codes (products in bold are normally stock in North America)

Dial Size	2.5" (63mm)		4" (100mm)				6" (150mm)	
Connection	1/4" Bottom	1/4" Back (CB)	1/4" Bottom	1/4" Back (LB)	1/2" Bottom	1/2" Back (LB)	1/4" Bottom	1/2" Bottom
30" Hg Vac/kPa	PFP820ZR	PFP840ZR	PFP640ZR	PFP1090ZR	PFP655ZR	PFP2308ZR	PFP1078ZR	PFP2326ZR
30"/0/15 psi/kPa	PFP860ZR	PFP870ZR	PFP1036ZR	PFP1244ZR	PFP1044ZR	PFP2309ZR	PFP1079ZR	PFP2327ZR
30"/0/30 psi/kPa	PFP861ZR	PFP871ZR	PFP1037ZR	PFP1245ZR	PFP1045ZR	PFP2310ZR	PFP1052ZR	PFP2328ZR
30"/0/60 psi/kPa	PFP862ZR	PFP872ZR	PFP1038ZR	PFP1246ZR	PFP1046ZR	PFP2311ZR	PFP1053ZR	PFP2329ZR
30"/0/100 psi/kPa	PFP863ZR	PFP873ZR	PFP1039ZR	PFP1247ZR	PFP1047ZR	PFP2312ZR	PFP1054ZR	PFP2330ZR
30"/0/150 psi/kPa	PFP864ZR	PFP874ZR	PFP1040ZR	PFP1248ZR	PFP1048ZR	PFP2313ZR	PFP1055ZR	PFP2331ZR
30"/0/200 psi/kPa	PFP866ZR	PFP876ZR	PFP1042ZR	PFP1249ZR	PFP1050ZR	PFP2314ZR	PFP1057ZR	PFP2332ZR
30"/0/300 psi/kPa	PFP867ZR	PFP877ZR	PFP1043ZR	PFP1250ZR	PFP1051ZR	PFP2315ZR	PFP1058ZR	PFP2333ZR
0/15 psi/kPa	PFP821ZR	PFP921ZR	PFP641ZR	PFP1091ZR	PFP656ZR	PFP2316ZR	PFP1059ZR	PFP2334ZR
0/30 psi/kPa	**PFP822ZR**	PFP922ZR	**PFP642ZR**	PFP1092ZR	PFP657ZR	PFP2317ZR	PFP1060ZR	PFP2335ZR
0/60 psi/kPa	**PFP823ZR**	**PFP923ZR**	**PFP643ZR**	PFP1093ZR	**PFP658ZR**	PFP2318ZR	PFP1061ZR	PFP2336ZR
0/100 psi/kPa	**PFP824ZR**	**PFP924ZR**	**PFP644ZR**	PFP1094ZR	**PFP659ZR**	PFP2319ZR	PFP1062ZR	PFP2337ZR
0/160 psi/kPa	**PFP825ZR**	**PFP925ZR**	**PFP645ZR**	PFP1095ZR	PFP660ZR	PFP2320ZR	PFP1063ZR	PFP2338ZR
0/200 psi/kPa	**PFP826ZR**	**PFP926ZR**	PFP646ZR	PFP1096ZR	**PFP661ZR**	PFP2321ZR	PFP1064ZR	PFP2339ZR
0/300 psi/kPa	**PFP827ZR**	PFP927ZR	PFP647ZR	PFP1097ZR	PFP662ZR	PFP2322ZR	PFP1065ZR	PFP2340ZR
0/400 psi/kPa	PFP880ZR	PFP881ZR	PFP650ZR	PFP1251ZR	PFP666ZR	PFP2323ZR	PFP1077ZR	PFP2341ZR
0/600 psi/kPa	PFP828ZR	PFP928ZR	PFP648ZR	PFP1098ZR	PFP663ZR	PFP2324ZR	PFP1066ZR	PFP2342ZR
0/1,000 psi/kPa	PFP829ZR	PFP929ZR	PFP649ZR	PFP1099ZR	PFP664ZR	PFP2325ZR	PFP1067ZR	PFP1080ZR
0/1,500 psi/kPa	PFP834ZR	PFP934ZR	PFP2301ZR	PFP1252ZR	PFP665ZR	PFP1190ZR	PFP1068ZR	PFP1081ZR
0/2,000 psi/kPa	PFP830ZR	PFP930ZR	PFP2302ZR	PFP1253ZR	PFP667ZR	PFP1191ZR	PFP1069ZR	PFP1082ZR
0/3,000 psi/kPa	PFP831ZR	PFP931ZR	PFP2303ZR	PFP1254ZR	PFP668ZR	PFP1192ZR	PFP1070ZR	PFP1083ZR
0/5,000 psi/kPa	**PFP832ZR**	PFP852ZR	PFP2304ZR	PFP1255ZR	PFP669ZR	PFP1193ZR	PFP1072ZR	PFP1085ZR
0/6,000 psi/kPa	PFP836ZR	PFP851ZR	PFP2305ZR	PFP1259ZR	PFP675ZR	PFP1197ZR	-	PFP1089ZR
0/10,000 psi/kPa	PFP833ZR	PFP853ZR	PFP2306ZR	PFP1256ZR	PFP670ZR	PFP1194ZR	PFP1073ZR	PFP1086ZR
0/15,000 psi/kPa	PFP835ZR	PFP855ZR	PFP2307ZR	PFP1257ZR	PFP671ZR	PFP1195ZR	PFP1074ZR	PFP1087ZR
0/20,000 psi/kPa	PFP837ZR	-	-	PFP1258ZR	PFP672ZR	PFP1196ZR	PFP1075ZR	PFP1088ZR

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes. **For options, attach suffix to end of order code: i.e. PFP660ZR-4FF for FRONT FLANGE.**

Option suffix:

25BF = 2.5" (63mm) Back flange
25BOOT = 2.5" (63mm) Black rubber boot
25FF = 2.5" (63mm) Front flange
25SS = 2.5" (63mm) 316 SS case
25UC = 2.5" (63mm) U-Clamp
4BF = 4" (100mm) Back flange
4FF = 4" (100mm) Front flange
4SS = 4" (100mm) SS case
4UC-P = 4" (100mm) U-Clamp premium
6BF = 6" (150mm) Back flange
6SS = 6" (150mm) SS case
EN = EN837-1 compliant
MAXI25 = 2.5" (63mm) Maximum adjustable pointer
MAXI4 = 4" (100mm) Maximum adjustable pointer
RSP4 = 4" (100mm) Red set pointer
RSP6 = 6" (150mm) Red set pointer
SG25 = 2.5" (63mm) Safety glass lens
SG-4 = 4" (100mm) Safety glass lens
SG-6 = 6" (150mm) Safety glass lens

For Win**BRIGHT** dial options refer to Custom Dials

2.5” Bottom Connection with Back Flange

2.5” Back Connection with Front Flange

2.5” Back Connection with U-Clamp

4” Bottom Connection with Back Flange

4” Lower Back Connection with Front Flange

STABILIZR® power

Description & Features:

- StabiliZR® dampened movement minimizes effects of pulsation and vibration as effectively as liquid filled gauges
- Restricted orifice standard on dual scale
- Crimp-on bezel
- Brass internals
- Dual scale (psi/kPa)
- U-Clamps and front flanges for panel mounting
- ASME B40.100 compliant (EN837-1 available)
- CRN registered
- 5 year warranty

Applications:

- Ideal for pumps, compressors, hydraulic presses, machinery, pneumatic equipment and motors in harsh environments
- Use where harmful vibration and pulsation are present

Specifications	
Dial	2.5” (63mm) aluminum with red and black markings
Case	304 SS (dry)
Lens	Polycarbonate
Ring	304 SS (crimped on)
Socket	Brass with restricted orifice (dual scale only)
Connection	1/4” NPT
Bourdon Tube	Bronze
Movement	Brass with StabiliZR® dampened movement (silicone in sealed chamber)
Pointer	Anodized black aluminum
Over-pressure Limit	25% for pressures up to 1,450 psi (9,998 kPa), 15% for pressures over 1,450 psi (9,998 kPa)
Socket Gasket	Buna N for two-piece internal socket seal
Fill Plug	Buna N
Lens Ring Gasket	Silicone rubber
Working Pressure	75% of full scale value
Ambient Temperature	-76°F to 200°F (-60°C to 93°C)
Process Temperature	-40°F to 200°F (-40°C to 93°C)
Accuracy	±1.5% of full scale value
Enclosure Rating	IP65
Warning	**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Single Scale Order Codes

Dial Size	2.5" (63mm)	
Connection	1/4" Bottom	1/4" Back (CB)
30" Hg Vac	PFQ801ZRR6	PFQ900ZRR6
30"/0/15 psi	PFQ790ZRR1	PFQ890ZRR1
30"/0/30 psi	PFQ798ZRR1	PFQ898ZRR1
30"/0/60 psi	PFQ799ZRR1	PFQ899ZRR1
30"/0/100 psi	PFQ791ZRR1	PFQ891ZRR1
30"/0/160 psi	PFQ792ZRR1	PFQ892ZRR1
30"/0/200 psi	PFQ794ZRR1	PFQ894ZRR1
30"/0/300 psi	PFQ795ZRR1	PFQ895ZRR1
0/15 psi	PFQ800ZRR1	PFQ901ZRR1
0/30 psi	PFQ802ZRR1	PFQ902ZRR1
0/60 psi	**PFQ803ZRR1**	PFQ903ZRR1
0/100 psi	PFQ804ZRR1	PFQ904ZRR1
0/160 psi	PFQ805ZRR1	PFQ905ZRR1
0/200 psi	PFQ806ZRR1	PFQ906ZRR1
0/300 psi	PFQ807ZRR1	PFQ907ZRR1
0/400 psi	PFQ817ZRR1	PFQ917ZRR1
0/600 psi	PFQ808ZRR1	PFQ908ZRR1
0/1,000 psi	PFQ809ZRR1	PFQ909ZRR1
0/1,500 psi	PFQ816ZRR1	PFQ914ZRR1
0/2,000 psi	PFQ810ZRR1	PFQ910ZRR1
0/3,000 psi	PFQ811ZRR1	PFQ911ZRR1
0/5,000 psi	PFQ812ZRR1	PFQ912ZRR1
0/6,000 psi	PFQ814ZRR1	PFQ915ZRR1
0/7,500 psi	PFQ818ZRR1	PFQ918ZRR1
0/10,000 psi	PFQ813ZRR1	PFQ913ZRR1

Dual Scale Order Codes (products in bold are normally stock in North America)

Dial Size	2.5" (63mm)	
Connection	1/4" Bottom	1/4" Back (CB)
30" Hg Vac/kPa	**PFQ801ZR**	**PFQ900ZR**
30"/0/15 psi/kPa	PFQ790ZR	PFQ890ZR
30"/0/30 psi/kPa	**PFQ798ZR**	PFQ898ZR
30"/0/60 psi/kPa	**PFQ799ZR**	PFQ899ZR
30"/0/100 psi/kPa	PFQ791ZR	PFQ891ZR
30"/0/150 psi/kPa	PFQ792ZR	PFQ892ZR
30"/0/200 psi/kPa	PFQ794ZR	PFQ894ZR
30"/0/300 psi/kPa	PFQ795ZR	PFQ895ZR
0/15 psi/kPa	**PFQ800ZR**	PFQ901ZR
0/30 psi/kPa	PFQ802ZR	**PFQ902ZR**
0/60 psi/kPa	**PFQ803ZR**	**PFQ903ZR**
0/100 psi/kPa	**PFQ804ZR**	**PFQ904ZR**
0/160 psi/kPa	**PFQ805ZR**	**PFQ905ZR**
0/200 psi/kPa	**PFQ806ZR**	**PFQ906ZR**
0/300 psi/kPa	**PFQ807ZR**	**PFQ907ZR**
0/400 psi/kPa	PFQ817ZR	PFQ917ZR
0/600 psi/kPa	**PFQ808ZR**	PFQ908ZR
0/1,000 psi/kPa	**PFQ809ZR**	**PFQ909ZR**
0/1,500 psi/kPa	PFQ816ZR	PFQ914ZR
0/2,000 psi/kPa	**PFQ810ZR**	PFQ910ZR
0/3,000 psi/kPa	**PFQ811ZR**	**PFQ911ZR**
0/5,000 psi/kPa	**PFQ812ZR**	**PFQ912ZR**
0/6,000 psi/kPa	PFQ814ZR	PFQ915ZR
0/7,500 psi/kPa	PFQ818ZR	PFQ918ZR
0/10,000 psi/kPa	**PFQ813ZR**	PFQ913ZR

Note: Restrictor screws are not standard on single scale gauges

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.
For options, attach suffix to end of order code: i.e. PFQ807ZR-25BF for BACK FLANGE.

Option suffix:

25BF = 2.5" (63mm) Back flange
25BOOT = 2.5" (63mm) Black rubber boot
25FF = 2.5" (63mm) Front flange
25UC = 2.5" (63mm) U-Clamp
EN = EN837-1 compliant
REST = Restrictor screw (single scale only)

2.5" Bottom Connection with Back Flange

2.5" Back Connection with Front Flange

Single Scale Order Codes

Dial Size	4" (100mm)			
Connection	1/4" Bottom	1/4" Back (CB)	1/2" Bottom	1/2" Back (CB)
30" Hg Vac	PFQ700ZRR1	PFQ730ZRR1	PFQ1234ZRR1	PFQ1285ZRR1
30"/0/15 psi	PFQ701ZRR1	PFQ731ZRR1	PFQ1235ZRR1	PFQ1286ZRR1
30"/0/30 psi	PFQ702ZRR1	PFQ732ZRR1	PFQ1236ZRR1	PFQ1287ZRR1
30"/0/60 psi	PFQ703ZRR1	PFQ733ZRR1	PFQ1237ZRR1	PFQ1288ZRR1
30"/0/100 psi	PFQ704ZRR1	PFQ734ZRR1	PFQ1238ZRR1	PFQ1289ZRR1
30"/0/160 psi	PFQ705ZRR1	PFQ735ZRR1	PFQ1239ZRR1	PFQ1290ZRR1
30"/0/200 psi	PFQ706ZRR1	PFQ736ZRR1	PFQ1240ZRR1	PFQ1291ZRR1
30"/0/300 psi	PFQ707ZRR1	PFQ737ZRR1	PFQ1241ZRR1	PFQ1292ZRR1
0/15 psi	PFQ708ZRR1	PFQ738ZRR1	PFQ1242ZRR1	PFQ1293ZRR1
0/30 psi	PFQ709ZRR1	PFQ739ZRR1	PFQ1243ZRR1	PFQ1294ZRR1
0/60 psi	PFQ710ZRR1	PFQ740ZRR1	PFQ1244ZRR1	PFQ1295ZRR1
0/100 psi	PFQ711ZRR1	PFQ741ZRR1	PFQ1245ZRR1	PFQ1296ZRR1
0/160 psi	PFQ712ZRR1	PFQ742ZRR1	PFQ1246ZRR1	PFQ1298ZRR1
0/200 psi	PFQ713ZRR1	PFQ743ZRR1	PFQ1247ZRR1	PFQ1524ZRR1
0/300 psi	PFQ714ZRR1	PFQ744ZRR1	PFQ1248ZRR1	PFQ1525ZRR1
0/400 psi	PFQ715ZRR1	PFQ745ZRR1	PFQ1249ZRR1	PFQ1526ZRR1
0/600 psi	PFQ716ZRR1	PFQ746ZRR1	PFQ1250ZRR1	PFQ1527ZRR1
0/1,000 psi	PFQ724ZRR1	PFQ192ZRR1	PFQ717ZRR1	PFQ747ZRR1
0/1,500 psi	PFQ725ZRR1	PFQ241ZRR1	PFQ718ZRR1	PFQ748ZRR1
0/2,000 psi	PFQ726ZRR1	PFQ242ZRR1	PFQ719ZRR1	PFQ749ZRR1
0/3,000 psi	PFQ727ZRR1	PFQ243ZRR1	PFQ720ZRR1	PFQ750ZRR1
0/5,000 psi	PFQ728ZRR1	PFQ244ZRR1	PFQ721ZRR1	PFQ751ZRR1
0/6,000 psi	PFQ346ZRR1	PFQ246ZRR1	PFQ784ZRR1	PFQ785ZRR1
0/7,500 psi	PFQ347ZRR1	PFQ247ZRR1	PFQ786ZRR1	PFQ886ZRR1
0/10,000 psi	PFQ729ZRR1	PFQ360ZRR1	PFQ722ZRR1	PFQ752ZRR1
0/15,000 psi	PFQ261ZRR1	PFQ361ZRR1	PFQ723ZRR1	PFQ753ZRR1

Dual Scale Order Codes (products in bold are normally stock in North America)

Dial Size	4" (100mm)			
Connection	1/4" Bottom	1/4" Back (CB)	1/2" Bottom	1/2" Back (CB)
30" Hg Vac/kPa	PFQ700ZR	PFQ730ZR	PFQ1234ZR	PFQ1285ZR
30"/0/15 psi/kPa	PFQ701ZR	PFQ731ZR	PFQ1235ZR	PFQ1286ZR
30"/0/30 psi/kPa	PFQ702ZR	PFQ732ZR	PFQ1236ZR	PFQ1287ZR
30"/0/60 psi/kPa	PFQ703ZR	PFQ733ZR	PFQ1237ZR	PFQ1288ZR
30"/0/100 psi/kPa	PFQ704ZR	PFQ734ZR	PFQ1238ZR	PFQ1289ZR
30"/0/160 psi/kPa	PFQ705ZR	PFQ735ZR	PFQ1239ZR	PFQ1290ZR
30"/0/200 psi/kPa	PFQ706ZR	PFQ736ZR	PFQ1240ZR	PFQ1291ZR
30"/0/300 psi/kPa	PFQ707ZR	PFQ737ZR	PFQ1241ZR	PFQ1292ZR
0/15 psi/kPa	PFQ708ZR	PFQ738ZR	PFQ1242ZR	PFQ1293ZR
0/30 psi/kPa	PFQ709ZR	PFQ739ZR	PFQ1243ZR	PFQ1294ZR
0/60 psi/kPa	PFQ710ZR	PFQ740ZR	PFQ1244ZR	PFQ1295ZR
0/100 psi/kPa	**PFQ711ZR**	PFQ741ZR	PFQ1245ZR	PFQ1296ZR
0/160 psi/kPa	**PFQ712ZR**	PFQ742ZR	**PFQ1246ZR**	PFQ1298ZR
0/200 psi/kPa	**PFQ713ZR**	PFQ743ZR	PFQ1247ZR	PFQ1524ZR
0/300 psi/kPa	**PFQ714ZR**	PFQ744ZR	**PFQ1248ZR**	PFQ1525ZR
0/400 psi/kPa	PFQ715ZR	PFQ745ZR	PFQ1249ZR	PFQ1526ZR
0/600 psi/kPa	PFQ716ZR	PFQ746ZR	PFQ1250ZR	PFQ1527ZR
0/1,000 psi/kPa	PFQ724ZR	PFQ192ZR	PFQ717ZR	PFQ747ZR
0/1,500 psi/kPa	PFQ725ZR	PFQ241ZR	PFQ718ZR	PFQ748ZR
0/2,000 psi/kPa	PFQ726ZR	PFQ242ZR	PFQ719ZR	PFQ749ZR
0/3,000 psi/kPa	PFQ727ZR	PFQ243ZR	PFQ720ZR	PFQ750ZR
0/5,000 psi/kPa	PFQ728ZR	PFQ244ZR	PFQ721ZR	PFQ751ZR
0/6,000 psi/kPa	PFQ346ZR	PFQ246ZR	PFQ784ZR	PFQ785ZR
0/7,500 psi/kPa	PFQ347ZR	PFQ247ZR	PFQ786ZR	PFQ886ZR
0/10,000 psi/kPa	PFQ729ZR	PFQ360ZR	PFQ722ZR	PFQ752ZR
0/15,000 psi/kPa	PFQ261ZR	PFQ361ZR	PFQ723ZR	PFQ753ZR

Note: Restrictor screws are not standard on single scale gauges

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.
For options, attach suffix to end of order code: i.e. PFQ709ZR-4BF for BACK FLANGE.

Option suffix:
4BF = 4" (100mm) Back flange
4FF = 4" (100mm) Front flange
4UC-Q = 4" (100mm) U-Clamp (for brass movement)
EN = EN837-1 compliant
REST = Restrictor screw (single scale only)

PN2-ZR NACE StabiliZR® Gauge - MR0175-2002

Description & Features:

- Designed for sour gas applications requiring NACE Standards MR0175-2002 (NACE Standards MR0103-2003 available)
- StabiliZR® dampened movement minimizes effects of pulsation and vibration as effectively as liquid filled gauges
- Blow out back plug
- Under and overload stops
- Wetted parts meet hardness requirements
- ASME B40.100 compliant (EN837-1 available)
- CRN registered
- 5 year warranty

Applications:

- Sour gas applications requiring gauges that meet NACE International Standards

RoHS compliant

STABILIZR® power

Specifications	
Dial	4” (100mm) aluminum with black and red markings
Case	304 SS (dry)
Lens	Laminated safety glass
Ring	304 SS, bayonet
Socket	316L SS
Connection	1/2” NPT bottom
Bourdon Tube	316L SS
Movement	304 SS with under and overload stops and StabiliZR® dampened movement (silicone in sealed chamber)
Pointer	Aluminum, anodized black, micrometer adjustable
Over-Pressure Limit	25% for pressures up to 1,450 psi (9,998 kPa), 15% for pressures over 1,450 psi (9,998 kPa)
Ambient Temperature	-76°F to 200°F (-60°C to 93°C)
Process Temperature	-40°F to 250°F (-40°C to 120°C)
Accuracy	±1% ANSI/ASME Grade 1A
Enclosure Rating	IP66

Order Codes

Dial Size	4” (100mm)
Connection	1/2” Bottom
30” Hg Vac/kPa	PN2655ZR
30”/0/15 psi/kPa	PN21044ZR
30”/0/30 psi/kPa	PN21045ZR
30”/0/60 psi/kPa	PN21046ZR
30”/0/100 psi/kPa	PN21047ZR
30”/0/150 psi/kPa	PN21048ZR
30”/0/200 psi/kPa	PN21050ZR
30”/0/300 psi/kPa	PN21051ZR
0/15 psi/kPa	PN2656ZR
0/30 psi/kPa	PN2657ZR
0/60 psi/kPa	PN2658ZR
0/100 psi/kPa	PN2659ZR
0/160 psi/kPa	PN2660ZR
0/200 psi/kPa	PN2661ZR
0/300 psi/kPa	PN2662ZR
0/400 psi/kPa	PN2666ZR
0/600 psi/kPa	PN2663ZR
0/1,000 psi/kPa	PN2664ZR
0/1,500 psi/kPa	PN2665ZR
0/2,000 psi/kPa	PN2667ZR
0/3,000 psi/kPa	PN2668ZR
0/5,000 psi/kPa	PN2669ZR
0/6,000 psi/kPa	PN2675ZR
0/10,000 psi/kPa	PN2670ZR
0/15,000 psi/kPa	PN2671ZR
0/20,000 psi/kPa	PN2672ZR

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.
For options, attach suffix to end of order code: i.e. PN2664ZR-4BF for BACK FLANGE.

Option suffix:
4BF = 4” (100mm) Back flange
4NSS = 4” (100mm) SS case
4UC-P = 4” (100mm) U-Clamp premium
EN = EN837-1 compliant
REST = Restrictor screw

4” Bottom Connection

PPC-ZR StabiliZR® Process Gauge

Note; RoHS applies to SS and Monel® internals only

Description & Features:

- StabiliZR® dampened movement minimizes effects of pulsation and vibration as effectively as liquid filled gauges
- Solid phenolic front and polypropylene pressure relief back safety case
- ±0.5% accuracy
- Stainless steel full rotary movement
- Micrometer adjustable pointer for ease in calibration
- Under and overload stops
- 316L stainless steel or brass wetted parts standard
- Restricted orifice standard on dual scale (optional on single scale)
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Ideally suited for process, chemical, petroleum and power industries
- Suitable for non-clogging corrosive media
- Used where operator safety is a requirement
- Processes where pulsation and vibration exist

Specifications	Stainless Steel Internals	Brass Internals
Dial	4.5” (115mm) aluminum with black and red markings	4.5” (115mm) white aluminum with black and red markings
Case	Black phenolic with pressure relief back, solid front, integral back flange	Black phenolic with pressure relief back, solid front, integral back flange
Solid Wall	Phenolic	Phenolic
Pressure Relief Back	Polypropylene	Polypropylene
Window	Polycarbonate	Polycarbonate
Ring	Phenolic	Phenolic
Pointer	Aluminum, anodized black, micrometer adjustable	Aluminum, anodized black, micrometer adjustable
Socket	316L SS	OT 58 brass
Connection	1/4” or 1/2” NPT standard, bottom or back	1/4” NPT or 1/2” NPT standard, bottom or back
Bourdon Tube	316L SS, drawn seamless	Phosphor bronze
Movement	304 SS with under and overload stops and StabiliZR® dampened movement (silicone in sealed chamber)	304 SS with under and overload stops and StabiliZR® dampened movement (silicone in sealed chamber)
Gasket Materials	Dry & glycerin filled gauges: Black NBR Silicone filled gauges: Brown NBR	Dry & glycerin filled gauges: Black NBR Silicone filled gauges: Brown NBR
Welding	TIG	Silver alloy
Over-pressure Limit	25% for pressures below 1,500 psi (10,341 kPa), 15% for pressures 1,500 to 8,700 psi (10,341 kPa to 59,984 kPa), 10% for pressures above 8,700 psi (59,984 kPa)	25% for pressures below 1,500 psi (10,341 kPa), 15% for pressures 1,500 to 8,700 psi (10,341 kPa to 59,984 kPa), 10% for pressures above 8,700 psi (59,984 kPa)
Working Pressure	Maximum 75% of full scale value	Maximum 75% of full scale value
Ambient Temperature	-76°F to 200°F (-60°C to 93°C)	-76°F to 200°F (-60°C to 93°C)
Process Temperature	-40°F to 250°F (-40°C to 120°C)	-40°F to 150°F (-40°C to 65°C)
Accuracy	±0.5% ANSI/ASME Grade 2A	±0.5% ANSI/ASME Grade 2A
Enclosure Rating	IP65	IP65
Warning (brass internals only)	N/A	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Single Scale Order Codes (products in bold are normally stock in North America)

Connection	1/4” Bottom	1/4” Back (LB)	1/4” Bottom	1/4” Back (LB)	1/2” Bottom	1/2” Back (LB)
Socket, Tube	Brass		SS			
30” Hg Vac	PPC5080ZRR6	PPC5280ZRR6	PPC5040ZRR6	PPC5340ZRR6	PPC5060ZRR6	PPC5460ZRR6
30”/0/15 psi	PPC5120ZRR1	PPC5220ZRR1	PPC5130ZRR1	PPC5330ZRR1	PPC5140ZRR1	PPC5440ZRR1
30”/0/30 psi	PPC5121ZRR1	PPC5221ZRR1	PPC5131ZRR1	PPC5331ZRR1	PPC5141ZRR1	PPC5441ZRR1
30”/0/60 psi	PPC5122ZRR1	PPC5222ZRR1	PPC5132ZRR1	PPC5332ZRR1	PPC5142ZRR1	PPC5442ZRR1
30”/0/100 psi	PPC5123ZRR1	PPC5223ZRR1	PPC5133ZRR1	PPC5333ZRR1	PPC5143ZRR1	PPC5443ZRR1
30”/0/160 psi	PPC5124ZRR1	PPC5224ZRR1	PPC5134ZRR1	PPC5334ZRR1	PPC5144ZRR1	PPC5444ZRR1
30”/0/200 psi	PPC5125ZRR1	PPC5225ZRR1	PPC5135ZRR1	PPC5335ZRR1	PPC5145ZRR1	PPC5445ZRR1
30”/0/300 psi	PPC5126ZRR1	PPC5226ZRR1	PPC5136ZRR1	PPC5336ZRR1	PPC5146ZRR1	PPC5446ZRR1
0/15 psi	PPC5081ZRR1	PPC5281ZRR1	PPC5041ZRR1	PPC5341ZRR1	PPC5061ZRR1	PPC5461ZRR1
0/30 psi	PPC5082ZRR1	PPC5282ZRR1	PPC5042ZRR1	PPC5342ZRR1	PPC5062ZRR1	PPC5462ZRR1
0/60 psi	PPC5083ZRR1	PPC5283ZRR1	PPC5043ZRR1	PPC5343ZRR1	PPC5063ZRR1	PPC5463ZRR1
0/100 psi	PPC5084ZRR1	PPC5284ZRR1	PPC5044ZRR1	PPC5344ZRR1	**PPC5064ZRR1**	PPC5464ZRR1
0/160 psi	PPC5085ZRR1	PPC5285ZRR1	PPC5045ZRR1	PPC5345ZRR1	**PPC5065ZRR1**	PPC5465ZRR1
0/200 psi	PPC5086ZRR1	PPC5286ZRR1	PPC5046ZRR1	PPC5346ZRR1	**PPC5066ZRR1**	PPC5466ZRR1
0/300 psi	PPC5087ZRR1	PPC5287ZRR1	PPC5047ZRR1	PPC5347ZRR1	**PPC5067ZRR1**	PPC5467ZRR1
0/400 psi	PPC5088ZRR1	PPC5288ZRR1	PPC5048ZRR1	PPC5348ZRR1	**PPC5068ZRR1**	PPC5468ZRR1
0/600 psi	PPC5089ZRR1	PPC5289ZRR1	PPC5049ZRR1	PPC5349ZRR1	**PPC5069ZRR1**	PPC5469ZRR1
0/800 psi	-	-	PPC5058ZRR1	PPC5358ZRR1	**PPC5078ZRR1**	PPC5478ZRR1
0/1,000 psi	PPC5098ZRR1	PPC5298ZRR1	PPC5050ZRR1	PPC5350ZRR1	**PPC5070ZRR1**	PPC5470ZRR1
Connection	**1/2” Bottom**	**1/2” Back (LB)**	**1/4” Bottom**	**1/4” Back (LB)**	**1/2” Bottom**	**1/2” Back (LB)**
0/1,000 psi	PPC5188ZRR1	PPC5290ZRR1	PPC5050ZRR1	PPC5350ZRR1	PPC5070ZRR1	PPC5470ZRR1
0/1,500 psi	PPC5091ZRR1	PPC5291ZRR1	PPC5051ZRR1	PPC5351ZRR1	PPC5071ZRR1	PPC5471ZRR1
0/2,000 psi	PPC5092ZRR1	PPC5292ZRR1	PPC5052ZRR1	PPC5352ZRR1	**PPC5072ZRR1**	PPC5472ZRR1
0/3,000 psi	PPC5093ZRR1	PPC5293ZRR1	PPC5053ZRR1	PPC5353ZRR1	PPC5073ZRR1	PPC5473ZRR1
0/5,000 psi	PPC5094ZRR1	PPC5294ZRR1	PPC5054ZRR1	PPC5354ZRR1	**PPC5074ZRR1**	PPC5474ZRR1
0/10,000 psi	PPC5095ZRR1	PPC5295ZRR1	PPC5055ZRR1	PPC5355ZRR1	PPC5075ZRR1	PPC5475ZRR1
0/15,000 psi	PPC5096ZRR1	PPC5296ZRR1	PPC5056ZRR1	PPC5356ZRR1	PPC5076ZRR1	PPC5476ZRR1
0/20,000 psi	PPC5097ZRR1	PPC5297ZRR1	PPC5057ZRR1	PPC5357ZRR1	PPC5077ZRR1	PPC5477ZRR1

Note: Restrictor screws are not standard on single scale gauges

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes. 1/2” NPT brass available on ranges below 1,000 psi.

For options, attach suffix to end of order code: i.e. PPC5284ZRR1-FMR for FLUSH MOUNTED RING.

Option suffix:

CS = Carbon steel socket/stainless steel tube
FMR = Flush mounted ring
HCSF = 4.5” (115mm) Solid front hinged case (back connection only)
MAXI45 = 4.5” (115mm) Maxi pointer
MS = Monel® tube and socket
SG-45 = 4.5” (115mm) Safety glass
REST = Restrictor screw

For Win**BRIGHT** dial options refer to Custom Dials

4.5” Bottom Connection

4.5” Back Connection

Dual Scale Order Codes (products in bold are normally stock in North America)

Connection	1/4" Bottom	1/4" Back (LB)	1/4" Bottom	1/4" Back (LB)	1/2" Bottom	1/2" Back (LB)
Socket, Tube	Brass		SS			
30" Hg Vac/kPa	PPC5080ZR	PPC5280ZR	PPC5040ZR	PPC5340ZR	PPC5060ZR	PPC5460ZR
30"/0/15 psi/kPa	PPC5120ZR	PPC5220ZR	PPC5130ZR	PPC5330ZR	PPC5140ZR	PPC5440ZR
30"/0/30 psi/kPa	PPC5121ZR	PPC5221ZR	PPC5131ZR	PPC5331ZR	PPC5141ZR	PPC5441ZR
30"/0/60 psi/kPa	PPC5122ZR	PPC5222ZR	PPC5132ZR	PPC5332ZR	PPC5142ZR	PPC5442ZR
30"/0/100 psi/kPa	PPC5123ZR	PPC5223ZR	PPC5133ZR	PPC5333ZR	PPC5143ZR	PPC5443ZR
30"/0/160 psi/kPa	PPC5124ZR	PPC5224ZR	PPC5134ZR	PPC5334ZR	PPC5144ZR	PPC5444ZR
30"/0/200 psi/kPa	PPC5125ZR	PPC5225ZR	PPC5135ZR	PPC5335ZR	PPC5145ZR	PPC5445ZR
30"/0/300 psi/kPa	PPC5126ZR	PPC5226ZR	PPC5136ZR	PPC5336ZR	PPC5146ZR	PPC5446ZR
0/15 psi/kPa	PPC5081ZR	PPC5281ZR	PPC5041ZR	PPC5341ZR	PPC5061ZR	PPC5461ZR
0/30 psi/kPa	PPC5082ZR	PPC5282ZR	PPC5042ZR	PPC5342ZR	PPC5062ZR	PPC5462ZR
0/60 psi/kPa	PPC5083ZR	PPC5283ZR	PPC5043ZR	PPC5343ZR	PPC5063ZR	PPC5463ZR
0/100 psi/kPa	PPC5084ZR	PPC5284ZR	PPC5044ZR	PPC5344ZR	PPC5064ZR	PPC5464ZR
0/160 psi/kPa	PPC5085ZR	PPC5285ZR	PPC5045ZR	PPC5345ZR	**PPC5065ZR**	PPC5465ZR
0/200 psi/kPa	PPC5086ZR	PPC5286ZR	PPC5046ZR	PPC5346ZR	PPC5066ZR	PPC5466ZR
0/300 psi/kPa	PPC5087ZR	PPC5287ZR	PPC5047ZR	PPC5347ZR	PPC5067ZR	PPC5467ZR
0/400 psi/kPa	PPC5088ZR	PPC5288ZR	PPC5048ZR	PPC5348ZR	PPC5068ZR	PPC5468ZR
0/600 psi/kPa	PPC5089ZR	PPC5289ZR	PPC5049ZR	PPC5349ZR	PPC5069ZR	PPC5469ZR
0/800 psi/kPa	PPC5099ZR	PPC5299ZR	PPC5058ZR	PPC5358ZR	PPC5078ZR	PPC5478ZR
0/1,000 psi/kPa	PPC5098ZR	PPC5298ZR	PPC5050ZR	PPC5350ZR	PPC5070ZR	PPC5470ZR
Connection	**1/2"**	**1/2"**	**1/4"**	**1/4"**	**1/2"**	**1/2"**
0/800 psi/kPa	PPC5188ZR	PPC5198ZR	PPC5058ZR	PPC5358ZR	PPC5078ZR	PPC5478ZR
0/1,000 psi/kPa	PPC5090ZR	PPC5290ZR	PPC5050ZR	PPC5350ZR	PPC5070ZR	PPC5470ZR
0/1,500 psi/kPa	PPC5091ZR	PPC5291ZR	PPC5051ZR	PPC5351ZR	PPC5071ZR	PPC5471ZR
0/2,000 psi/kPa	PPC5092ZR	PPC5292ZR	PPC5052ZR	PPC5352ZR	PPC5072ZR	PPC5472ZR
0/3,000 psi/kPa	PPC5093ZR	PPC5293ZR	PPC5053ZR	PPC5353ZR	PPC5073ZR	PPC5473ZR
0/5,000 psi/kPa	PPC5094ZR	PPC5294ZR	PPC5054ZR	PPC5354ZR	PPC5074ZR	PPC5474ZR
0/10,000 psi/kPa	PPC5095ZR	PPC5295ZR	PPC5055ZR	PPC5355ZR	PPC5075ZR	PPC5475ZR
0/15,000 psi/kPa	PPC5096ZR	PPC5296ZR	PPC5056ZR	PPC5356ZR	PPC5076ZR	PPC5476ZR
0/20,000 psi/kPa	PPC5097ZR	PPC5297ZR	PPC5057ZR	PPC5357ZR	PPC5077ZR	PPC5477ZR

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes. 1/2" NPT brass available on ranges below 1,000 psi/kPa. **For options, attach suffix to end of order code: i.e. PPC5284ZR-FMR for FLUSH MOUNTED RING.**

Option suffix:

CS = Carbon steel socket/stainless steel tube
FMR = Flush mounted ring
HCSF = 4.5" (115mm) Solid front hinged case (back connection only)
MAXI45 = 4.5" (115mm) Maxi pointer
MS = Monel® tube and socket
SG-45 = 4.5" (115mm) Safety glass

For Win**BRIGHT** dial options refer to Custom Dials

1. Optional Front Flange
2. Optional Back Flange

Description & Features:

- High quality, commercial grade gauge at an economical price
- ±1% accuracy
- Steel and aluminum cases
- Brass wetted parts
- ASME B40.100 compliant (EN837-1 available)
- CRN registered
- 5 year warranty

Applications:

- Commercial installations, plumbing, heating and cooling

Specifications	
Dial	3.5” (90mm), 4” (100mm), 4.5” (115mm), 6” (150mm) white aluminum with black and red markings
Case	3.5” (90mm), 4” (100mm): Steel painted black 4.5” (115mm): Aluminum 6” (150mm) Bottom: Steel painted black 6” (150mm) Back: Aluminum
Lens	3.5” (90mm), 4.5” (115mm) Bottom connection, 6” (150mm): Glass 4” (100mm), 4.5” (115mm) Back connection: Polycarbonate
Ring	3.5” (90mm), 4” (100mm), 4.5” (115mm) Bottom connection: Polished brass 6” (150mm) Bottom connection: Steel painted black 4.5” (115mm) Back connection, 6” (150mm) back connection: SS, polished
Socket	Brass
Connection	1/4” NPT standard
Bourdon Tube	Phosphor bronze
Pointer	Black aluminum
Welding	Silver alloy
Over-pressure Limit	25% of full scale value
Working Pressure	Maximum 75% of full scale value
Ambient/Process Temperature	-40°F to 200°F (-40°C to 93°C)
Accuracy	±1% ANSI/ASME Grade 1A
Enclosure Rating	IP52
Warning	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Order Codes (products in bold are normally stock in North America)

Dial Size	3.5” (90mm)		4” (100mm)	4.5” (115mm)		6” (150mm)	
Case Material	Steel			Aluminum		Steel	Aluminum
Connection	Bottom	Centre Back		Bottom	Lower Back	Bottom	Lower Back
30” Hg Vac/kPa	P1S234	P1S560	P1S460	P1S410	P1S430	P1S250	P1S475
30”/0/15 psi/kPa	P1S230	P1S568	P1S468	P1S411	P1S431	P1S251C	P1S476
30”/0/30 psi/kPa	P1S231	P1S569	P1S469	**P1S412**	P1S432	P1S252C	P1S477
30”/0/60 psi/kPa	**P1S232**	P1S570	P1S470	P1S413	P1S433	P1S259C	P1S478
30”/0/100 psi/kPa	**P1S233**	P1S571	P1S471	**P1S414**	P1S434	P1S253C	P1S479
30”/0/160 psi/kPa	P1S229	P1S572	P1S472	P1S416	P1S436	P1S254C	P1S480
30”/0/200 psi/kPa	-	P1S573	-	P1S417	P1S437	P1S255C	P1S481
30”/0/300 psi/kPa	P1S227	P1S574	P1S473	P1S418	P1S438	P1S256C	P1S482
0/15 psi/kPa	P1S228	P1S561	P1S461	P1S419	P1S439	-	-
0/30 psi/kPa	P1S235	P1S562	P1S462	**P1S420**	P1S440	P1S251	P1S483
0/60 psi/kPa	P1S236	P1S563	P1S463	P1S421	P1S441	P1S252	P1S484
0/100 psi/kPa	**P1S237**	P1S564	P1S464	P1S422	P1S442	P1S253	P1S485
0/160 psi/kPa	**P1S238**	P1S565	P1S465	P1S423	P1S443	P1S254	P1S486
0/200 psi/kPa	P1S239	P1S566	P1S466	P1S424	P1S444	P1S255	P1S487
0/300 psi/kPa	P1S240	P1S567	P1S467	**P1S426**	P1S446	P1S256	P1S488
0/600 psi/kPa	-	-	-	P1S490	-	-	-
0/1,000 psi/kPa	-	-	-	P1S491	-	-	-
0/3,000 psi/kPa	-	-	-	P1S492	-	-	-
0/5,000 psi/kPa	-	-	-	P1S493	-	-	-

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.
For options, attach suffix to end of order code: i.e. P1S420-45QBF for BACK FLANGE.

Option suffix:

35QBF = 3.5” (90mm) Back flange
4QBF = 4” (100mm) Back flange
45QBF = 4.5” (115mm) Back flange
6QBF = 6” (150mm) Back flange
EN = EN837-1 compliant
MAXI45 = 4.5” (115mm) Maxi pointer
MAXI6 = 6” (150mm) Maxi pointer

Note: Syphon recommended for all steam applications

3.5” Bottom Connection

3.5” Back Connection

Front flange is a standard integral part of the 3.5” back connection case

4” Centre Back Connection

4.5” Bottom Connection

4.5” Lower Back Connection

6” Bottom Connection

6” Back Connection with Front Flange

P3S 300 Series Gauge

1

1. Back Connection with Standard (on all dial sizes) Front Flange

Description & Features:

- Heavy duty, highly accurate aluminum case gauge
- ±0.5% accuracy
- Brass or stainless steel internals
- Large, easy-to-read dial
- StabiliZR® dampened movement available on 4.5” (115mm) dial size
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Intended for non-clogging installations
- Use on air, steam, oil, fresh water
- Boilers, control rooms and chillers

Specifications	Stainless Steel Internals	Brass Internals
Dial	4.5” (115mm), 6” (150mm), 8.5” (215mm) and 10” (250mm) white aluminum with black and red markings	4.5” (115mm), 6” (150mm), 8.5” (215mm) and 10” (250mm) white aluminum with black and red markings
Case	Aluminum painted black	Aluminum painted black
Front Flange	4.5” (115mm), 6” (150mm): SS, polished 8.5” (215mm), 10” (250mm): Aluminum, painted black	4.5” (115mm), 6” (150mm): SS, polished 8.5” (215mm), 10” (250mm): Aluminum, painted black
Back Flange	4.5” (115mm), 6” (150mm): Steel, painted black (optional) 8.5” (215mm), 10” (250mm): Aluminum, painted black	4.5” (115mm), 6” (150mm): Steel, painted black (optional) 8.5” (215mm), 10” (250mm): Aluminum, painted black
Lens	4.5” (115mm), 6” (150mm): Glass 8.5” (200mm), 10” (250mm): Polycarbonate	4.5” (115mm), 6” (150mm): Glass 8.5” (200mm), 10” (250mm): Polycarbonate
Ring	4.5” (115mm), 6” (150mm): SS, polished 8.5” (215mm), 10” (250mm): Aluminum	4.5” (115mm), 6” (150mm): SS, polished 8.5” (215mm), 10” (250mm): Aluminum
Socket	316L SS	Brass
Connection	1/4” NPT for ranges up to 600 psi (4,137 kPa), 1/2” NPT for ranges over 600 psi (4,137 kPa)	1/4” NPT for ranges up to 600 psi (4,137 kPa), 1/2” NPT for ranges over 600 psi (4,137 kPa)
Bourdon Tube	316L SS	Phosphor bronze for ranges up to 600 psi (4,137 kPa) 316L SS for ranges over 600 psi (4,137 kPa)
Movement	304 SS	Brass
Pointer	Aluminum, anodized black, micrometer adjustable	Aluminum, anodized black, micrometer adjustable
Welding	316L SS TIG Argonarc	Tin/copper alloy for ranges up to 600 psi (4,137 kPa) Silver alloy for ranges over 600 psi (4,137 kPa)
Over-pressure Limit	30% for pressures up to 600 psi (4,137 kPa), 25% for pressures 601 psi to 1,400 psi (4,137 kPa to 9,653 kPa), 15% for pressures over 1,400 psi (9,653 kPa)	30% for pressures up to 600 psi (4,137 kPa), 25% for pressures 601 psi to 1,400 psi (4,137 kPa to 9,653 kPa), 15% for pressures over 1,400 psi (9,653 kPa)
Working Pressure	Maximum 75% of full scale value	Maximum 75% of full scale value
Ambient/Process Temperature	-40°F to 150°F (-40°C to 65°C)	-40°F to 150°F (-40°C to 65°C)
Accuracy	±0.5% ANSI/ASME Grade 2A	±0.5% ANSI/ASME Grade 2A
Enclosure Rating	IP52	IP52
Warning (brass internals only)	N/A	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Order Codes

	Dial Size	4.5" (115mm)				6" (150mm)			
	Connection	Bottom	Back (LB)	Bottom	Back (LB)	Bottom	Back (LB)	Bottom	Back (LB)
	Movement, Socket, Tube	Brass		SS		Brass		SS	
1/4"	30" Hg Vac/kPa	P3S6000	P3S6000B	P3S6025	P3S6025B	P3S6075	P3S6075B	P3S6260	P3S6260B
1/4"	30"/0/15 psi/kPa	P3S6001	P3S6001B	P3S6026	P3S6026B	P3S6076	P3S6076B	P3S6261	P3S6261B
1/4"	30"/0/30 psi/kPa	P3S6002	P3S6002B	P3S6027	P3S6027B	P3S6077	P3S6077B	P3S6162	P3S6162B
1/4"	30"/0/60 psi/kPa	P3S6003	P3S6003B	P3S6028	P3S6028B	P3S6078	P3S6078B	P3S6163	P3S6163B
1/4"	30"/0/100 psi/kPa	P3S6004	P3S6004B	P3S6029	P3S6029B	P3S6079	P3S6079B	P3S6164	P3S6164B
1/4"	30"/0/160 psi/kPa	P3S6005	P3S6005B	P3S6030	P3S6030B	P3S6080	P3S6080B	P3S6265	P3S6265B
1/4"	30"/0/200 psi/kPa	P3S6006	P3S6006B	P3S6031	P3S6031B	P3S6081	P3S6081B	P3S6266	P3S6266B
1/4"	30"/0/300 psi/kPa	P3S6007	P3S6007B	P3S6032	P3S6032B	P3S6082	P3S6082B	P3S6267	P3S6267B
1/4"	0/15 psi/kPa	P3S6008	P3S6008B	P3S6033	P3S6033B	P3S6083	P3S6083B	P3S6098	P3S6098B
1/4"	0/30 psi/kPa	P3S6009	P3S6009B	P3S6034	P3S6034B	P3S6084	P3S6084B	P3S6099	P3S6099B
1/4"	0/60 psi/kPa	P3S6010	P3S6010B	P3S6035	P3S6035B	P3S6085	P3S6085B	P3S6100	P3S6100B
1/4"	0/100 psi/kPa	P3S6011	P3S6011B	P3S6036	P3S6036B	P3S6086	P3S6086B	P3S6101	P3S6101B
1/4"	0/160 psi/kPa	P3S6012	P3S6012B	P3S6037	P3S6037B	P3S6087	P3S6087B	P3S6102	P3S6102B
1/4"	0/200 psi/kPa	P3S6013	P3S6013B	P3S6038	P3S6038B	P3S6088	P3S6088B	P3S6103	P3S6103B
1/4"	0/300 psi/kPa	P3S6014	P3S6014B	P3S6039	P3S6039B	P3S6089	P3S6089B	P3S6104	P3S6104B
1/4"	0/400 psi/kPa	P3S6015	P3S6015B	P3S6040	P3S6040B	P3S6090	P3S6090B	P3S6105	P3S6105B
1/4"	0/600 psi/kPa	P3S6016	P3S6016B	P3S6041	P3S6041B	P3S6091	P3S6091B	P3S6106	P3S6106B
1/2"	0/1,000 psi/kPa	P3S6017	P3S6017B	P3S6042	P3S6042B	P3S6092	P3S6092B	P3S6107	P3S6107B
1/2"	0/1,500 psi/kPa	P3S6018	P3S6018B	P3S6043	P3S6043B	P3S6093	P3S6093B	P3S6108	P3S6108B
1/2"	0/2,000 psi/kPa	P3S6019	P3S6019B	P3S6044	P3S6044B	P3S6094	P3S6094B	P3S6109	P3S6109B
1/2"	0/3,000 psi/kPa	P3S6020	P3S6020B	P3S6045	P3S6045B	P3S6095	P3S6095B	P3S6110	P3S6110B
1/2"	0/5,000 psi/kPa	P3S6021	P3S6021B	P3S6046	P3S6046B	P3S6096	P3S6096B	P3S6111	P3S6111B
1/2"	0/10,000 psi/kPa	P3S6022	P3S6022B	P3S6047	P3S6047B	P3S6170	P3S6170B	P3S6180	P3S6180B
1/2"	0/15,000 psi/kPa	P3S6023	P3S6023B	P3S6160	P3S6160B	P3S6171	P3S6171B	P3S6181	P3S6181B
1/2"	0/20,000 psi/kPa	P3S6024	P3S6024B	P3S6161	P3S6161B	P3S6172	P3S6172B	P3S6182	P3S6182B
	Dial Size	8.5" (215mm)				10" (250mm)			
1/4"	30" Hg Vac/kPa	P3S6200	P3S6200B	P3S6300	P3S6300B	P3S6400	P3S6400B	P3S6500	P3S6500B
1/4"	30"/0/15 psi/kPa	P3S6201	P3S6201B	P3S6301	P3S6301B	P3S6401	P3S6401B	P3S6501	P3S6501B
1/4"	30"/0/30 psi/kPa	P3S6202	P3S6202B	P3S6302	P3S6302B	P3S6402	P3S6402B	P3S6502	P3S6502B
1/4"	30"/0/60 psi/kPa	P3S6203	P3S6203B	P3S6303	P3S6303B	P3S6403	P3S6403B	P3S6503	P3S6503B
1/4"	30"/0/100 psi/kPa	P3S6204	P3S6204B	P3S6304	P3S6304B	P3S6404	P3S6404B	P3S6504	P3S6504B
1/4"	30"/0/160 psi/kPa	P3S6205	P3S6205B	P3S6305	P3S6305B	P3S6405	P3S6405B	P3S6505	P3S6505B
1/4"	30"/0/200 psi/kPa	P3S6206	P3S6206B	P3S6306	P3S6306B	P3S6406	P3S6406B	P3S6506	P3S6506B
1/4"	30"/0/300 psi/kPa	P3S6207	P3S6207B	P3S6307	P3S6307B	P3S6407	P3S6407B	P3S6507	P3S6507B
1/4"	0/15 psi/kPa	P3S6208	P3S6208B	P3S6308	P3S6308B	P3S6408	P3S6408B	P3S6508	P3S6508B
1/4"	0/30 psi/kPa	P3S6209	P3S6209B	P3S6309	P3S6309B	P3S6409	P3S6409B	P3S6509	P3S6509B
1/4"	0/60 psi/kPa	P3S6210	P3S6210B	P3S6310	P3S6310B	P3S6410	P3S6410B	P3S6510	P3S6510B
1/4"	0/100 psi/kPa	P3S6211	P3S6211B	P3S6311	P3S6311B	P3S6411	P3S6411B	P3S6511	P3S6511B
1/4"	0/160 psi/kPa	P3S6212	P3S6212B	P3S6312	P3S6312B	P3S6412	P3S6412B	P3S6512	P3S6512B
1/4"	0/200 psi/kPa	P3S6213	P3S6213B	P3S6313	P3S6313B	P3S6413	P3S6413B	P3S6513	P3S6513B
1/4"	0/300 psi/kPa	P3S6214	P3S6214B	P3S6314	P3S6314B	P3S6414	P3S6414B	P3S6514	P3S6514B
1/4"	0/400 psi/kPa	P3S6215	P3S6215B	P3S6315	P3S6315B	P3S6415	P3S6415B	P3S6515	P3S6515B
1/4"	0/600 psi/kPa	P3S6216	P3S6216B	P3S6316	P3S6316B	P3S6416	P3S6416B	P3S6516	P3S6516B
1/2"	0/1,000 psi/kPa	P3S6217	P3S6217B	P3S6317	P3S6317B	P3S6417	P3S6417B	P3S6517	P3S6517B
1/2"	0/1,500 psi/kPa	P3S6218	P3S6218B	P3S6318	P3S6318B	P3S6418	P3S6418B	P3S6518	P3S6518B
1/2"	0/2,000 psi/kPa	P3S6219	P3S6219B	P3S6319	P3S6319B	P3S6419	P3S6419B	P3S6519	P3S6519B
1/2"	0/3,000 psi/kPa	P3S6220	P3S6220B	P3S6320	P3S6320B	P3S6420	P3S6420B	P3S6520	P3S6520B
1/2"	0/5,000 psi/kPa	P3S6221	P3S6221B	P3S6321	P3S6321B	P3S6421	P3S6421B	P3S6521	P3S6521B
1/2"	0/10,000 psi/kPa	P3S6222	P3S6222B	P3S6322	P3S6322B	P3S6422	P3S6422B	P3S6522	P3S6522B
1/2"	0/15,000 psi/kPa	P3S6223	P3S6223B	P3S6323	P3S6322B	P3S6423	P3S6423B	P3S6523	P3S6523B
1/2"	0/20,000 psi/kPa	P3S6224	P3S6224B	P3S6324	P3S6324B	P3S6424	P3S6424B	P3S6524	P3S6524B

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.

Option suffix:

45BF-300 = 4.5" (115mm) Back flange
45HC = 4.5" (115mm) Hinged case
6BF-300 = 6" (150mm) Back flange
6HC = 6" (150mm) Hinged case
MAXI45 = 4.5" (115mm) Maxi pointer
MAXI6 = 6" (150mm) Maxi pointer
MS = Monel
OST = Overstop
SFC = Safety case
SG-45 = 4.5" (115mm) Safety glass
SG-6 = 6" (150mm) Safety glass
UST = Understop
ZR = StabiliZR® movement (4.5" dial only)

4.5” Bottom Connection with Back Flange

4.5” Back Connection with Front Flange

6” Bottom Connection with Back Flange

6” Back Connection with Front Flange

8.5” Bottom Connection with Back Flange

10” Back Connection with Front Flange

Description & Features:

- One piece forged brass case designed for severe service conditions
- Easy-to-read single or dual scale dial
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- High vibration industrial installations including hydraulic and fracking systems

Specifications	
Dial	2.5” (63mm), 4” (100mm)
Case	Forged brass, rugged 2.5”: Liquid filled case standard, 4”: dry case standard
Lens	Polycarbonate
Ring	2.5” (63mm): Gold-coloured ABS, 4” (100mm): polished brass
Socket	Brass
Pointer	Aluminum, anodized black
Connection	2.5”(63mm): 1/4” NPT bottom or back, 4” (100mm): 1/4” or 1/2” NPT bottom
Wetted Parts	Brass
Ambient/Process Temperature	-40°F to 150°F (-40°C to 65°C)
Accuracy	2.5” (63mm): ±1.5% of full scale, 4” (100mm): ±1% ANSI/ASME Grade 1A
Enclosure Rating	IP65
Warning	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Single Scale Order Codes

Dial Size	2.5" (63mm)		4" (100mm)	
Connection	1/4" Bottom	1/4" Back (CB)	1/4" Bottom	1/2" Bottom
30" Hg Vac	PBC801R6	PBC900R6	PBC700R6	PBC1234R6
30"/0/15 psi	PBC790R1	PBC890R1	PBC701R1	PBC1235R1
30"/0/30 psi	PBC798R1	PBC898R1	PBC702R1	PBC1236R1
30"/0/60 psi	PBC799R1	PBC899R1	PBC703R1	PBC1237R1
30"/0/100 psi	PBC791R1	PBC891R1	PBC704R1	PBC1238R1
30"/0/150 psi	PBC792R1	PBC892R1	PBC705R1	PBC1239R1
30"/0/200 psi	PBC794R1	PBC894R1	PBC706R1	PBC1240R1
30"/0/300 psi	PBC795R1	PBC895R1	PBC707R1	PBC1241R1
0/15 psi	PBC800R1	PBC901R1	PBC708R1	PBC1242R1
0/30 psi	PBC802R1	PBC902R1	PBC709R1	PBC1243R1
0/60 psi	PBC803R1	PBC903R1	PBC710R1	PBC1244R1
0/100 psi	PBC804R1	PBC904R1	PBC711R1	PBC1245R1
0/160 psi	PBC805R1	PBC905R1	PBC712R1	PBC1246R1
0/200 psi	PBC806R1	PBC906R1	PBC713R1	PBC1247R1
0/300 psi	PBC807R1	PBC907R1	PBC714R1	PBC1248R1
0/400 psi	PBC817R1	PBC917R1	PBC715R1	PBC1249R1
0/600 psi	PBC808R1	PBC908R1	PBC716R1	PBC1250R1
0/1,000 psi	PBC809R1	PBC909R1	PBC724R1	PBC717R1
0/1,500 psi	PBC816R1	PBC914R1	PBC725R1	PBC718R1
0/2,000 psi	PBC810R1	PBC910R1	PBC726R1	PBC719R1
0/3,000 psi	PBC811R1	PBC911R1	PBC727R1	PBC720R1
0/5,000 psi	PBC812R1	PBC912R1	PBC728R1	PBC721R1
0/6,000 psi	PBC814R1	PBC915R1	PBC024R1	PBC784R1
0/10,000 psi	PBC813R1	PBC913R1	PBC729R1	PBC722R1

Dual Scale Order Codes

Dial Size	2.5" (63mm)		4" (100mm)	
Connection	1/4" Bottom	1/4" Back (CB)	1/4" Bottom	1/2" Bottom
30" Hg Vac/kPa	PBC801	PBC900	PBC700	PBC1234
30"/0/15 psi/kPa	PBC790	PBC890	PBC701	PBC1235
30"/0/30 psi/kPa	PBC798	PBC898	PBC702	PBC1236
30"/0/60 psi/kPa	PBC799	PBC899	PBC703	PBC1237
30"/0/100 psi/kPa	PBC791	PBC891	PBC704	PBC1238
30"/0/150 psi/kPa	PBC792	PBC892	PBC705	PBC1239
30"/0/200 psi/kPa	PBC794	PBC894	PBC706	PBC1240
30"/0/300 psi/kPa	PBC795	PBC895	PBC707	PBC1241
0/15 psi/kPa	PBC800	PBC901	PBC708	PBC1242
0/30 psi/kPa	PBC802	PBC902	PBC709	PBC1243
0/60 psi/kPa	PBC803	PBC903	PBC710	PBC1244
0/100 psi/kPa	PBC804	PBC904	PBC711	PBC1245
0/160 psi/kPa	PBC805	PBC905	PBC712	PBC1246
0/200 psi/kPa	PBC806	PBC906	PBC713	PBC1247
0/300 psi/kPa	PBC807	PBC907	PBC714	PBC1248
0/400 psi/kPa	PBC817	PBC917	PBC715	PBC1249
0/600 psi/kPa	PBC808	PBC908	PBC716	PBC1250
0/1,000 psi/kPa	PBC809	PBC909	PBC724	PBC717
0/1,500 psi/kPa	PBC816	PBC914	PBC725	PBC718
0/2,000 psi/kPa	PBC810	PBC910	PBC726	PBC719
0/3,000 psi/kPa	PBC811	PBC911	PBC727	PBC720
0/5,000 psi/kPa	PBC812	PBC912	PBC728	PBC721
0/6,000 psi/kPa	PBC814	PBC915	PBC024	PBC784
0/10,000 psi/kPa	PBC813	PBC913	PBC729	PBC722

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes. **For options, attach suffix to end of order code: i.e. PBC805-REST for RESTRICTOR SCREW.**

Option suffix:
25DRY = Supply 2.5" (63mm) gauge dry
G = Glycerin filled case
REST = Restrictor screw

2.5” Bottom Connection

2.5” Back Connection

4” Bottom Connection

PCC Colour Coded Gauge

Description & Features:

- Unique pressure instrument utilizing colour coded cases for easy identification of processes
- 4 different colours
- Stainless steel or brass internals, liquid fillable
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Used for easy identification of process or pressure
- Well suited for use where vibration or pulsation exist (with liquid filling)
- Used on machinery, process lines, compressors, hydraulics

Specifications	Stainless Steel Internals	Brass Internals
Dial	4” (100mm) white aluminum with black and red markings	4” (100mm) white aluminum with black and red markings
Case	PBT Polybutylene terephthalate - colour coded	PBT Polybutylene terephthalate - colour coded
Lens	Polycarbonate	Polycarbonate
Ring	PBT Polybutylene terephthalate - colour coded	PBT Polybutylene terephthalate - colour coded
Socket	316L SS	OT 58 brass
Connection	1/4” NPT or 1/2” NPT standard	1/4” NPT or 1/2” NPT standard
Bourdon Tube	316L SS, drawn seamless	Phosphor bronze
Movement	304 SS	Gears are OT 59 brass, plates are AISI 304 SS
Pointer	Aluminum, anodized black, micrometer adjustable	Aluminum, anodized black
Welding	TIG, silver alloy	Tin/copper alloy for pressures up to 600 psi (4,137 kPa), Silver alloy for pressures over 600 psi (4,137 kPa)
Over-pressure Limit	30% for pressures up to 600 psi (4,137 kPa), 15% for pressures over 600 psi (4,137 kPa)	25% for pressures up to 1,400 psi (9,653 kPa), 15% for pressures over 1,400 psi (9,653 kPa)
Gasket Material	EPDM	Silicone rubber for socket, EPDM for lens, filling plug and blow-out vent
Working Pressure	Maximum 75% of full scale value	Maximum 75% of full scale value
Ambient/Process Temperature	Dry: -40°F to 200°F (-40°C to 93°C) Glycerin Filled: -40°F to 150°F (-40°C to 65°C)	Dry: -40°F to 200°F (-40°C to 93°C) Glycerin Filled: -40°F to 150°F (-40°C to 65°C)
Accuracy	±1% ANSI/ASME Grade 1A	±1% ANSI/ASME Grade 1A
Enclosure Rating	IP65 per EN60529-1 (IEC529-1)	IP65 per EN60529-1 (IEC529-1)
Warning (brass internals only)	N/A	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Order Codes (products in bold are normally stock in North America)

Dial Size	4" (100mm)			
Connection	1/4" Bottom	1/2" Bottom	1/4" Bottom	1/2" Bottom
Movement, Socket, Tube	Brass		SS	
30" Hg Vac/kPa	PCC600C	-	PCC640C	PCC655C
30"/0/15 psi/kPa	PCC1020C	-	PCC1036C	PCC1044C
30"/0/30 psi/kPa	PCC1021C	-	PCC1037C	PCC1045C
30"/0/60 psi/kPa	PCC1022C	-	PCC1038C	PCC1046C
30"/0/100 psi/kPa	PCC1023C	-	PCC1039C	PCC1047C
30"/0/160 psi/kPa	PCC1024C	-	PCC1040C	PCC1048C
30"/0/200 psi/kPa	PCC1026C	-	PCC1042C	PCC1050C
30"/0/300 psi/kPa	PCC1027C	-	PCC1043C	PCC1051C
0/15 psi/kPa	**PCC601C**	-	PCC641C	PCC656C
0/30 psi/kPa	**PCC602C**	-	PCC642C	PCC657C
0/60 psi/kPa	**PCC603C**	-	PCC643C	PCC658C
0/100 psi/kPa	**PCC604C**	-	PCC644C	PCC659C
0/160 psi/kPa	**PCC605C**	-	PCC645C	PCC660C
0/200 psi/kPa	**PCC606C**	-	PCC646C	PCC661C
0/300 psi/kPa	**PCC607C**	-	PCC647C	PCC662C
0/400 psi/kPa	PCC610C	-	PCC650C	PCC666C
0/600 psi/kPa	PCC608C	-	PCC648C	PCC663C
0/1,000 psi/kPa	PCC609C	PCC624C	PCC649C	PCC664C
0/1,500 psi/kPa	-	PCC625C	-	PCC665C
0/2,000 psi/kPa	-	PCC626C	-	PCC667C
0/3,000 psi/kPa	-	PCC627C	-	PCC668C
0/5,000 psi/kPa	-	PCC628C	-	PCC669C
0/10,000 psi/kPa	-	PCC629C	-	PCC670C
0/15,000 psi/kPa	-	PCC630C	-	PCC671C
0/20,000 psi/kPa	-	PCC639C	-	PCC672C

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes. **For options, attach suffix to end of order code: i.e. PCC603C-G for GLYCERIN FILL.**

Colour Coded Cases	Colour	Suffix
	Red	1Y
	Yellow	2Y
	Black	3Y
	Blue	4Y

Add appropriate colour code as suffix.
(e.g. PCC662C1Y = Gauge Order Code + Case Colour Code)

Option suffix:
G = Glycerin filled case
SG4 = 4" (100mm) Safety glass lens

4" Bottom Connection

PCT, PCT-LF

Contractor Gauge
Lead Free Contractor Gauge

LEAD FREE

NSF
Certified to NSF/ANSI 61 & 372

Description & Features:

- Economical 4.5” (115mm) stainless steel case gauge
- Brass or lead free brass wetted parts
- ±1% accuracy
- Zero adjustment screw
- 1/4” NPT
- Restricted orifice
- ASME B40.100 compliant
- CRN registered
- Lead free version NSF-61-372 certified
- 5 year warranty

Applications:

- Most commercial air, water and steam services (with syphon)
- Lead free version for potable water systems

Specifications	
Dial	4.5” (115mm) white aluminum with black and red markings
Case	304 SS
Lens	Acrylic
Ring	304 SS
Socket	PCT: Brass PCT-LF: Lead free brass, NSF-61-372 certified
Connection	1/4” NPT standard
Bourdon Tube	Phosphor bronze
Movement	PCT: Brass, PCT-LF: Lead free brass, NSF-61-372 certified
Pointer	Aluminum, anodized black, recalibrator screw
Welding	Silver solder
Over-pressure Limit	25% for pressures up to 1,450 psi (9,998 kPa), 15% for pressures over 1,450 psi (9,998 kPa)
Working Pressure	Maximum 75% of full scale value
Ambient/Process Temperature	-40°F to 200°F (-40°C to 93°C)
Accuracy	±1% ANSI/ASME Grade 1A
Enclosure Rating	IP52
Warning	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

PCT Order Codes (products in bold are normally stock in North America)

Connection	1/4” Bottom
30” Hg Vac/kPa	PCT320
30”/0/30 psi/kPa	**PCT329**
30”/0/60 psi/kPa	PCT330
30”/0/100 psi/kPa	**PCT328**
30”/0/160 psi/kPa	PCT332
30”/0/200 psi/kPa	PCT333
30”/0/300 psi/kPa	**PCT334**
0/15 psi/kPa	**PCT319**
0/30 psi/kPa	**PCT321**
0/60 psi/kPa	**PCT322**
0/100 psi/kPa	**PCT323**
0/160 psi/kPa	**PCT324**
0/200 psi/kPa	**PCT325**
0/300 psi/kPa	**PCT326**
0/400 psi/kPa	**PCT327**
0/600 psi/kPa	**PCT331**
0/1,000 psi/kPa	PCT293
0/3,000 psi/kPa	PCT294
0/5,000 psi/kPa	PCT295

PCT-LF Order Codes (products in bold are normally stock in North America)

Connection	1/4” Bottom
30” Hg Vac/kPa	PCT320LF
30”/0/30 psi/kPa	PCT329LF
30”/0/60 psi/kPa	PCT330LF
30”/0/100 psi/kPa	PCT328LF
30”/0/160 psi/kPa	PCT332LF
30”/0/200 psi/kPa	PCT333LF
30”/0/300 psi/kPa	PCT334LF
0/15 psi/kPa	**PCT319LF**
0/30 psi/kPa	**PCT321LF**
0/60 psi/kPa	**PCT322LF**
0/100 psi/kPa	**PCT323LF**
0/160 psi/kPa	**PCT324LF**
0/200 psi/kPa	**PCT325LF**
0/300 psi/kPa	**PCT326LF**
0/400 psi/kPa	**PCT327LF**
0/600 psi/kPa	**PCT331LF**
0/1,000 psi/kPa	PCT293LF
0/3,000 psi/kPa	PCT294LF
0/5,000 psi/kPa	PCT295LF

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes. **For options, attach suffix to end of order code: i.e. PCT322-45BF for BACK FLANGE.**

Option suffix:
45BF = 4.5” (115mm) Back flange

4.5” Bottom

Premium Stainless Steel Liquid Filled Gauge

PFP

1. Maximum Indicating Pointer

RoHS compliant

Note: RoHS applies to SS internals only

Description & Features:

- Liquid filled stainless steel case protects against vibration and pulsation
- Bayonet ring
- Highly accurate
- Back, bottom, or panel mounted
- Under and overload stops
- Ventable plug on 2.5” to 4.5” stainless steel and 4.5” brass bottom mount and 4” stainless steel back mount
- Stainless steel or brass wetted parts
- Restrictor screw standard on dual scale (optional on single scale)
- Dry case available
- ASME B40.100 compliant (EN837-1 available)
- CRN registered
- 5 year warranty

Applications:

- Outdoor and severe ambient and process conditions
- Use where harmful vibration and pulsation are present
- Hydraulic equipment, oil field equipment, pumps, compressors and process industries

Specifications	Stainless Steel Internals	Brass Internals
Dial	2.5” (63mm), 4” (100mm), 4.5” (115mm), 6” (150mm) white aluminum with black and red markings	4” (100mm), 4.5” (115mm) white aluminum with black and red markings
Case	AISI 304 SS	AISI 304 SS
Lens	Polycarbonate, High pressure BSP(G) and HP: Tempered safety glass	Polycarbonate
Ring	AISI 304 SS	AISI 304 SS
Socket	316L SS, 2.5” (63mm) to 4.5” (115mm): Welded one-piece socket	OT 58 brass
Connection	1/4” NPT or 1/2” NPT standard, High Pressure: 1/2” BSP(G) or 9/16” autoclave or 1/4” autoclave with 9/16” gland/collar	1/4” NPT or 1/2” NPT standard
Bourdon Tube	316L SS, drawn seamless	Phosphor bronze
Movement	304 SS (under and overload stops 4” to 6”)	OT 59 brass (under and overload stops 4”)
Pointer	2.5” (63mm): Aluminum, anodized black, 4” (100mm), 4.5” (115mm), 6” (150mm): Aluminum, anodized black, micrometer adjustable	4” (100mm), 4.5” (115mm): Aluminum, anodized black
Welding	Laser welded socket to case	Silver alloy
Fill Liquid	Glycerin	Glycerin
Over-pressure Limit	25% for pressures up to 1,450 psi (9,998 kPa), 15% for pressures over 1,450 psi (9,998 kPa)	25% for pressures up to 1,450 psi (9,998 kPa), 15% for pressures over 1,450 psi (9,998 kPa)
Socket Gasket	2.5” (63mm), 4” (100mm), 4.5” (115mm): Welded (no gasket) 6” (150mm): Buna N for one-piece external socket seal, (silicone rubber option)	Buna N for two-piece internal socket seal
Fill Plug	Buna N (silicone rubber option)	Buna N (silicone rubber option)
Lens Ring Gasket	Buna N (silicone rubber option)	Buna N (silicone rubber option)
Working Pressure	Maximum 75% of full scale value	Maximum 75% of full scale value
Ambient Temperature	Dry: -40°F to 250°F (-40°C to 120°C) Glycerin Filled: -4°F to 150°F (-20°C to 65°C)	Dry: -40°F to 200°F (-40°C to 93°C) Glycerin Filled: -4°F to 150°F (-20°C to 65°C)
Process Temperature	-40°F to 250°F (-40°C to 120°C)	-40°F to 200°F (-40°C to 93°C)
Accuracy	2.5” (63mm): ±1.5% of full scale value 4” (100mm), 4.5” (115mm), 6” (150mm): ±1% ANSI/ ASME Grade 1A	4” (100mm), 4.5” (115mm): ±1% ANSI/ASME Grade 1A
Enclosure Rating	NEMA 4X/IP66, EN60529-1 (IEC529-1)	NEMA 4X/IP66, EN60529-1 (IEC529-1)
Warning (brass internals only)	N/A	**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Premium Stainless Steel Liquid Filled Gauge

Single Scale Order Codes (products in bold are normally stock in North America)

Dial Size	2.5” (63mm)		4” (100mm)			
Connection	1/4” Bottom	1/4” Back (CB)	1/4” Bottom	1/4” Back (LB)	1/2” Bottom	1/2” Back (LB)
Movement, Socket, Tube	SS					
30” Hg Vac	**PFP820R6**	PFP840R6	PFP640R6	PFP1090R6	PFP655R6	-
30”/0/15 psi	PFP860R1	PFP870R1	PFP1036R1	PFP1244R1	PFP1044R1	-
30”/0/30 psi	**PFP861R1**	PFP871R1	PFP1037R1	PFP1245R1	PFP1045R1	-
30”/0/60 psi	PFP862R1	PFP872R1	PFP1038R1	PFP1246R1	PFP1046R1	-
30”/0/100 psi	PFP863R1	PFP873R1	PFP1039R1	PFP1247R1	PFP1047R1	-
30”/0/150 psi	**PFP864R1**	PFP874R1	PFP1040R1	PFP1248R1	PFP1048R1	-
30”/0/200 psi	PFP866R1	PFP876R1	PFP1042R1	PFP1249R1	PFP1050R1	-
30”/0/300 psi	PFP867R1	PFP877R1	PFP1043R1	PFP1250R1	PFP1051R1	-
0/15 psi	**PFP821R1**	**PFP921R1**	PFP641R1	PFP1091R1	PFP656R1	-
0/30 psi	**PFP822R1**	**PFP922R1**	PFP642R1	PFP1092R1	PFP657R1	-
0/60 psi	**PFP823R1**	**PFP923R1**	PFP643R1	PFP1093R1	**PFP658R1**	-
0/100 psi	**PFP824R1**	**PFP924R1**	PFP644R1	PFP1094R1	**PFP659R1**	-
0/160 psi	**PFP825R1**	**PFP925R1**	PFP645R1	PFP1095R1	**PFP660R1**	-
0/200 psi	**PFP826R1**	**PFP926R1**	PFP646R1	PFP1096R1	**PFP661R1**	-
0/300 psi	**PFP827R1**	PFP927R1	PFP647R1	PFP1097R1	**PFP662R1**	-
0/400 psi	**PFP880R1**	PFP881R1	PFP650R1	PFP1251R1	PFP666R1	-
0/600 psi	**PFP828R1**	**PFP928R1**	PFP648R1	PFP1098R1	**PFP663R**1	-
0/1,000 psi	**PFP829R1**	PFP929R1	PFP649R1	PFP1099R1	**PFP664R1**	-
0/1,500 psi	**PFP834R1**	PFP934R1	-	PFP1252R1	**PFP665R1**	PFP1190R1
0/2,000 psi	**PFP830R1**	PFP930R1	-	PFP1253R1	**PFP667R1**	PFP1191R1
0/3,000 psi	**PFP831R1**	PFP931R1	-	PFP1254R1	PFP668R1	PFP1192R1
0/5,000 psi	**PFP832R1**	PFP852R1	-	PFP1255R1	**PFP669R1**	PFP1193R1
0/6,000 psi	PFP836R1	PFP851R1	-	PFP1259R1	PFP675R1	PFP1197R1
0/10,000 psi	PFP833R1	PFP853R1	-	PFP1256R1	PFP670R1	PFP1194R1
0/15,000 psi	PFP835R1	PFP855R1	-	PFP1257R1	PFP671R1	PFP1195R1
0/20,000 psi	PFP837R1	-	-	PFP1258R1	PFP672R1	PFP1196R1

Other ranges and connection sizes available upon request. 316 SS case and mountable bezel available upon request. For scale change, refer to How to Order Guide for scale codes. **For options, attach suffix to end of order code: i.e. PFP929R1-25UC for U-CLAMP.**

Option suffix:

25BF = 2.5” (63mm) Back flange
25BOOT = 2.5” (63mm) black rubber boot
25DRY = Supply 2.5” (63mm) gauge dry
25FF = 2.5” (63mm) Front flange
25SS = 2.5” (63mm) 316 SS case
25UC = 2.5” (63mm) U-Clamp
4BF = 4” (100mm) Back flange
4FF = 4” (100mm) Front flange
4SS = 4” (100mm) SS case
4UC-P = 4” (100mm) U-Clamp premium
DRY = Supply gauge dry
EN = EN837-1 compliant
MAXI25= 2.5” (63mm) Maxi pointer
MAXI4 = 4” (100mm) Maxi pointer
REST = Restrictor screw
RSP4 = 4” (100mm) Red set pointer
SF25 = 2.5” (63mm) Silicone filled
SF4 = 4” (100mm) Silicone filled
SG-25 = 2.5” (63mm) Safety glass lens
SG-4 = 4” (100mm) Safety glass lens

For Win**BRIGHT** dial options refer to Custom Dials

2.5” Bottom Connection with Back Flange

2.5” Back Connection with Front Flange

Dual Scale Order Codes (products in bold are normally stock in North America)

Dial Size	2.5" (63mm)		4" (100mm)							
Connection	1/4" Bottom	1/4" Back (CB)	1/4" Bottom	1/4" Back (LB)	1/4" Bottom	1/4" Back (LB)	1/2" Bottom	1/2" Back (LB)	1/2" Bottom	1/2" Back (LB)
Movement, Socket, Tube	SS		Brass		SS		Brass		SS	
30" Hg Vac/kPa	**PFP820**	PFP840	PFP600	PFP1000	PFP640	PFP1090	PFP2284	-	PFP655	PFP2308
30"/0/15 psi/kPa	PFP860	PFP870	PFP1020	PFP1028	PFP1036	PFP1244	PFP2285	-	PFP1044	PFP2309
30"/0/30 psi/kPa	**PFP861**	PFP871	PFP1021	PFP1029	**PFP1037**	PFP1245	PFP2286	-	PFP1045	PFP2310
30"/0/60 psi/kPa	PFP862	**PFP872**	PFP1022	PFP1030	**PFP1038**	PFP1246	PFP2287	-	PFP1046	PFP2311
30"/0/100 psi/kPa	**PFP863**	PFP873	PFP1023	PFP1031	PFP1039	PFP1247	PFP2288	-	PFP1047	PFP2312
30"/0/150 psi/kPa	PFP864	PFP874	PFP1024	PFP1032	PFP1040	PFP1248	PFP2289	-	PFP1048	PFP2313
30"/0/200 psi/kPa	PFP866	PFP876	PFP1026	PFP1034	PFP1042	PFP1249	PFP2290	-	PFP1050	PFP2314
30"/0/300 psi/kPa	PFP867	**PFP877**	PFP1027	PFP1035	PFP1043	PFP1250	PFP2291	-	PFP1051	PFP2315
0/15 psi/kPa	**PFP821**	PFP921	**PFP601**	PFP1001	**PFP641**	PFP1091	PFP2292	-	**PFP656**	PFP2316
0/30 psi/kPa	**PFP822**	**PFP922**	**PFP602**	PFP1002	**PFP642**	PFP1092	PFP2293	-	**PFP657**	PFP2317
0/60 psi/kPa	**PFP823**	**PFP923**	**PFP603**	PFP1003	**PFP643**	PFP1093	PFP2294	-	**PFP658**	PFP2318
0/100 psi/kPa	**PFP824**	**PFP924**	**PFP604**	PFP1004	**PFP644**	PFP1094	PFP2295	-	**PFP659**	PFP2319
0/160 psi/kPa	**PFP825**	**PFP925**	**PFP605**	PFP1005	**PFP645**	PFP1095	PFP2296	-	**PFP660**	PFP2320
0/200 psi/kPa	**PFP826**	**PFP926**	**PFP606**	PFP1006	**PFP646**	PFP1096	PFP2297	-	**PFP661**	PFP2321
0/300 psi/kPa	**PFP827**	**PFP927**	**PFP607**	PFP1007	**PFP647**	PFP1097	PFP2298	-	**PFP662**	PFP2322
0/400 psi/kPa	**PFP880**	PFP881	PFP610	PFP1016	**PFP650**	PFP1251	PFP2299	-	**PFP666**	PFP2323
0/600 psi/kPa	**PFP828**	**PFP928**	PFP608	PFP1008	PFP648	PFP1098	PFP2300	-	**PFP663**	PFP2324
0/1,000 psi/kPa	**PFP829**	**PFP929**	PFP609	-	PFP649	PFP1099	PFP624	PFP1009	**PFP664**	PFP2325
0/1,500 psi/kPa	PFP834	PFP934	-	-	PFP2301	PFP1252	PFP625	PFP1010	PFP665	PFP1190
0/2,000 psi/kPa	**PFP830**	**PFP930**	-	-	PFP2302	PFP1253	PFP626	PFP1011	PFP667	PFP1191
0/3,000 psi/kPa	**PFP831**	**PFP931**	-	-	PFP2303	PFP1254	PFP627	PFP1012	**PFP668**	PFP1192
0/5,000 psi/kPa	**PFP832**	**PFP852**	-	-	PFP2304	PFP1255	PFP628	PFP1013	PFP669	PFP1193
0/6,000 psi/kPa	**PFP836**	PFP851	-	-	PFP2305	PFP1259	PFP631	PFP1015	PFP675	PFP1197
0/10,000 psi/kPa	**PFP833**	PFP853	-	-	PFP2306	PFP1256	PFP629	PFP1014	PFP670	PFP1194
0/15,000 psi/kPa	PFP835	PFP855	-	-	PFP2307	PFP1257	PFP630	PFP1018	PFP671	PFP1195
0/20,000 psi/kPa	PFP837	-	-	-	-	PFP1258	PFP639	PFP1019	PFP672	PFP1196

Other ranges and connection sizes available upon request. 316 SS case and mountable bezel available upon request. For scale change, refer to How to Order Guide for scale codes. **For options, attach suffix to end of order code: i.e. PFP929-25UC for U-CLAMP.**

Option suffix:

25BF = 2.5" (63mm) Back flange
25BOOT = 2.5" (63mm) black rubber boot
25DRY = Supply 2.5" (63mm) gauge dry
25FF = 2.5" (63mm) Front flange
25SS = 2.5" (63mm) 316 SS case
25UC = 2.5" (63mm) U-Clamp
4BF = 4" (100mm) Back flange
4FF = 4" (100mm) Front flange
4SS = 4" (100mm) SS case
4UC-P = 4" (100mm) U-Clamp premium
DRY = Supply gauge dry
EN = EN837-1 compliant
MAXI25= 2.5" (63mm) Maxi pointer
MAXI4 = 4" (100mm) Maxi pointer
RSP4 = 4" (100mm) Red set pointer
SF25 = 2.5" (63mm) Silicone filled
SF4 = 4" (100mm) Silicone filled
SG-25 = 2.5" (63mm) Safety glass lens
SG-4 = 4" (100mm) Safety glass lens

For Win**BRIGHT** dial options refer to Custom Dials

4" Bottom Connection with Back Flange

Premium Stainless Steel Liquid Filled Gauge

High Pressure Order Codes

Dial Size	4” (100mm)			
Connection	1/2” BSP(G) Bottom	1/2” BSP(G) Back (LB)	9/16” HP Bottom	1/4” HP Autoclave w/9/16” gland and collar Bottom
Movement, Socket, Tube	SS			
0/20,000 psi/kPa	-	-	PFP9601	PFP9621
0/25,000 psi/kPa	PFP9602T1	PFP9652T1	PFP9602	PFP9622
0/30,000 psi/kPa	PFP9603T1	PFP9653T1	PFP9603	PFP9623
0/35,000 psi/kPa	PFP9604T1	PFP9654T1	PFP9604	PFP9624
0/40,000 psi/kPa	PFP9605T1	PFP9655T1	PFP9605	PFP9625

Other ranges and connection sizes available upon request. 316 SS case and mountable bezel available upon request. For scale change, refer to How to Order Guide for scale codes. **For options, attach suffix to end of order code: i.e. PFP9652T1-4UC-P for U-CLAMP.**

Option suffix:

4BF = 4” (100mm) Back flange
4FF = 4” (100mm) Front flange
4SS = 4” (100mm) SS case
4UC-P = 4” (100mm) U-Clamp premium
DRY = Supply gauge dry
EN = EN837-1 compliant
RSP4 = 4” (100mm) Red set pointer
SF4 = 4” (100mm) Silicone filled
SG-4 = 4” (100mm) Safety glass lens

For Win**BRIGHT** dial options refer to Custom Dials

4” Bottom Connection 1/4” HP Autoclave w/9/16” Gland and Collar

4” Back Connection HP 1/2” BSP(G)

Dual Scale Order Codes

Dial Size	4.5” (115mm)							
Connection	1/4” Bottom	1/4” Back (LB)	1/2” Bottom	1/2” Back (LB)	1/4” Bottom	1/4” Back (LB)	1/2” Bottom	1/2” Back (LB)
Movement, Socket, Tube	Brass				SS			
30” Hg Vac/kPa	PFP500	PFP1300	PFP550	PFP1350	PFP700	PFP400	PFP750	PFP450
30”/0/15 psi/kPa	PFP501	PFP1301	PFP551	PFP1351	PFP701	PFP401	PFP751	PFP451
30”/0/30 psi/kPa	PFP502	PFP1302	PFP552	PFP1352	PFP702	PFP402	PFP752	PFP452
30”/0/60 psi/kPa	PFP503	PFP1303	PFP553	PFP1353	PFP703	PFP403	PFP753	PFP453
30”/0/100 psi/kPa	PFP504	PFP1304	PFP554	PFP1354	PFP704	PFP404	PFP754	PFP454
30”/0/150 psi/kPa	PFP505	PFP1305	PFP555	PFP1355	PFP705	PFP405	PFP755	PFP455
30”/0/200 psi/kPa	PFP506	PFP1306	PFP556	PFP1356	PFP706	PFP406	PFP756	PFP456
30”/0/300 psi/kPa	PFP507	PFP1307	PFP557	PFP1357	PFP707	PFP407	PFP757	PFP457
0/15 psi/kPa	PFP508	PFP1308	PFP558	PFP1358	PFP708	PFP408	PFP758	PFP458
0/30 psi/kPa	PFP509	PFP1309	PFP559	PFP1359	PFP709	PFP409	PFP759	PFP459
0/60 psi/kPa	PFP510	PFP1310	PFP560	PFP1360	PFP710	PFP410	PFP760	PFP460
0/100 psi/kPa	PFP511	PFP1311	PFP561	PFP1361	PFP711	PFP411	PFP761	PFP461
0/160 psi/kPa	PFP512	PFP1312	PFP562	PFP1362	PFP712	PFP412	PFP762	PFP462
0/200 psi/kPa	PFP513	PFP1313	PFP563	PFP1363	PFP713	PFP413	PFP763	PFP463
0/300 psi/kPa	PFP514	PFP1314	PFP564	PFP1364	PFP714	PFP414	PFP764	PFP464
0/400 psi/kPa	PFP515	PFP1315	PFP565	PFP1365	PFP715	PFP415	PFP765	PFP465
0/600 psi/kPa	PFP516	PFP1316	PFP566	PFP1366	PFP716	PFP416	PFP766	PFP466
0/1,000 psi/kPa	PFP517	PFP1317	PFP567	PFP1367	PFP717	PFP417	PFP767	PFP467
0/1,500 psi/kPa	PFP518	PFP1318	PFP568	PFP1368	PFP718	PFP418	PFP768	PFP468
0/2,000 psi/kPa	PFP519	PFP1319	PFP569	PFP1369	PFP719	PFP419	PFP769	PFP469
0/3,000 psi/kPa	PFP520	PFP1320	PFP570	PFP1370	PFP720	PFP420	PFP770	PFP470
0/5,000 psi/kPa	PFP521	PFP1321	PFP571	PFP1371	PFP721	PFP421	PFP771	PFP471
0/6,000 psi/kPa	PFP522	PFP1322	PFP572	PFP1372	PFP722	PFP422	PFP772	PFP472
0/10,000 psi/kPa	PFP523	PFP1323	PFP573	PFP1373	PFP723	PFP423	PFP773	PFP473
0/15,000 psi/kPa	PFP524	PFP1324	PFP574	PFP1374	PFP724	PFP424	PFP774	PFP474
0/20,000 psi/kPa	PFP525	PFP1325	PFP575	PFP1375	PFP725	PFP425	PFP775	PFP475

Other ranges and connection sizes available upon request. 316 SS case and mountable bezel available upon request. For scale change, refer to How to Order Guide for scale codes. **For options, attach suffix to end of order code: i.e. PFP1311-DRY for DRY GAUGE.**

Option suffix:

DRY = Supply gauge dry
EN = EN837-1 compliant
SF45 = 4.5” (115mm) Silicone filled
SG-45-P = 4.5” (115mm) Safety glass lens

4.5” Bottom Connection with Back Flange

4.5” Back Connection with Front Flange

Dual Scale Order Codes

Dial Size	6” (150mm)			
Connection	1/4” Bottom	1/4” Back (LB)	1/2” Bottom	1/2” Back (LB)
Movement, Socket, Tube	SS			
30” Hg Vac/kPa	PFP1078	PFP1168	PFP2326	-
30”/0/15 psi/kPa	PFP1079	-	PFP2327	-
30”/0/30 psi/kPa	PFP1052	-	PFP2328	-
30”/0/60 psi/kPa	PFP1053	-	PFP2329	-
30”/0/100 psi/kPa	PFP1054	-	PFP2330	-
30”/0/150 psi/kPa	PFP1055	-	PFP2331	-
30”/0/200 psi/kPa	PFP1057	-	PFP2332	-
30”/0/300 psi/kPa	PFP1058	-	PFP2333	-
0/15 psi/kPa	PFP1059	PFP1159	PFP2334	-
0/30 psi/kPa	PFP1060	PFP1160	PFP2335	-
0/60 psi/kPa	PFP1061	PFP1161	PFP2336	-
0/100 psi/kPa	PFP1062	PFP1162	PFP2337	-
0/160 psi/kPa	PFP1063	PFP1163	PFP2338	-
0/200 psi/kPa	PFP1064	PFP1164	PFP2339	-
0/300 psi/kPa	PFP1065	PFP1165	PFP2340	-
0/400 psi/kPa	PFP1077	-	PFP2341	-
0/600 psi/kPa	PFP1066	PFP1166	PFP2342	-
0/1,000 psi/kPa	PFP1067	PFP1167	PFP1080	-
0/1,500 psi/kPa	PFP1068	-	PFP1081	PFP1169
0/2,000 psi/kPa	PFP1069	-	PFP1082	PFP1170
0/3,000 psi/kPa	PFP1070	-	PFP1083	PFP1171
0/4,000 psi/kPa	PFP1071	-	PFP1084	-
0/5,000 psi/kPa	PFP1072	-	PFP1085	PFP1172
0/6,000 psi/kPa	PFP1289	-	PFP1089	PFP1176
0/10,000 psi/kPa	PFP1073	-	PFP1086	PFP1173
0/15,000 psi/kPa	PFP1074	-	PFP1087	PFP1174
0/20,000 psi/kPa	PFP1075	-	PFP1088	PFP1175

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes. **For options, attach suffix to end of order code: i.e. PFP1064-SC for SAFETY CASE**

Option suffix:

6BF = 6” (150mm) Back flange
6FF = 6” (150mm) Front flange
6SS = 6” (150mm) SS case
6UC = 6” (150mm) U-Clamp
DRY = Supply gauge dry
EN = EN837-1 compliant
RSP6 = 6” (150mm) Red set pointer
SC = 6” (150mm) Safety case
SF6 = 6” (150mm) Silicone fill
SG-6 = 6” (150mm) Safety glass lens

For Win**BRIGHT** dial options refer to Custom Dials

6” Bottom Connection

6” Back Connection with Front Flange

Premium Stainless Steel Liquid Filled Gauge for Panel Mounting

PFP

Description & Features:

- Liquid filled stainless steel case protects against extreme vibration and pulsation
- Lower back mount with front flange for panel mounting
- Bayonet ring
- Dual and single scale available (psi/kPa & psi only)
- Stainless steel wetted parts
- Restricted orifice standard on dual scale (optional on single scale)
- Safety glass
- ASME B40.100 compliant (EN837-1 available)
- CRN registered
- 5 year warranty

Applications:

- Outdoor and severe ambient and process conditions
- Use where harmful vibration and pulsation are present
- Panel builders in hydraulic equipment, oil field equipment, pumps, compressors and process industries

Specifications	
Dial	2.5” (63mm) white aluminum with black and red markings
Case	AISI 304 SS
Lens	Safety glass
Ring	AISI 304 SS
Socket	316L SS welded one-piece socket
Connection	1/4” NPT
Bourdon Tube	316L SS, drawn seamless
Movement	304 SS
Pointer	Aluminum, anodized black
Welding	Laser welded socket to case
Fill Liquid	Glycerin
Over-pressure Limit	25% for pressures up to 1,450 psi (9,998 kPa), 15% for pressures over 1,450 psi (9,998 kPa)
Fill Plug	Buna N (silicone rubber option)
Lens Ring Gasket	Buna N (silicone rubber option)
Working Pressure	Maximum 75% of full scale value
Ambient Temperature	Dry: -40°F to 250°F (-40°C to 120°C) Glycerin Filled: -4°F to 150°F (-20°C to 65°C)
Process Temperature	-40°F to 250°F (-40°C to 120°C)
Accuracy	±1.5% of full scale value
Enclosure Rating	NEMA 4X/IP66, EN60529-1 (IEC529-1)

Premium Stainless Steel Liquid Filled Gauge for Panel Mounting

Single Scale Order Codes (products in bold are normally stock in North America)

Dial Size	2.5” (63mm)
Connection	1/4” Back (LBM)
Movement, Socket, Tube	SS
30” Hg Vac	PFP3772R6
30”/0/15 psi	PFP3773R1
30”/0/30 psi	PFP3774R1
30”/0/60 psi	PFP3775R1
30”/0/100 psi	PFP3776R1
30”/0/150 psi	PFP3777R1
30”/0/200 psi	PFP3778R1
30”/0/300 psi	PFP3779R1
0/15 psi	PFP3780R1
0/30 psi	PFP3781R1
0/60 psi	PFP3782R1
0/100 psi	PFP3783R1
0/160 psi	PFP3784R1
0/200 psi	PFP3785R1
0/300 psi	PFP3786R1
0/400 psi	PFP3787R1
0/600 psi	PFP3788R1
0/1,000 psi	PFP3789R1
0/1,500 psi	PFP3790R1
0/2,000 psi	PFP3791R1
0/3,000 psi	PFP3792R1
0/5,000 psi	PFP3793R1
0/6,000 psi	PFP3794R1
0/7,500 psi	PFP3795R1
0/10,000 psi	PFP3796R1
0/15,000 psi	PFP3797R1
0/20,000 psi	PFP3798R1

Dual Scale Order Codes

Dial Size	2.5” (63mm)
Connection	1/4” Back (LBM)
Movement, Socket, Tube	SS
30” Hg Vac/kPa	PFP3772
30”/0/15 psi/kPa	PFP3773
30”/0/30 psi/kPa	PFP3774
30”/0/60 psi/kPa	PFP3775
30”/0/100 psi/kPa	PFP3776
30”/0/150 psi/kPa	PFP3777
30”/0/200 psi/kPa	PFP3778
30”/0/300 psi/kPa	PFP3779
0/15 psi/kPa	PFP3780
0/30 psi/kPa	PFP3781
0/60 psi/kPa	PFP3782
0/100 psi/kPa	PFP3783
0/160 psi/kPa	PFP3784
0/200 psi/kPa	PFP3785
0/300 psi/kPa	PFP3786
0/400 psi/kPa	PFP3787
0/600 psi/kPa	PFP3788
0/1,000 psi/kPa	PFP3789
0/1,500 psi/kPa	PFP3790
0/2,000 psi/kPa	PFP3791
0/3,000 psi/kPa	PFP3792
0/5,000 psi/kPa	PFP3793
0/6,000 psi/kPa	PFP3794
0/7,500 psi/kPa	PFP3795
0/10,000 psi/kPa	PFP3796
0/15,000 psi/kPa	PFP3797
0/20,000 psi/kPa	PFP3798

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.

Option suffix:

25DRY = Supply 2.5” (63mm) gauge dry
25SS = 2.5” (63mm) 316 SS case
MAXI25 = 2.5” (63mm) Maxi Pointer
EN = EN837-1 compliant
REST = Restrictor screw (psi only)
SF25 = 2.5” (63mm) Silicone filled

2.5” Lower Back Connection with Front Flange

Dimensions in mm (inches)

Stainless Steel Liquid Filled Gauge, Lead Free Stainless Steel Liquid Filled Gauge

PFQ, PFQ-LF

1. Optional U-Clamp
2. Optional Front Flange

RoHS compliant

Note; RoHS applies SS internals only

LEAD FREE

NSF
Certified to NSF/ANSI 61 & 372

Description & Features:

- Pulsation resistant, liquid filled stainless steel case
- Glycerin filled standard
- Brass or stainless steel internals
- Restricted orifice standard on dual scale
- Ventable plug on 2.5” (63mm) and 4” (100mm) bottom mount (excluding SAE connection)
- Crimp-On bezel
- Single (psi) or dual scale (psi/kPa)/(psi/bar) available
- Optional U-Clamps and front flanges
- Dry case available
- ASME B40.100 compliant (EN837-1 available on 2” (50mm) dial and up)
- CRN registered
- Lead free version NSF-61-372 certified
- 5 year warranty

Applications:

- Ideal for pumps, compressors, hydraulic presses, machinery, pneumatic equipment and motors in harsh environments
- Use where harmful vibration and pulsation are present

Specifications	Stainless Steel Internals	Brass/Lead Free Brass Internals
Dial	1.5” (40mm), 2” (50mm), 2.5” (63mm), 4” (100mm), white aluminum with black and red markings	1.5” (40mm), 2” (50mm), 2.5” (63mm), 4” (100mm), white aluminum with black and red markings
Case	AISI 304 SS	AISI 304 SS
Lens	Polycarbonate	Polycarbonate
Ring	AISI 304 SS, Crimp-On	AISI 304 SS, Crimp-On
Socket	AISI 316 SS with restrictor screw (dual scale only)	OT 58 brass with restricted orifice (dual scale only) or lead free brass with restricted orifice (dual scale only), NSF-61-372 certified
Connection	1/8”, 1/4” or 1/2” NPT	1/8”, 1/4” or 1/2” NPT or 7/16-20 SAE standard with restricted orifice
Fill Liquid	Glycerin	Glycerin
Bourdon Tube	1.5” (40mm), 2” (50mm): SS C or coil shaped 2.5” (63mm), 4” (100mm): AISI 316 SS C or coil shaped	Phosphor bronze C or coil shaped
Movement	SS	PFQ: OT 59 brass PFQ-LF (1.5”, 2”, 2.5”): SS, PFQ-LF (4”): Lead free brass, NSF-61-372 certified
Pointer	Aluminum, anodized black	Aluminum, anodized black
Welding	TIG	Silver alloy
Over-pressure Limit	25% for pressures up to 1,450 psi (9,998 kPa), 15% for pressures over 1,450 psi (9,998 kPa)	25% for pressures up to 1,450 psi (9,998 kPa), 15% for pressures over 1,450 psi (9,998 kPa)
Socket Gasket	Buna N for two-piece internal socket seal	Buna N for two-piece internal socket seal
Fill Plug	Buna N	Buna N
Lens Ring Gasket	Silicone rubber	Silicone rubber
Working Pressure	Maximum 75% of full scale value	Maximum 75% of full scale value
Ambient/Process Temperature	Dry: -40°F to 200°F (-40°C to 93°C) Glycerin Filled: -4°F to 150°F (-20°C to 65°C)	Dry: -40°F to 200°F (-40°C to 93°C) Glycerin Filled: -4°F to 150°F (-20°C to 65°C)
Accuracy	1.5” (40mm), 2” (50mm): ±2.5% of full scale value 2.5” (63mm), 4” (100mm): ±1.5% of full scale value	1.5” (40mm), 2” (50mm): ±2.5% of full scale value 2.5” (63mm), 4” (100mm): ±1.5% of full scale value
Enclosure Rating	IP65	IP65
Warning (brass and lead free brass internals only)	N/A	**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Stainless Steel Liquid Filled Gauge, Lead Free Stainless Steel Liquid Filled Gauge

Dual Scale Order Codes (products in bold are normally stock in North America)

Dial Size	1.5" (40mm)			
Connection	1/8" Bottom	1/8" Back (CB)	1/8" Bottom	1/8" Back (CB)
Movement, Socket, Tube	Brass		SS	
30" Hg Vac/kPa	-	-	PFQ1200	PFQ1220
0/15 psi/kPa	-	-	PFQ1201	PFQ1221
0/30 psi/kPa	PFQ1102	**PFQ1122**	PFQ1202	**PFQ1222**
0/60 psi/kPa	PFQ1103	**PFQ1123**	**PFQ1203**	PFQ1223
0/100 psi/kPa	PFQ1104	**PFQ1124**	**PFQ1204**	**PFQ1224**
0/160 psi/kPa	**PFQ1105**	**PFQ1125**	PFQ1205	**PFQ1225**
0/200 psi/kPa	PFQ1106	PFQ1126	PFQ1206	**PFQ1226**
0/300 psi/kPa	PFQ1107	**PFQ1127**	**PFQ1207**	PFQ1227
0/600 psi/kPa	**PFQ1108**	PFQ1128	PFQ1208	PFQ1228
0/1,000 psi/kPa	PFQ1109	**PFQ1129**	PFQ1209	PFQ1229
0/1,500 psi/kPa	PFQ1110	PFQ1130	PFQ1210	PFQ1230
0/2,000 psi/kPa	PFQ1111	**PFQ1131**	PFQ1211	PFQ1231
0/3,000 psi/kPa	PFQ1112	**PFQ1132**	**PFQ1212**	PFQ1232
0/5,000 psi/kPa	PFQ1113	**PFQ1133**	PFQ1213	**PFQ1233**

PFQ-LF Order Codes

Dial Size	1.5" (40mm)	
Connection	1/8" Bottom	1/8" Back (CB)
Movement, Socket, Tube	Lead Free Brass	
0/30 psi/kPa	PFQ1102LF	PFQ1122LF
0/60 psi/kPa	PFQ1103LF	PFQ1123LF
0/100 psi/kPa	PFQ1104LF	PFQ1124LF
0/160 psi/kPa	PFQ1105LF	PFQ1125LF
0/200 psi/kPa	PFQ1106LF	PFQ1126LF
0/300 psi/kPa	PFQ1107LF	PFQ1127LF
0/600 psi/kPa	PFQ1108LF	PFQ1128LF
0/1,000 psi/kPa	PFQ1109LF	PFQ1129LF
0/1,500 psi/kPa	PFQ1110LF	PFQ1130LF
0/2,000 psi/kPa	PFQ1111LF	PFQ1131LF
0/3,000 psi/kPa	PFQ1112LF	PFQ1132LF
0/5,000 psi/kPa	PFQ1113LF	PFQ1133LF

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes. 1.5" (40mm) gauges are available dry (non-liquid filled) only on a special order basis. **For options, attach suffix to end of order code: i.e. PFQ1102-15DRY for DRY CASE**

Option suffix:
15DRY = Supply 1.5" (40mm) gauge dry
15FF = 1.5" (40mm) Front flange
15UC = 1.5" (40mm) U-Clamp

Single Scale Order Codes

Dial Size	2” (50mm)							
Connection	1/8” Bottom	1/8” Back (CB)	1/8” Bottom	1/8” Back (CB)	1/4” Bottom	1/4” Back (CB)	1/4” Bottom	1/4” Back (CB)
Movement, Socket, Tube	Brass		SS		Brass		SS	
30” Hg Vac	PFQ2400R6	PFQ2426R6	PFQ2248R6	PFQ2309R6	PFQ2452R6	PFQ2478R6	PFQ2247R6	PFQ2246R6
30”/0/15 psi	PFQ2401R1	PFQ2427R1	PFQ2295R1	PFQ2310R1	PFQ2453R1	PFQ2479R1	PFQ2271R1	PFQ2282R1
30”/0/30 psi	PFQ2402R1	PFQ2428R1	PFQ2241R1	PFQ2311R1	PFQ2454R1	PFQ2480R1	PFQ2272R1	PFQ2283R1
30”/0/60 psi	PFQ2403R1	PFQ2429R1	PFQ2296R1	PFQ2312R1	PFQ2455R1	PFQ2481R1	PFQ2273R1	PFQ2242R1
30”/0/100 psi	PFQ2404R1	PFQ2430R1	PFQ2297R1	PFQ2313R1	PFQ2456R1	PFQ2482R1	PFQ2274R1	PFQ2284R1
30”/0/160 psi	PFQ2405R1	PFQ2431R1	PFQ2298R1	PFQ2314R1	PFQ2457R1	PFQ2483R1	PFQ2275R1	PFQ2285R1
30”/0/200 psi	PFQ2406R1	PFQ2432R1	PFQ2299R1	PFQ2315R1	PFQ2458R1	PFQ2484R1	PFQ2276R1	PFQ2286R1
30”/0/300 psi	PFQ2407R1	PFQ2433R1	PFQ2300R1	PFQ2316R1	PFQ2459R1	PFQ2485R1	PFQ2277R1	PFQ2287R1
0/15 psi	PFQ2408R1	PFQ2434R1	PFQ2218R1	PFQ2217R1	PFQ2460R1	PFQ2486R1	PFQ2215R1	PFQ2214R1
0/30 psi	PFQ2409R1	PFQ2435R1	PFQ2253R1	PFQ2252R1	PFQ2461R1	PFQ2487R1	PFQ2250R1	PFQ2249R1
0/60 psi	PFQ2410R1	PFQ2436R1	PFQ2270R1	PFQ2269R1	PFQ2462R1	PFQ2488R1	PFQ2266R1	PFQ2265R1
0/100 psi	PFQ2411R1	PFQ2437R1	PFQ2209R1	PFQ2208R1	PFQ2463R1	PFQ2489R1	PFQ2205R1	PFQ2204R1
0/160 psi	PFQ2412R1	PFQ2438R1	PFQ2206R1	PFQ2207R1	PFQ2464R1	PFQ2490R1	PFQ2220R1	PFQ2219R1
0/200 psi	PFQ2413R1	PFQ2439R1	PFQ2301R1	PFQ2951R1	PFQ2465R1	PFQ2491R1	PFQ2267R1	PFQ2268R1
0/300 psi	PFQ2414R1	PFQ2440R1	PFQ2245R1	PFQ2318R1	PFQ2466R1	PFQ2492R1	PFQ2244R1	PFQ2243R1
0/400 psi	PFQ2415R1	PFQ2441R1	PFQ2302R1	PFQ2319R1	PFQ2467R1	PFQ2493R1	PFQ2254R1	PFQ2288R1
0/600 psi	PFQ2416R1	PFQ2442R1	PFQ2264R1	PFQ2320R1	PFQ2468R1	PFQ2494R1	PFQ2278R1	PFQ2289R1
0/1,000 psi	PFQ2417R1	PFQ2443R1	PFQ2203R1	PFQ2321R1	PFQ2469R1	PFQ2495R1	PFQ2202R1	PFQ2201R1
0/1,500 psi	PFQ2418R1	PFQ2444R1	PFQ2213R1	PFQ2322R1	PFQ2470R1	PFQ2496R1	PFQ2212R1	PFQ2211R1
0/2,000 psi	PFQ2419R1	PFQ2445R1	PFQ2304R1	PFQ2323R1	PFQ2471R1	PFQ2497R1	PFQ2279R1	PFQ2290R1
0/3,000 psi	PFQ2420R1	PFQ2446R1	PFQ2305R1	PFQ2324R1	PFQ2472R1	PFQ2498R1	PFQ2280R1	PFQ2291R1
0/5,000 psi	PFQ2421R1	PFQ2447R1	PFQ2258R1	PFQ2257R1	PFQ2473R1	PFQ2499R1	PFQ2256R1	PFQ2255R1
0/6,000 psi	PFQ2422R1	PFQ2448R1	PFQ2262R1	PFQ2261R1	PFQ2474R1	PFQ2500R1	PFQ2260R1	PFQ2259R1
0/7,500 psi	PFQ2423R1	PFQ2449R1	PFQ2306R1	PFQ2325R1	PFQ2475R1	PFQ2501R1	PFQ2281R1	PFQ2292R1
0/10,000 psi	PFQ2424R1	PFQ2450R1	PFQ2307R1	PFQ2326R1	PFQ2476R1	PFQ2502R1	PFQ2200R1	PFQ2293R1
0/15,000 psi	PFQ2425R1	PFQ2451R1	PFQ2308R1	PFQ2327R1	PFQ2477R1	PFQ2503R1	PFQ2210R1	PFQ2294R1

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes. Front flange for 2” (50mm) gauge is available. **For options, attach suffix to end of order code: i.e. PFQ2414R1-20DRY for DRY CASE**

Option suffix:
20DRY = Supply 2” (50mm) gauge dry
2UC = 2” (50mm) U-Clamp
EN = EN837-1 compliant
REST = Restrictor screw

Single Scale Order Codes (products in bold are normally stock in North America)

Dial Size	2.5” (63mm)			
Connection	1/4” Bottom	1/4” Back (CB)	1/4” Bottom	1/4” Back (CB)
Movement, Socket, Tube	Brass		SS	
30” Hg Vac	PFQ801R6	PFQ900R6	PFQ106R6	PFQ147R6
30”/0/15 psi	PFQ790R1	PFQ890R1	PFQ107R1	PFQ148R1
30”/0/30 psi	**PFQ798R1**	PFQ898R1	**PFQ108R1**	PFQ149R1
30”/0/60 psi	PFQ799R1	PFQ899R1	PFQ109R1	PFQ151R1
30”/0/100 psi	PFQ791R1	PFQ891R1	PFQ110R1	PFQ156R1
30”/0/160 psi	PFQ792R1	PFQ892R1	PFQ111R1	PFQ157R1
30”/0/200 psi	PFQ794R1	PFQ894R1	PFQ112R1	PFQ158R1
30”/0/300 psi	PFQ795R1	PFQ895R1	PFQ113R1	PFQ159R1
0/15 psi	**PFQ800R1**	PFQ901R1	PFQ118R1	PFQ162R1
0/30 psi	**PFQ802R1**	PFQ902R1	PFQ119R1	PFQ163R1
0/60 psi	**PFQ803R1**	PFQ903R1	PFQ120R1	PFQ164R1
0/100 psi	PFQ804R1	PFQ904R1	**PFQ121R1**	PFQ169R1
0/160 psi	PFQ805R1	PFQ905R1	PFQ122R1	PFQ170R1
0/200 psi	PFQ806R1	PFQ906R1	PFQ123R1	PFQ171R1
0/300 psi	PFQ807R1	PFQ907R1	**PFQ124R1**	PFQ175R1
0/400 psi	PFQ817R1	PFQ917R1	PFQ125R1	PFQ177R1
0/600 psi	PFQ808R1	PFQ908R1	PFQ126R1	PFQ178R1
0/1,000 psi	PFQ809R1	PFQ909R1	PFQ127R1	PFQ179R1
0/1,500 psi	PFQ816R1	PFQ914R1	PFQ128R1	PFQ180R1
0/2,000 psi	PFQ810R1	PFQ910R1	PFQ129R1	PFQ181R1
0/3,000 psi	PFQ811R1	PFQ911R1	PFQ137R1	PFQ182R1
0/4,000 psi	PFQ819R1	PFQ919R1	-	-
0/5,000 psi	PFQ812R1	PFQ912R1	PFQ138R1	PFQ183R1
0/6,000 psi	PFQ814R1	PFQ915R1	PFQ139R1	PFQ184R1
0/7,500 psi	PFQ818R1	PFQ918R1	PFQ144R1	PFQ186R1
0/10,000 psi	PFQ813R1	PFQ913R1	PFQ145R1	PFQ190R1
0/15,000 psi	-	-	PFQ146R1	PFQ191R1

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes. Front flange for 2” (50mm) gauge is available. **For options, attach suffix to end of order code: i.e. PFQ806R1-25DRY for DRY CASE**

Option suffix:

25BF = 2.5” (63mm) Back flange
25DRY = Supply 2.5” (63mm) gauge dry
25FF = 2.5” (63mm) Front flange
25UC = 2.5” (63mm) U-Clamp
EN = EN837-1 compliant
REST = Restrictor screw
SF25 = 2.5” (63mm) Silicone filled

Dual Scale Order Codes (products in bold are normally stock in North America)

Dial Size	2" (50mm)							
Connection	1/8" Bottom	1/8" Back (CB)	1/8" Bottom	1/8" Back (CB)	1/4" Bottom	1/4" Back (CB)	1/4" Bottom	1/4" Back (CB)
Movement, Socket, Tube	Brass		SS		Brass		SS	
30" Hg Vac/kPa	PFQ2400	**PFQ2426**	PFQ2248	PFQ2309	**PFQ2452**	PFQ2478	PFQ2247	PFQ2246
30"/0/15 psi/kPa	PFQ2401	PFQ2427	PFQ2295	PFQ2310	PFQ2453	PFQ2479	PFQ2271	PFQ2282
30"/0/30 psi/kPa	PFQ2402	PFQ2428	PFQ2241	PFQ2311	PFQ2454	PFQ2480	PFQ2272	PFQ2283
30"/0/60 psi/kPa	PFQ2403	PFQ2429	PFQ2296	PFQ2312	PFQ2455	PFQ2481	PFQ2273	PFQ2242
30"/0/100 psi/kPa	PFQ2404	PFQ2430	PFQ2297	PFQ2313	PFQ2456	PFQ2482	PFQ2274	PFQ2284
30"/0/150 psi/kPa	PFQ2405	PFQ2431	PFQ2298	PFQ2314	PFQ2457	PFQ2483	PFQ2275	PFQ2285
30"/0/200 psi/kPa	PFQ2406	PFQ2432	PFQ2299	PFQ2315	PFQ2458	PFQ2484	PFQ2276	PFQ2286
30"/0/300 psi/kPa	PFQ2407	PFQ2433	PFQ2300	PFQ2316	PFQ2459	PFQ2485	PFQ2277	PFQ2287
0/15 psi/kPa	PFQ2408	PFQ2434	PFQ2218	PFQ2217	PFQ2460	PFQ2486	PFQ2215	PFQ2214
0/30 psi/kPa	PFQ2409	PFQ2435	PFQ2253	PFQ2252	PFQ2461	**PFQ2487**	PFQ2250	PFQ2249
0/60 psi/kPa	PFQ2410	**PFQ2436**	PFQ2270	PFQ2269	**PFQ2462**	PFQ2488	PFQ2266	PFQ2265
0/100 psi/kPa	**PFQ2411**	**PFQ2437**	PFQ2209	PFQ2208	**PFQ2463**	**PFQ2489**	PFQ2205	PFQ2204
0/160 psi/kPa	PFQ2412	**PFQ2438**	PFQ2206	PFQ2207	**PFQ2464**	**PFQ2490**	PFQ2220	PFQ2219
0/200 psi/kPa	**PFQ2413**	**PFQ2439**	PFQ2301	PFQ2951	**PFQ2465**	PFQ2491	PFQ2267	PFQ2268
0/300 psi/kPa	**PFQ2414**	PFQ2440	PFQ2245	PFQ2318	PFQ2466	**PFQ2492**	PFQ2244	PFQ2243
0/400 psi/kPa	PFQ2415	PFQ2441	PFQ2302	PFQ2319	PFQ2467	PFQ2493	PFQ2254	PFQ2288
0/600 psi/kPa	PFQ2416	PFQ2442	PFQ2264	PFQ2320	PFQ2468	PFQ2494	PFQ2278	PFQ2289
0/1,000 psi/kPa	PFQ2417	PFQ2443	PFQ2203	PFQ2321	**PFQ2469**	**PFQ2495**	PFQ2202	**PFQ2201**
0/1,500 psi/kPa	PFQ2418	PFQ2444	PFQ2213	PFQ2322	PFQ2470	PFQ2496	PFQ2212	PFQ2211
0/2,000 psi/kPa	PFQ2419	PFQ2445	PFQ2304	PFQ2323	PFQ2471	PFQ2497	PFQ2279	PFQ2290
0/3,000 psi/kPa	PFQ2420	PFQ2446	PFQ2305	PFQ2324	PFQ2472	PFQ2498	PFQ2280	PFQ2291
0/5,000 psi/kPa	PFQ2421	PFQ2447	PFQ2258	PFQ2257	**PFQ2473**	PFQ2499	PFQ2256	PFQ2255
0/6,000 psi/kPa	PFQ2422	PFQ2448	PFQ2262	PFQ2261	PFQ2474	PFQ2500	PFQ2260	PFQ2259
0/7,500 psi/kPa	PFQ2423	PFQ2449	PFQ2306	PFQ2325	PFQ2475	PFQ2501	PFQ2281	PFQ2292
0/10,000 psi/kPa	PFQ2424	PFQ2450	PFQ2307	PFQ2326	PFQ2476	PFQ2502	PFQ2200	PFQ2293
0/15,000 psi/kPa	PFQ2425	PFQ2451	PFQ2308	PFQ2327	PFQ2477	PFQ2503	PFQ2210	PFQ2294

PFQ-LF Order Codes

Dial Size	2" (50mm)			
Connection	1/8" Bottom	1/8" Back (CB)	1/4" Bottom	1/4" Back (CB)
Movement, Socket, Tube	Lead Free Brass			
30" Hg Vac/kPa	PFQ2400LF	PFQ2426LF	PFQ2452LF	PFQ2478LF
30"/0/15 psi/kPa	PFQ2401LF	PFQ2427LF	PFQ2453LF	PFQ2479LF
30"/0/30 psi/kPa	PFQ2402LF	PFQ2428LF	PFQ2454LF	PFQ2480LF
30"/0/60 psi/kPa	PFQ2403LF	PFQ2429LF	PFQ2455LF	PFQ2481LF
30"/0/100 psi/kPa	PFQ2404LF	PFQ2430LF	PFQ2456LF	PFQ2482LF
30"/0/160 psi/kPa	PFQ2405LF	PFQ2431LF	PFQ2457LF	PFQ2483LF
30"/0/200 psi/kPa	PFQ2406LF	PFQ2432LF	PFQ2458LF	PFQ2484LF
30"/0/300 psi/kPa	PFQ2407LF	PFQ2433LF	PFQ2459LF	PFQ2485LF
0/15 psi/kPa	PFQ2408LF	PFQ2434LF	**PFQ2460LF**	PFQ2486LF
0/30 psi/kPa	PFQ2409LF	PFQ2435LF	**PFQ2461LF**	PFQ2487LF
0/60 psi/kPa	PFQ2410LF	PFQ2436LF	**PFQ2462LF**	PFQ2488LF
0/100 psi/kPa	PFQ2411LF	PFQ2437LF	**PFQ2463LF**	PFQ2489LF
0/160 psi/kPa	PFQ2412LF	PFQ2438LF	**PFQ2464LF**	PFQ2490LF
0/200 psi/kPa	PFQ2413LF	PFQ2439LF	**PFQ2465LF**	PFQ2491LF
0/300 psi/kPa	PFQ2414LF	PFQ2440LF	PFQ2466LF	PFQ2492LF
0/400 psi/kPa	PFQ2415LF	PFQ2441LF	PFQ2467LF	PFQ2493LF
0/600 psi/kPa	PFQ2416LF	PFQ2442LF	PFQ2468LF	PFQ2494LF
0/1,000 psi/kPa	PFQ2417LF	PFQ2443LF	PFQ2469LF	PFQ2495LF
0/1,500 psi/kPa	PFQ2418LF	PFQ2444LF	PFQ2470LF	PFQ2496LF
0/2,000 psi/kPa	PFQ2419LF	PFQ2445LF	PFQ2471LF	PFQ2497LF
0/3,000 psi/kPa	PFQ2420LF	PFQ2446LF	PFQ2472LF	PFQ2498LF
0/5,000 psi/kPa	PFQ2421LF	PFQ2447LF	PFQ2473LF	PFQ2499LF
0/6,000 psi/kPa	PFQ2422LF	PFQ2448LF	PFQ2474LF	PFQ2500LF
0/7,500 psi/kPa	PFQ2423LF	PFQ2449LF	PFQ2475LF	PFQ2501LF
0/10,000 psi/kPa	PFQ2424LF	PFQ2450LF	PFQ2476LF	PFQ2502LF
0/15,000 psi/kPa	PFQ2425LF	PFQ2451LF	PFQ2477LF	PFQ2503LF

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes. Front flange for 2" (50mm) gauge is available. **For options, attach suffix to end of order code: i.e. PFQ2218R1-20DRY for DRY CASE**

Option suffix:
2FF = 2" (50mm) Front flange
2UC = 2" (50mm) U-Clamp
20DRY = Supply 2" gauge dry
EN = EN837-1 compliant

Dual Scale Order Codes (products in bold are normally stock in North America)

Dial Size	2.5" (63mm)			
Connection	1/4" Bottom	1/4" Back (CB)	1/4" Bottom	1/4" Back (CB)
Movement, Socket, Tube	Brass		SS	
30" Hg Vac/kPa	**PFQ801**	**PFQ900**	**PFQ106**	PFQ147
30"/0/15 psi/kPa	**PFQ790**	**PFQ890**	PFQ107	PFQ148
30"/0/30 psi/kPa	**PFQ798**	**PFQ898**	**PFQ108**	**PFQ149**
30"/0/60 psi/kPa	**PFQ799**	**PFQ899**	**PFQ109**	**PFQ151**
30"/0/100 psi/kPa	**PFQ791**	PFQ891	**PFQ110**	PFQ156
30"/0/150 psi/kPa	**PFQ792**	PFQ892	PFQ111	PFQ157
30"/0/200 psi/kPa	**PFQ794**	**PFQ894**	PFQ112	PFQ158
30"/0/300 psi/kPa	**PFQ795**	PFQ895	PFQ113	PFQ159
0/15 psi/kPa	**PFQ800**	**PFQ901**	**PFQ118**	PFQ162
0/30 psi/kPa	**PFQ802**	**PFQ902**	**PFQ119**	PFQ163
0/60 psi/kPa	**PFQ803**	**PFQ903**	**PFQ120**	**PFQ164**
0/100 psi/kPa	**PFQ804**	**PFQ904**	**PFQ121**	**PFQ169**
0/160 psi/kPa	**PFQ805**	**PFQ905**	**PFQ122**	**PFQ170**
0/200 psi/kPa	**PFQ806**	**PFQ906**	**PFQ123**	**PFQ171**
0/300 psi/kPa	**PFQ807**	**PFQ907**	**PFQ124**	**PFQ175**
0/400 psi/kPa	**PFQ817**	**PFQ917**	**PFQ125**	**PFQ177**
0/600 psi/kPa	**PFQ808**	**PFQ908**	**PFQ126**	**PFQ178**
0/1,000 psi/kPa	**PFQ809**	**PFQ909**	**PFQ127**	**PFQ179**
0/1,500 psi/kPa	**PFQ816**	**PFQ914**	**PFQ128**	PFQ180
0/2,000 psi/kPa	**PFQ810**	**PFQ910**	**PFQ129**	PFQ181
0/3,000 psi/kPa	**PFQ811**	**PFQ911**	**PFQ137**	**PFQ182**
0/4,000 psi/kPa	**PFQ819**	PFQ919	PFQ130	-
0/5,000 psi/kPa	**PFQ812**	**PFQ912**	**PFQ138**	**PFQ183**
0/6,000 psi/kPa	**PFQ814**	**PFQ915**	PFQ139	PFQ184
0/7,500 psi/kPa	PFQ818	PFQ918	PFQ144	PFQ186
0/10,000 psi/kPa	**PFQ813**	**PFQ913**	**PFQ145**	**PFQ190**
0/15,000 psi/kPa	-	-	PFQ146	PFQ191

Dial Size	2.5" (63mm)	
Connection	1/4" Bottom	1/4" Back (CB)
Movement, Socket, Tube	Brass	
30" Hg Vac/bar	**PFQ801R1R11**	PFQ900R1R11
30"/0/15 psi/bar	PFQ790R1R11	PFQ890R1R11
30"/0/30 psi/bar	PFQ798R1R11	PFQ898R1R11
30"/0/60 psi/bar	PFQ799R1R11	PFQ899R1R11
30"/0/100 psi/bar	PFQ791R1R11	PFQ891R1R11
30"/0/160 psi/bar	PFQ792R1R11	PFQ892R1R11
30"/0/200 psi/bar	PFQ794R1R11	PFQ894R1R11
30"/0/300 psi/bar	PFQ795R1R11	PFQ895R1R11
0/15 psi/bar	PFQ800R1R11	PFQ901R1R11
0/30 psi/bar	PFQ802R1R11	PFQ902R1R11
0/60 psi/bar	PFQ803R1R11	PFQ903R1R11
0/100 psi/bar	**PFQ804R1R11**	PFQ904R1R11
0/160 psi/bar	**PFQ805R1R11**	PFQ905R1R11
0/200 psi/bar	**PFQ806R1R11**	PFQ906R1R11
0/300 psi/bar	**PFQ807R1R11**	PFQ907R1R11
0/400 psi/bar	**PFQ817R1R11**	PFQ917R1R11
0/600 psi/bar	**PFQ808R1R11**	PFQ908R1R11
0/1,000 psi/bar	**PFQ809R1R11**	PFQ909R1R11
0/1,500 psi/bar	PFQ816R1R11	PFQ914R1R11
0/2,000 psi/bar	PFQ810R1R11	PFQ910R1R11
0/3,000 psi/bar	**PFQ811R1R11**	PFQ911R1R11
0/4,000 psi/bar	PFQ819R1R11	PFQ919R1R11
0/5,000 psi/bar	**PFQ812R1R11**	PFQ912R1R11
0/6,000 psi/bar	**PFQ814R1R11**	PFQ915R1R11
0/7,500 psi/bar	PFQ818R1R11	PFQ918R1R11
0/10,000 psi/bar	PFQ813R1R11	PFQ913R1R11

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.
For options, attach suffix to end of order code: i.e. PFQ801-25DRY for DRY CASE

Option suffix:
25BF = 2.5" (63mm) Back flange
25DRY = Supply 2.5" (63mm) gauge dry
25FF = 2.5" (63mm) Front flange
25UC = 2.5" (63mm) U-Clamp
EN = EN837-1 compliant
SF25 = 2.5" (63mm) Silicone filled

Dual Scale Order Codes (products in bold are normally stock in North America)

Dial Size	2.5” (63mm)
Connection	7/16”-20 SAE Bottom
Movement, Socket, Tube	Brass
30” Hg Vac/bar	PFQ3643
30”/0/15 psi/bar	PFQ3644
30”/0/30 psi/bar	PFQ3645
30”/0/60 psi/bar	PFQ3646
30”/0/100 psi/bar	PFQ3647
30”/0/150 psi/bar	PFQ3648
30”/0/200 psi/bar	PFQ3649
30”/0/300 psi/bar	PFQ3650
0/15 psi/bar	PFQ3651
0/30 psi/bar	PFQ3652
0/60 psi/bar	PFQ3653
0/100 psi/bar	PFQ3654
0/160 psi/bar	PFQ3655
0/200 psi/bar	PFQ3656
0/300 psi/bar	PFQ3657
0/400 psi/bar	PFQ3658
0/600 psi/bar	PFQ3659
0/1,000 psi/bar	PFQ3660
0/1,500 psi/bar	PFQ3661
0/2,000 psi/bar	PFQ3662
0/3,000 psi/bar	**PFQ3663**
0/5,000 psi/bar	**PFQ3664**
0/6,000 psi/bar	PFQ3665
0/7,500 psi/bar	PFQ3666
0/10,000 psi/bar	PFQ3667
0/15,000 psi/bar	PFQ3668

PFQ-LF Order Codes (products in bold are normally stock in North America)

Dial Size	2.5” (63mm)	
Connection	1/4” Bottom	1/4” Back (CB)
Socket, Tube	Lead Free Brass	
30” Hg Vac/kPa	**PFQ801LF**	PFQ900LF
30”/0/15 psi/kPa	PFQ790LF	PFQ890LF
30”/0/30 psi/kPa	PFQ798LF	PFQ898LF
30”/0/60 psi/kPa	PFQ799LF	PFQ899LF
30”/0/100 psi/kPa	PFQ791LF	PFQ891LF
30”/0/150 psi/kPa	PFQ792LF	PFQ892LF
30”/0/200 psi/kPa	PFQ794LF	PFQ894LF
30”/0/300 psi/kPa	PFQ795LF	PFQ895LF
0/15 psi/kPa	**PFQ800LF**	PFQ901LF
0/30 psi/kPa	**PFQ802LF**	PFQ902LF
0/60 psi/kPa	**PFQ803LF**	PFQ903LF
0/100 psi/kPa	**PFQ804LF**	PFQ904LF
0/160 psi/kPa	**PFQ805LF**	PFQ905LF
0/200 psi/kPa	**PFQ806LF**	PFQ906LF
0/300 psi/kPa	**PFQ807LF**	PFQ907LF
0/400 psi/kPa	PFQ817LF	PFQ917LF
0/600 psi/kPa	PFQ808LF	PFQ908LF
0/1,000 psi/kPa	PFQ809LF	PFQ909LF
0/1,500 psi/kPa	PFQ816LF	PFQ914LF
0/2,000 psi/kPa	PFQ810LF	PFQ910LF
0/3,000 psi/kPa	PFQ811LF	PFQ911LF
0/5,000 psi/kPa	PFQ812LF	PFQ912LF
0/6,000 psi/kPa	PFQ814LF	PFQ915LF
0/7,500 psi/kPa	PFQ818LF	PFQ918LF
0/10,000 psi/kPa	PFQ813LF	PFQ913LF
0/15,000 psi/kPa	-	-

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.
For options, attach suffix to end of order code: i.e. PFQ3651-25DRY for DRY CASE

Option suffix:
25BF = 2.5” (63mm) Back flange
25DRY = Supply 2.5” (63mm) gauge dry
25FF = 2.5” (63mm) Front flange
25UC = 2.5” (63mm) U-Clamp
EN = EN837-1 compliant
SF25 = 2.5” (63mm) Silicone filled

Single Scale Order Codes (products in bold are normally stock in North America)

Dial Size	4" (100mm)							
Connection	1/4" Bottom	1/4" Back (CB)	1/4" Bottom	1/4" Back (CB)	1/2" Bottom	1/2" Back (CB)	1/2" Bottom	1/2" Back (CB)
Movement, Socket, Tube	Brass		SS		Brass		SS	
30" Hg Vac	PFQ700R6	PFQ730R6	PFQ760R6	PFQ1260R6	PFQ1234R6	PFQ1285R6	PFQ1535R6	PFQ1559R6
30"/0/15 psi	PFQ701R1	PFQ731R1	PFQ761R1	PFQ1261R1	PFQ1235R1	PFQ1286R1	PFQ1536R1	PFQ1560R1
30"/0/30 psi	PFQ702R1	PFQ732R1	PFQ762R1	PFQ1262R1	PFQ1236R1	PFQ1287R1	PFQ1537R1	PFQ1561R1
30"/0/60 psi	PFQ703R1	PFQ733R1	PFQ763R1	PFQ1263R1	PFQ1237R1	PFQ1288R1	PFQ1538R1	PFQ1562R1
30"/0/100 psi	PFQ704R1	PFQ734R1	PFQ764R1	PFQ1264R1	PFQ1238R1	PFQ1289R1	PFQ1539R1	PFQ1563R1
30"/0/160 psi	PFQ705R1	PFQ735R1	PFQ765R1	PFQ1265R1	PFQ1239R1	PFQ1290R1	PFQ1540R1	PFQ1564R1
30"/0/200 psi	PFQ706R1	PFQ736R1	PFQ766R1	PFQ1266R1	PFQ1240R1	PFQ1291R1	PFQ1541R1	PFQ1565R1
30"/0/300 psi	PFQ707R1	PFQ737R1	PFQ767R1	PFQ1267R1	PFQ1241R1	PFQ1292R1	PFQ1542R1	PFQ1566R1
0/15 psi	PFQ708R1	PFQ738R1	PFQ768R1	PFQ1268R1	PFQ1242R1	PFQ1293R1	PFQ1543R1	PFQ1567R1
0/30 psi	PFQ709R1	PFQ739R1	PFQ769R1	PFQ1269R1	PFQ1243R1	PFQ1294R1	PFQ1544R1	PFQ1568R1
0/60 psi	**PFQ710R1**	PFQ740R1	PFQ770R1	PFQ1270R1	PFQ1244R1	PFQ1295R1	PFQ1545R1	PFQ1569R1
0/100 psi	**PFQ711R1**	PFQ741R1	PFQ771R1	PFQ1271R1	PFQ1245R1	PFQ1296R1	PFQ1546R1	PFQ1570R1
0/160 psi	**PFQ712R1**	PFQ742R1	PFQ772R1	PFQ1272R1	PFQ1246R1	PFQ1298R1	PFQ1547R1	PFQ1571R1
0/200 psi	PFQ713R1	PFQ743R1	PFQ773R1	PFQ1273R1	**PFQ1247R1**	PFQ1524R1	PFQ1548R1	PFQ1572R1
0/300 psi	**PFQ714R1**	PFQ744R1	PFQ774R1	PFQ1274R1	PFQ1248R1	PFQ1525R1	PFQ1549R1	PFQ1573R1
0/400 psi	PFQ715R1	PFQ745R1	PFQ775R1	PFQ1275R1	PFQ1249R1	PFQ1526R1	PFQ1550R1	PFQ1574R1
0/600 psi	PFQ716R1	PFQ746R1	PFQ776R1	PFQ1276R1	PFQ1250R1	PFQ1527R1	PFQ1551R1	PFQ1575R1
0/1,000 psi	PFQ724R1	PFQ192R1	PFQ1528R1	PFQ1552R1	PFQ717R1	PFQ747R1	PFQ777R1	PFQ1277R1
0/1,500 psi	PFQ725R1	PFQ241R1	PFQ1529R1	PFQ1553R1	PFQ718R1	PFQ748R1	PFQ778R1	PFQ1278R1
0/2,000 psi	PFQ726R1	PFQ242R1	PFQ1530R1	PFQ1554R1	PFQ719R1	PFQ749R1	**PFQ779R1**	PFQ1279R1
0/3,000 psi	PFQ727R1	PFQ243R1	PFQ1531R1	PFQ1555R1	**PFQ720R1**	PFQ750R1	PFQ780R1	PFQ1280R1
0/5,000 psi	PFQ728R1	PFQ244R1	PFQ1532R1	PFQ1556R1	**PFQ721R1**	PFQ751R1	PFQ781R1	PFQ1281R1
0/6,000 psi	PFQ346R1	PFQ246R1	-	-	PFQ784R1	PFQ785R1	PFQ789R1	PFQ1284R1
0/7,500 psi	PFQ347R1	PFQ247R1	-	-	PFQ786R1	PFQ886R1	-	-
0/10,000 psi	PFQ729R1	PFQ360R1	PFQ1533R1	PFQ1557R1	**PFQ722R1**	PFQ752R1	PFQ782R1	PFQ1282R1
0/15,000 psi	PFQ261R1	PFQ361R1	PFQ1534R1	PFQ1558R1	PFQ723R1	PFQ753R1	PFQ783R1	PFQ1283R1

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.
For options, attach suffix to end of order code: i.e. PFQ728-DRY for DRY CASE

Option suffix:

4BF = 4" (100mm) Back flange
4FF = 4" (100mm) Front flange
4UC-P = 4" (100mm) U-Clamp (for SS movement)
4UC-Q = 4" (100mm) U-Clamp (for brass movement)
DRY = Supply gauge dry
EN = EN837-1 compliant
REST = Restrictor screw
SF4 = 4" (100mm) Silicone filled

Dual Scale Order Codes (products in bold are normally stock in North America)

Dial Size	4” (100mm)							
Connection	1/4” Bottom	1/4” Back (CB)	1/4” Bottom	1/4” Back (CB)	1/2” Bottom	1/2” Back (CB)	1/2” Bottom	1/2” Back (CB)
Movement, Socket, Tube	Brass		SS		Brass		SS	
30” Hg Vac/kPa	**PFQ700**	PFQ730	**PFQ760**	PFQ1260	PFQ1234	PFQ1285	PFQ1535	PFQ1559
30”/0/15 psi/kPa	**PFQ701**	PFQ731	PFQ761	PFQ1261	PFQ1235	PFQ1286	PFQ1536	PFQ1560
30”/0/30 psi/kPa	**PFQ702**	PFQ732	**PFQ762**	PFQ1262	PFQ1236	PFQ1287	PFQ1537	PFQ1561
30”/0/60 psi/kPa	**PFQ703**	PFQ733	PFQ763	PFQ1263	PFQ1237	PFQ1288	PFQ1538	PFQ1562
30”/0/100 psi/kPa	**PFQ704**	PFQ734	PFQ764	PFQ1264	PFQ1238	PFQ1289	PFQ1539	PFQ1563
30”/0/150 psi/kPa	**PFQ705**	PFQ735	PFQ765	PFQ1265	PFQ1239	PFQ1290	PFQ1540	PFQ1564
30”/0/200 psi/kPa	**PFQ706**	PFQ736	PFQ766	PFQ1266	PFQ1240	PFQ1291	PFQ1541	PFQ1565
30”/0/300 psi/kPa	**PFQ707**	PFQ737	PFQ767	PFQ1267	PFQ1241	PFQ1292	PFQ1542	PFQ1566
0/15 psi/kPa	**PFQ708**	PFQ738	PFQ768	PFQ1268	PFQ1242	PFQ1293	PFQ1543	PFQ1567
0/30 psi/kPa	**PFQ709**	**PFQ739**	PFQ769	PFQ1269	PFQ1243	PFQ1294	PFQ1544	PFQ1568
0/60 psi/kPa	**PFQ710**	**PFQ740**	**PFQ770**	PFQ1270	PFQ1244	PFQ1295	PFQ1545	PFQ1569
0/100 psi/kPa	**PFQ711**	**PFQ741**	**PFQ771**	PFQ1271	**PFQ1245**	PFQ1296	**PFQ1546**	PFQ1570
0/160 psi/kPa	**PFQ712**	**PFQ742**	**PFQ772**	PFQ1272	**PFQ1246**	PFQ1298	**PFQ1547**	PFQ1571
0/200 psi/kPa	**PFQ713**	PFQ743	**PFQ773**	PFQ1273	PFQ1247	PFQ1524	**PFQ1548**	PFQ1572
0/300 psi/kPa	**PFQ714**	PFQ744	**PFQ774**	PFQ1274	**PFQ1248**	PFQ1525	**PFQ1549**	PFQ1573
0/400 psi/kPa	**PFQ715**	PFQ745	PFQ775	PFQ1275	PFQ1249	PFQ1526	PFQ1550	PFQ1574
0/600 psi/kPa	**PFQ716**	PFQ746	**PFQ776**	PFQ1276	**PFQ1250**	PFQ1527	PFQ1551	PFQ1575
0/1,000 psi/kPa	**PFQ724**	PFQ192	PFQ1528	PFQ1552	**PFQ717**	PFQ747	PFQ777	PFQ1277
0/1,500 psi/kPa	PFQ725	PFQ241	PFQ1529	PFQ1553	PFQ718	PFQ748	PFQ778	PFQ1278
0/2,000 psi/kPa	PFQ726	PFQ242	PFQ1530	PFQ1554	**PFQ719**	PFQ749	PFQ779	PFQ1279
0/3,000 psi/kPa	**PFQ727**	PFQ243	PFQ1531	**PFQ1555**	**PFQ720**	PFQ750	PFQ780	PFQ1280
0/5,000 psi/kPa	**PFQ728**	PFQ244	PFQ1532	PFQ1556	**PFQ721**	PFQ751	PFQ781	PFQ1281
0/6,000 psi/kPa	PFQ346	PFQ246	-	-	PFQ784	PFQ785	PFQ789	PFQ1284
0/7,500 psi/kPa	PFQ347	PFQ247	-	-	-	-	-	-
0/10,000 psi/kPa	**PFQ729**	PFQ360	PFQ1533	PFQ1557	**PFQ722**	PFQ752	PFQ782	PFQ1282
0/15,000 psi/kPa	PFQ261	PFQ361	PFQ1534	PFQ1558	**PFQ723**	PFQ753	PFQ783	PFQ1283

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.
For options, attach suffix to end of order code: i.e. PFQ721-DRY for DRY CASE

Option suffix:
4BF = 4” (100mm) Back flange
4FF = 4” (100mm) Front flange
4UC-P = 4” (100mm) U-Clamp (for SS movement)
4UC-Q = 4” (100mm) U-Clamp (for brass movement)
DRY = Supply gauge dry
EN = EN837-1 compliant
SF4 = 4” (100mm) Silicone filled

PFQ-LF Order Codes (products in bold are normally stock in North America)

Dial Size	4” (100mm)			
Connection	1/4” Bottom	1/4” Back (CB)	1/2” Bottom	1/2” Back (CB)
Socket, Tube	Lead Free Brass			
30” Hg Vac/kPa	PFQ700LF	PFQ730LF	PFQ1234LF	PFQ1285LF
30”/0/15 psi/kPa	PFQ701LF	PFQ731LF	PFQ1235LF	PFQ1286LF
30”/0/30 psi/kPa	PFQ702LF	PFQ732LF	PFQ1236LF	PFQ1287LF
30”/0/60 psi/kPa	PFQ703LF	PFQ733LF	PFQ1237LF	PFQ1288LF
30”/0/100 psi/kPa	PFQ704LF	PFQ734LF	PFQ1238LF	PFQ1289LF
30”/0/150 psi/kPa	PFQ705LF	PFQ735LF	PFQ1239LF	PFQ1290LF
30”/0/200 psi/kPa	PFQ706LF	PFQ736LF	PFQ1240LF	PFQ1291LF
30”/0/300 psi/kPa	PFQ707LF	PFQ737LF	PFQ1241LF	PFQ1292LF
0/15 psi/kPa	PFQ708LF	PFQ738LF	PFQ1242LF	PFQ1293LF
0/30 psi/kPa	**PFQ709LF**	PFQ739LF	PFQ1243LF	PFQ1294LF
0/60 psi/kPa	**PFQ710LF**	PFQ740LF	PFQ1244LF	PFQ1295LF
0/100 psi/kPa	**PFQ711LF**	PFQ741LF	PFQ1245LF	PFQ1296LF
0/160 psi/kPa	**PFQ712LF**	PFQ742LF	PFQ1246LF	PFQ1298LF
0/200 psi/kPa	**PFQ713LF**	PFQ743LF	PFQ1247LF	PFQ1524LF
0/300 psi/kPa	**PFQ714LF**	PFQ744LF	PFQ1248LF	PFQ1525LF
0/400 psi/kPa	PFQ715LF	PFQ745LF	PFQ1249LF	PFQ1526LF
0/600 psi/kPa	PFQ716LF	PFQ746LF	PFQ1250LF	PFQ1527LF
0/1,000 psi/kPa	PFQ724LF	PFQ192LF	PFQ717LF	PFQ747LF
0/1,500 psi/kPa	PFQ725LF	PFQ241LF	PFQ718LF	PFQ748LF
0/2,000 psi/kPa	PFQ726LF	PFQ242LF	PFQ719LF	PFQ749LF
0/3,000 psi/kPa	PFQ727LF	PFQ243LF	PFQ720LF	PFQ750LF
0/5,000 psi/kPa	PFQ728LF	PFQ244LF	PFQ721LF	PFQ751LF
0/6,000 psi/kPa	PFQ346LF	PFQ246LF	PFQ784LF	PFQ785LF
0/7,500 psi/kPa	PFQ347LF	PFQ247LF	PFQ786LF	PFQ886LF
0/10,000 psi/kPa	PFQ729LF	PFQ360LF	PFQ722LF	PFQ752LF
0/15,000 psi/kPa	PFQ261LF	PFQ361LF	PFQ723LF	PFQ753LF

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.
For options, attach suffix to end of order code: i.e. PFQ728LF-DRY for DRY CASE

Option suffix:
4BF = 4” (100mm) Back flange
4FF = 4” (100mm) Front flange
4UC-P = 4” (100mm) U-Clamp (for SS movement)
4UC-Q = 4” (100mm) U-Clamp (for brass movement)
DRY = Supply gauge dry
EN = EN837-1 compliant
SF4 = 4” (100mm) Silicone filled

1.5” Back Connection with Front Flange and U-Clamp

2” Bottom Connection

2.5” Back Connection with Front Flange

2.5” Back Connection with U-Clamp

2.5” Bottom Connection SAE

Dimensions in mm

4” Back Connection with Front Flange

PN2 NACE Liquid Filled Gauge - MR0175-2002

Description & Features:

- Designed for sour gas applications requiring NACE Standards MR0175-2002 (NACE Standards MR0103-2003 available)
- Glycerin and H_2O filled case
- Blow out back plug
- Under and overload stops
- Wetted parts meet all hardness requirements
- ASME B40.100 compliant (EN837-1 available)
- CRN registered
- 5 year warranty

Applications:

- Sour gas applications requiring gauges that meet NACE International Standards

Specifications	
Dial	4” (100mm) and 6” (150mm) aluminum with black and red markings
Case	304 SS
Lens	Laminated safety glass
Ring	304 SS, bayonet
Socket	316L SS
Connection	1/4” or 1/2” NPT, bottom or back
Bourdon Tube	316L SS
Movement	304 SS with under and overload stops
Pointer	Aluminum, anodized black, micrometer adjustable
Fill Liquid	Glycerin/H_2O
Over-pressure Limit	25% for pressures up to 1,450 psi (9,998 kPa), 15% for pressures over 1,450 psi (9,998 kPa)
Ambient/Process Temperature	Dry: -40°F to 250°F (-40°C to 120°C) Glycerin Water: -40°F to 150°F (-40°C to 65°C)
Accuracy	±1% ANSI/ASME Grade 1A
Enclosure Rating	IP66

Order Codes (products in bold are normally stock in North America)

Dial Size	4” (100mm)				6” (150mm)	
Connection	1/4” Bottom	1/4” Back (LB)	1/2” Bottom	1/2” Back (LB)	1/2” Bottom	1/2” Back (LB)
30” Hg Vac/kPa	PN2640N	PN21090N	PN2655N	-	PN21100N	-
30”/0/15 psi/kPa	PN21036N	-	PN21044N	-	PN21101N	-
30”/0/30 psi/kPa	PN21037N	-	PN21045N	-	PN21102N	-
30”/0/60 psi/kPa	PN21038N	-	PN21046N	-	PN21103N	-
30”/0/100 psi/kPa	PN21039N	-	PN21047N	-	PN21104N	-
30”/0/150 psi/kPa	PN21040N	-	PN21048N	-	PN21105N	-
30”/0/200 psi/kPa	PN21042N	-	PN21050N	-	PN21106N	-
30”/0/300 psi/kPa	PN21043N	-	PN21051N	-	PN21107N	-
0/15 psi/kPa	PN2641N	PN21091N	PN2656N	-	PN21108N	-
0/30 psi/kPa	PN2642N	PN21092N	PN2657N	-	PN21109N	-
0/60 psi/kPa	PN2643N	PN21093N	PN2658N	-	PN21110N	-
0/100 psi/kPa	PN2644N	PN21094N	**PN2659N**	-	PN21111N	-
0/160 psi/kPa	PN2645N	PN21095N	**PN2660N**	-	PN21112N	-
0/200 psi/kPa	PN2646N	PN21096N	**PN2661N**	-	PN21113N	-
0/300 psi/kPa	PN2647N	PN21097N	**PN2662N**	-	PN21114N	-
0/400 psi/kPa	PN2650N	PN2150N	**PN2666N**	-	PN21115N	-
0/600 psi/kPa	PN2648N	PN21098N	**PN2663N**	-	PN21116N	-
0/1,000 psi/kPa	PN2649N	PN21099N	**PN2664N**	-	PN21117N	PN21217N
0/1,500 psi/kPa	-	-	**PN2665N**	PN21190N	PN21118N	PN21218N
0/2,000 psi/kPa	-	-	**PN2667N**	PN21191N	PN21119N	PN21219N
0/3,000 psi/kPa	-	-	**PN2668N**	PN21192N	PN21120N	PN21220N
0/4,000 psi/kPa	-	-	PN2701N	PN2702N	PN21121N	PN21221N
0/5,000 psi/kPa	-	-	**PN2669N**	PN21193N	PN21122N	PN21222N
0/6,000 psi/kPa	-	-	PN2675N	PN2175N	PN21123N	PN21223N
0/10,000 psi/kPa	-	-	**PN2670N**	PN21194N	PN21124N	PN21224N
0/15,000 psi/kPa	-	-	PN2671N	PN21195N	PN21125N	PN21225N
0/20,000 psi/kPa	-	-	PN2672N	PN21196N	PN21126N	PN21226N

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.

For options, attach suffix to end of order code: i.e. PN22657N-DRY for DRY CASE

Option suffix:

4BF = 4” (100mm) Back flange
4FF = 4” (100mm) Front flange
4NSS = 4” (100mm) SS case
4UC-P = 4” (100mm) U-Clamp premium

6BF = 6” (150mm) Back flange
6FF = 6” (150mm) Front flange
6NSS = 6” (150mm) SS case
6UC-P = 6” (150mm) U-Clamp premium

DRY = Supply gauge dry
EN = EN837-1 compliant
REST = Restrictor screw

4” Bottom Connection

4” Back Connection

6” Bottom Connection

PSC Safety Case Gauge

Description & Features:

- Solid front blowout back for the ultimate in gauge safety
- Full rotary movement and micrometer pointer for ease in calibration
- Overload stop
- Stainless steel case, socket and internals
- Safety glass lens
- Restricted orifice standard
- ASME B40.100 compliant (EN837-1 available)
- CRN registered
- 5 year warranty

Applications:

- Used where operator safety is a must
- Outdoor and severe ambient and process conditions
- Use where harmful vibration and pulsation are present (with liquid filling)
- Oil and gas, petrochemical, mining and power installations

Specifications	
Dial	4” (100mm), 4.5” (115mm), 6” (150mm), white aluminum with black and red markings
Case	304 SS case with blowout back
Lens	4” (100mm), 6” (150mm): Laminated safety glass 4.5” (115mm): Tempered safety glass
Ring	SS bayonet
Socket	316L SS
Connection	1/4” or 1/2” NPT bottom
Bourdon Tube	316L SS
Movement	304 SS overload stop
Pointer	Aluminum, anodized black, micrometer adjustable
Over-pressure Limit	25% for pressures up to 1,450 psi (9,998 kPa), 15% for pressures over 1,450 psi (9,998 kPa)
Working Pressure	Maximum 75% of full scale value
Ambient Temperature	Dry: -40°F to 250°F (-40°C to 120°C) Glycerin Filled: -4°F to 150°F (-20°C to 65°C)
Process Temperature	-40°F to 250°F (-40°C to 120°C)
Accuracy	4” (100mm), 6” (150mm): ±1% ANSI/ASME Grade 1A 4.5” (115mm): ±0.5% ANSI/ASME Grade 2A
Enclosure Rating	4” (100mm), 6” (150mm): IP67 per EN60529-1 (IEC529-1) 4.5” (115mm): IP65 per EN60529-1 (IEC529-1)

Order Codes

Dial Size	4” (100mm)		4.5” (115mm)		6” (150mm)	
Connection	1/4” Bottom	1/2” Bottom	1/4” Bottom	1/2” Bottom	1/4” Bottom	1/2” Bottom
30” Hg Vac/kPa	PSC248	PSC4870	PSC281	PSC4888	PSC283	PSC4906
30”/0/15 psi/kPa	PSC249	PSC4871	PSC282	PSC4889	PSC284	PSC4907
30”/0/30 psi/kPa	PSC257	PSC4872	PSC358	PSC4890	PSC285	PSC4908
30”/0/60 psi/kPa	PSC258	PSC4873	PSC359	PSC4891	PSC286	PSC4909
30”/0/100 psi/kPa	PSC259	PSC4874	PSC362	PSC4892	PSC287	PSC4910
30”/0/150 psi/kPa	PSC260	PSC4875	PSC363	PSC4893	PSC289	PSC4911
30”/0/200 psi/kPa	PSC261	PSC4876	PSC364	PSC4894	PSC296	PSC4912
30”/0/300 psi/kPa	PSC262	PSC4877	PSC365	PSC4895	PSC297	PSC4913
0/15 psi/kPa	PSC263	PSC4878	PSC366	PSC4896	PSC298	PSC4914
0/30 psi/kPa	PSC264	PSC4879	PSC367	PSC4897	PSC299	PSC4915
0/60 psi/kPa	PSC265	PSC4880	PSC368	PSC4898	PSC307	PSC4916
0/100 psi/kPa	PSC266	PSC4881	PSC369	PSC4899	PSC308	PSC4917
0/160 psi/kPa	PSC267	PSC4882	PSC370	PSC4900	PSC309	PSC4918
0/200 psi/kPa	PSC268	PSC4883	PSC371	PSC4901	PSC317	PSC4919
0/300 psi/kPa	PSC269	PSC4884	PSC372	PSC4902	PSC318	PSC4920
0/400 psi/kPa	PSC272	PSC4885	PSC373	PSC4903	PSC335	PSC4921
0/600 psi/kPa	PSC273	PSC4886	PSC374	PSC4904	PSC336	PSC4922
0/1,000 psi/kPa	-	PSC274	-	PSC375	-	PSC337
0/1,500 psi/kPa	-	PSC275	-	PSC376	-	PSC338
0/2,000 psi/kPa	-	PSC276	-	PSC377	-	PSC339
0/3,000 psi/kPa	-	PSC277	-	PSC378	-	PSC347
0/5,000 psi/kPa	-	PSC278	-	PSC379	-	PSC348
0/10,000 psi/kPa	-	PSC498	-	PSC380	-	PSC502
0/15,000 psi/kPa	-	PSC499	-	PSC381	-	PSC504
0/20,000 psi/kPa	-	PSC4887	-	PSC4905	-	PSC4923

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.
For options, attach suffix to end of order code: i.e. PSC374-R1 for SINGLE SCALE PSI

Option suffix:

4CSS = 4” (100mm) 316 SS case
45CSS = 4.5” (115mm) 316 SS case
6CSS = 6” (150mm) 316 SS case

EN = EN837-1 compliant
G = Glycerin filled
R1 = Single scale psi

Dial	A	B	C	D
4” (100mm)	4.1” (105mm)	4.67” (119mm)	2.44” (57mm)	3.80” (96.5mm)
4.5” (115mm)	4.38” (111.3mm)	5.04” (128mm)	2.38” (60.5mm)	4.173” (106mm)
6” (150mm)	5.69” (144.6mm)	6.34” (161mm)	2.74” (69.5mm)	4.843” (123mm)

PTG Test Gauge

Optional Case

Description & Features:

- Highly accurate ±0.5% complete with calibration certificate traceable to NIST standards
- Mirrored anti-parallax dial
- Knife-edge pointer
- Protective carrying and storage case available
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Designed to be used where accuracy and repeatability are of prime importance
- Used in laboratories and instrument testing facilities

Specifications	
Dial	White aluminum with black markings and mirror band for precise instrument readings
Case	AISI 304 SS
Lens	4” (100mm): Polycarbonate 6” (150mm): Glass
Ring	AISI 304 SS
Socket	Brass or Stainless Steel
Connection	1/4” NPT or 1/2” NPT standard, bottom
Bourdon Tube	Phosphor bronze or Stainless Steel
Movement	Brass or Stainless Steel
Pointer	Aluminum, anodized black, micrometer adjustable, knife-edge
Welding	Silver alloy
Over-pressure Limit	30% of full scale value
Working Pressure	Maximum 75% of full scale value
Calibration Conditions	68°F (±5.4°F), 20°C (±3°C) for ambient and process temperatures at atmospheric pressure
Ambient/Process Temperature	-4°F to 150°F (-20°C to 65°C)
Accuracy	6” - ±0.25% ANSI/ASME Grade 3A 4” - ±0.5% ANSI/ASME Grade 2A
Enclosure Rating	IP65
Warning (brass internals only)	**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Order Codes

Dial Size	4” (100mm)		6” (150mm)		6” (150mm)	
Connection	1/4” Bottom	1/2” Bottom	1/4” Bottom	1/2” Bottom	1/2” Bottom	1/2” Bottom
Movement, Socket, Tube	Brass		Brass		Stainless Steel	
30” Hg Vac	PTG3999	-	PTG6999	PTG6055	PTG6199	PTG6599
0/15 psi	PTG4000	-	PTG6000	PTG6056	PTG6100	PTG6500
0/30 psi	PTG4001	-	PTG6001	PTG6057	PTG6101	PTG6501
0/60 psi	PTG4002	-	PTG6002	PTG6058	PTG6102	PTG6502
0/100 psi	PTG4003	-	PTG6003	PTG6059	PTG6103	PTG6503
0/160 psi	PTG4004	-	PTG6004	PTG6060	PTG6104	PTG6504
0/200 psi	PTG4005	-	PTG6005	PTG6061	PTG6105	PTG6505
0/300 psi	PTG4006	-	PTG6006	PTG6062	PTG6106	PTG6506
0/400 psi	PTG4007	-	PTG6007	PTG6063	PTG6107	PTG6507
0/600 psi	PTG4008	-	PTG6008	PTG6064	PTG6108	PTG6508
0/1,000 psi	-	PTG4009	PTG6016	PTG6009	PTG6116	PTG6516
0/1,500 psi	-	PTG4010	PTG6017	PTG6010	PTG6117	PTG6517
0/2,000 psi	-	PTG4011	PTG6018	PTG6011	PTG6118	PTG6518
0/3,000 psi	-	PTG4012	PTG6019	PTG6012	PTG6119	PTG6519
0/5,000 psi	-	PTG4013	PTG6053	PTG6013	PTG6153	PTG6553
0/10,000 psi	-	PTG4014	PTG6054	PTG6014	PTG6154	PTG6554

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.
For options, attach suffix to end of order code: i.e. PTG2006-6BF for BACK FLANGE

Option suffix:
4BF = 4” (100mm) Back flange
4FF = 4” (100mm) Front flange
6BF = 6” (150mm) Back flange
6FF = 6” (150mm) Front flange
6FF = 6” (150mm) Front flange
TG4 = 4” (100mm) Test gauge case
TG6 = 6” (150mm) Test gauge case

4” Bottom Connection with Back Flange

6” Bottom Connection

PTS Tube Stub Gauge

Description & Features:

- Gauge designed to be used with most standard double ferrule tube fittings, such as Parker A-Lok®
- Heavy duty, stainless steel, liquid-filled gauge
- Back, bottom, or panel mount configurations
- ±1.5% accuracy
- Facilitates 360° orientation
- Elimination of leak point
- PTFE free connection
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Specifically designed to be utilized with tube fitting applications in the fluid power sector
- Allows installation where space is limited
- Used where PTFE free connection is needed
- Used where gauge alignment is critical

Specifications	
Dial	2.5” (63mm) aluminum with red and black markings
Case	Grade 304 SS
Lens	Polycarbonate
Ring	304 SS, bayonet
Block	316L SS
Socket	316L SS
Connection	1/4” Tube Stub
Bourdon Tube	316L SS
Movement	304 SS
Pointer	Aluminum, anodized black
Welding	Laser welded socket to case
Fill Liquid	Glycerin
Over-pressure Limit	15% of full scale value
Gasket Materials	Buna N
Working Pressure	75% of full scale value
Ambient/Process Temperature	Dry: -40°F to 200°F (-40°C to 93°C) Glycerin Filled: -4°F to 150°F (-20°C to 65°C)
Accuracy	±1.5% of full scale value
Enclosure Rating	IP66 per EN60529-1 (IEC529-1)

A-Lok® is a registered trademark of Parker Hannifin Corporation

Single Scale Order Codes

Dial Size	2.5” (63mm)	
Connection	1/4” Tube Bottom	1/4” Tube Back (CB)
30” Hg Vac	PTS820R6-TS	PTS840R6-TS
30”/0/15 psi	PTS860R1-TS	PTS870R1-TS
30”/0/30 psi	PTS861R1-TS	PTS871R1-TS
30”/0/60 psi	PTS862R1-TS	PTS872R1-TS
30”/0/100 psi	PTS863R1-TS	PTS873R1-TS
30”/0/150 psi	PTS864R1-TS	PTS874R1-TS
30”/0/200 psi	PTS866R1-TS	PTS876R1-TS
30”/0/300 psi	PTS867R1-TS	PTS877R1-TS
0/15 psi	PTS821R1-TS	PTS921R1-TS
0/30 psi	PTS822R1-TS	PTS922R1-TS
0/60 psi	PTS823R1-TS	PTS923R1-TS
0/100 psi	PTS824R1-TS	PTS924R1-TS
0/160 psi	PTS825R1-TS	PTS925R1-TS
0/200 psi	PTS826R1-TS	PTS926R1-TS
0/300 psi	PTS827R1-TS	PTS927R1-TS
0/400 psi	PTS880R1-TS	PTS881R1-TS
0/600 psi	PTS828R1-TS	PTS928R1-TS
0/1,000 psi	PTS829R1-TS	PTS929R1-TS
0/1,500 psi	PTS835R1-TS	PTS935R1-TS
0/2,000 psi	PTS836R1-TS	PTS936R1-TS
0/3,000 psi	PTS831R1-TS	PTS931R1-TS
0/5,000 psi	PTS832R1-TS	PTS852R1-TS

Dual Scale Order Codes

Dial Size	2.5” (63mm)	
Connection	1/4” Tube Bottom	1/4” Tube Back (CB)
30” Hg Vac/kPa	PTS820-TS	PTS840-TS
30”/0/15 psi/kPa	PTS860-TS	PTS870-TS
30”/0/30 psi/kPa	PTS861-TS	PTS871-TS
30”/0/60 psi/kPa	PTS862-TS	PTS872-TS
30”/0/100 psi/kPa	PTS863-TS	PTS873-TS
30”/0/150 psi/kPa	PTS864-TS	PTS874-TS
30”/0/200 psi/kPa	PTS866-TS	PTS876-TS
30”/0/300 psi/kPa	PTS867-TS	PTS877-TS
0/15 psi/kPa	PTS821-TS	PTS921-TS
0/30 psi/kPa	PTS822-TS	PTS922-TS
0/60 psi/kPa	PTS823-TS	PTS923-TS
0/100 psi/kPa	PTS824-TS	PTS924-TS
0/160 psi/kPa	PTS825-TS	PTS925-TS
0/200 psi/kPa	PTS826-TS	PTS926-TS
0/300 psi/kPa	PTS827-TS	PTS927-TS
0/400 psi/kPa	PTS880-TS	PTS881-TS
0/600 psi/kPa	PTS828-TS	PTS928-TS
0/1,000 psi/kPa	PTS829-TS	PTS929-TS
0/1,500 psi/kPa	PTS835-TS	PTS935-TS
0/2,000 psi/kPa	PTS836-TS	PTS936-TS
0/3,000 psi/kPa	PTS831-TS	PTS931-TS
0/5,000 psi/kPa	PTS832-TS	PTS852-TS

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.

For options, attach suffix to end of order code: i.e. PTS820-TS-25DRY for DRY CASE

Option suffix:

25BF = 2.5” (63mm) Back flange
25BOOT = 2.5” (63mm) Protective black rubber boot
25DRY = Supply 2.5” (63mm) gauge dry
25FF = 2.5” (63mm) Front flange
25UC = 2.5” (63mm) U-Clamp
SG-25 = 2.5” (63mm) Safety glass lens

2.5” Bottom Connection with Back Flange

2.5” Back Connection with Back Flange

2.5” Back Connection with Front Flange

2.5” Back Connection with U-Clamp

PXT Xmas Tree Gauge

Description & Features:

- High quality, heavy duty gauge ideal for corrosive environments
- Stainless steel liquid filled gauge (dry optional)
- 1/2” NPT bottom
- Stainless Steel wetted parts
- Heavy duty movement and Bourdon Tube
- Restrictor standard
- ASME B40, 100 compliant
- 5 year warranty

Applications:

- Outdoor and severe ambient and process conditions where harmful vibration and pulsation are present
- Designed to the specific needs of oil field equipment

Specifications	
Dial	4” (100mm) white aluminum with black markings
Case	AISI 304 SS
Lens	Safety glass standard; acrylic optional
Ring	AISI 304 SS
Socket	Welded, 316L SS
Connection	1/2” NPT standard, 1/4” NPT available
Bourdon Tube	316L SS, seamless drawn
Movement	304 SS with under and overload stops
Pointer	Aluminum, anodized black, micrometer adjustable
Welding	TIG
Fill Liquid	Glycerin
Over-pressure Limit	25% for pressures up to 1,450 psi (9,998 kPa) 15% for pressures over 1,450 psi (9,998 kPa)
Gasket Materials	EPDM
Working Pressure	Maximum 75% of full scale value
Ambient/Process Temperature	Dry: -40°F to 200°F (-40°C to 93°C) Glycerin filled: -4°F to 150°F (-20°C to 65°C)
Accuracy	±1% ANSI/ASME Grade 1A
Enclosure Rating	IP66 per EN60529-1 (IEC529-1)

Order Codes

Range	Code
0/1,000 psi	PXT1134
0/1,500 psi	PXT1135
0/2,000 psi	PXT1136
0/3,000 psi	PXT1137
0/5,000 psi	PXT1138
0/10,000 psi	PXT1139
0/15,000 psi	PXT1140
0/20,000 psi	PXT1141

Other ranges and connection sizes available upon request. For scale change, refer to How To Prder Guide for scale codes. 1/4” NPT connection available upon request.
For options, attach suffix to end of order code i.e. PXT1137-G for GLYCERIN FILL

Option Suffix:
G = Glycerin filled
SG-4 = 4” (100mm) Safety glass lens
SSF4 = 4” (100mm) Silicone filled
ZR = StabiliZR® movement

Description & Features:

- A general-purpose gauge that is serviceable and pulsation resistant
- 1.5” (40mm) to 3.5” (90mm) dial sizes
- Dampened movement combined with a flutterless pointer
- Removable lens
- Zero-adjustment
- ASME B40.100 compliant
- CRN registered
- ±2-1-2% accuracy
- 5 year warranty

Applications:

- Compressors, filters, regulators, water pumps, paint sprayers and a variety of other rapid pressure fluctuation applications
- Suitable for non-clogging and non-corroding media

Specifications	
Dial	1.5” (40mm), 2” (50mm), 2.5” (63mm), 3.5” (90mm) white aluminum with black and red markings
Case	Steel, painted black
Lens	Acrylic, threaded
Socket	Brass
Connection	1/8” NPT or 1/4” NPT standard
Bourdon Tube	Phosphor bronze
Movement	Brass (flutterless) with zero adjustment
Pointer	Aluminum, black
Welding	<1,000 psi: 60% tin 40% lead, ≥1,000 psi: silver alloy
Over-pressure Limit	25% of full scale value
Working Pressure	Maximum 75% of full scale value
Ambient/Process Temperature	-40°F to 150°F (-40°C to 65°C)
Accuracy	±2-1-2% ANSI/ASME Grade A
Enclosure Rating	IP52
Warning	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

1.5” Bottom Connection

1.5” Back Connection

Order Codes (products in bold are normally stock in North America)

Dial Size	1.5” (40mm)		2” (50mm)				2.5” (63mm)		3.5” (90mm)	
Connection	1/8” Bottom	1/8” Back (CB)	1/8” Bottom	1/8” Back (CB)	1/4” Bottom	1/4” Back (CB)	1/4” Bottom	1/4” Back (CB)	1/4” Bottom	1/4” Back (CB)
30” Hg Vac/kPa	P9S901297	P9S901397	P9S90195	P9S901424	P9S90135	P9S901428	P9S90210	P9S901431	P9S90220	P9S901455
30”/0/15 psi/kPa	-	-	-	-	-	-	P9S90152	-	-	-
30”/0/30 psi/kPa	-	-	-	-	-	-	P9S90153	-	-	-
30”/0/60 psi/kPa	-	-	-	-	-	-	P9S90154	-	-	-
30”/0/100 psi/kPa	-	-	-	-	-	-	P9S90155	-	-	-
0/15 psi/kPa	P9S901299	P9S901399	P9S90196	P9S901425	P9S90136	P9S901429	**P9S90211**	P9S901436	P9S90229	P9S901464
0/30 psi/kPa	P9S901300	**P9S901400**	P9S90206	P9S901402	P9S90199	**P9S901403**	**P9S90212**	P9S901437	P9S90221	P9S901456
0/60 psi/kPa	P9S901301	P9S901401	P9S90207	P9S901404	P9S90201	P9S901405	**P9S90213**	P9S901438	P9S90222	P9S901457
0/100 psi/kPa	**P9S901320**	**P9S901420**	P9S90208	P9S901406	**P9S90202**	P9S901407	**P9S90214**	P9S901439	**P9S90223**	P9S901458
0/160 psi/kPa	P9S901321	**P9S901421**	P9S90197	P9S901408	P9S90203	**P9S901409**	**P9S90215**	P9S901440	P9S90224	P9S901459
0/200 psi/kPa	P9S901322	P9S901422	P9S90209	P9S901426	**P9S90204**	P9S901410	P9S90216	P9S901441	**P9S90225**	P9S901460
0/300 psi/kPa	P9S901323	P9S901423	P9S90198	P9S901427	P9S90205	P9S901411	P9S90217	P9S901442	P9S90226	P9S901461
0/400 psi/kPa	P9S901324	P9S901443	P9S901449	P9S901445	P9S901451	P9S901447	P9S90219	P9S901453	P9S90227	P9S901462
0/600 psi/kPa	P9S901325	**P9S901444**	P9S901450	P9S901446	P9S901452	P9S901448	P9S90218	P9S901454	**P9S90228**	P9S901463

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.

2” Bottom Connection

2” Back Connection

2.5” Bottom Connection

2.5” Back Connection

3.5” Bottom Connection

3.5” Back Connection

P9U 90 Series Panel Mounted Gauge

Description & Features:

- General purpose panel mounted gauge with 1.5” (40mm) to 3.5” (90mm) dial sizes
- Flutterless pointer
- Dampened movement
- Removable lens
- Zero-adjustment
- ±2-1-2% accuracy
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Panels, compressor equipment, water and oil pumps where rapid pressure fluctuations or system vibration require a stable pointer
- Suitable for non-clogging and non-corrossive media

Specifications	
Dial	1.5” (40mm), 2” (50mm), 2.5” (63mm), 3.5” (90mm), white aluminum with black and red markings
Case	Steel, painted black
Lens	Acrylic, threaded
Socket	Brass
Connection	1/8” NPT or 1/4” NPT standard
Bourdon Tube	Phosphor bronze
Movement	Brass (flutterless movement)
Pointer	Aluminum, black
Welding	Silver alloy
Over-pressure Limit	25% of full scale value
Working Pressure	Maximum 75% of full scale value
Ambient/Process Temperature	-40°F to 150°F (-40°C to 65°C)
Accuracy	±2-1-2% ANSI/ASME Grade A
Enclosure Rating	IP52
Warning	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Order Codes (products in bold are normally stock in North America)

Dial Size	1.5” (40mm)	2” (50mm)		2.5” (63mm)	3.5” (90mm)
Connection	1/8” Back (CB)	1/8” Back (CB)	1/4” Back (CB)	1/4” Back (CB)	1/4” Back (CB)
Panel Cut-out	1.69” (43mm)	2.11” (53.5mm)	2.11” (53.5mm)	2.66” (67.5mm)	3.68” (93.5mm)
Overall O.D.	1.85” (47.7mm)	2.27” (57.9mm)	2.27” (57.9mm)	2.82” (71.9mm)	3.94” (98.9mm)
30” Hg Vac/kPa	P9U901397UC	P9U901424UC	P9U901428UC	P9U901431UC	P9U901455UC
30”/0/15 psi/kPa	-	-	-	-	-
30”/0/30 psi/kPa	-	-	-	-	-
30”/0/60 psi/kPa	-	-	-	-	-
30”/0/100 psi/kPa	-	-	-	-	-
0/15 psi/kPa	P9U901399UC	P9U901425UC	P9U901429UC	P9U901436UC	P9U901464UC
0/30 psi/kPa	P9U901400UC	P9U901402UC	**P9U901403UC**	P9U901437UC	P9U901456UC
0/60 psi/kPa	P9U901401UC	**P9U901404UC**	P9U901405UC	P9U901438UC	P9U901457UC
0/100 psi/kPa	P9U901420UC	**P9U901406UC**	P9U901407UC	P9U901439UC	P9U901458UC
0/160 psi/kPa	P9U901421UC	**P9U901408UC**	**P9U901409UC**	P9U901440UC	P9U901459UC
0/200 psi/kPa	P9U901422UC	P9U901426UC	P9U901410UC	**P9U901441UC**	P9U901460UC
0/300 psi/kPa	P9U901423UC	P9U901427UC	P9U901411UC	P9U901442UC	P9U901461UC
0/400 psi/kPa	P9U901443UC	P9U901445UC	P9U901447UC	P9U901453UC	P9U901462UC
0/600 psi/kPa	P9U901444UC	P9U901446UC	P9U901448UC	P9U901454UC	P9U901463UC

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.

1.5” Back Connection with U-Clamp

2” Back Connection with U-Clamp

2.5” Back Connection with U-Clamp

3.5” Back Connection with U-Clamp

Description & Features:

- Most economical, all-purpose pressure gauge
- 1.5” (40mm) to 4” (100mm) sizes
- Friction bezel rings
- Black steel case
- Brass or lead free brass wetted parts
- ±3-2-3% accuracy
- ASME B40.100 compliant (EN837-1 available)
- CRN registered
- Lead free version NSF-61-372 certified
- 5 year warranty

Applications:

- General purpose gauge for plumbing, heating, air conditioning, pneumatic, hydraulic, water tanks, air compressors, OEM
- Lead free version for potable water systems
- Suitable for non-clogging and non-corroding media

Specifications	
Dial	1.5” (40mm), 2” (50mm), 2.5” (63mm), 4” (100mm) white aluminum with black and red markings
Case	Steel, painted black (plastic available)
Lens	1.5” (40mm), 2” (50mm), 2.5” (63mm): Acrylic 4” (100mm): Glass
Ring	1.5” (40mm), 2” (50mm): Steel, painted black 2.5” (63mm), 4” (100mm): Steel, chrome plated
Socket	PEM: Brass PEM-LF: Lead free brass, NSF-61-372 certified
Connection	1/8” NPT or 1/4” NPT standard
Bourdon Tube	PEM: Phosphor bronze PEM-LF: Lead free phosphor bronze, NSF-61-372 certified
Movement	PEM: Brass PEM-LF (1.5”, 2”, 2.5”): SS, PEM-LF (4”): Lead free brass, NSF-61-372 certified
Pointer	Aluminum, black
Welding	Silver alloy
Over-pressure Limit	25% of full scale value
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	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

PEM Order Codes (products in bold are normally stock in North America)

Dial Size	1.5" (40mm)		2" (50mm)					2.5" (63mm)		4" (100mm)
Connection	1/8" Bottom	1/8" Back (CB)	1/8" Bottom	1/8" Back (CB)	1/4" Bottom	1/4" Back (CB)	1/4" psi only Bottom	1/4" Bottom	1/4" Back (CB)	1/4" Bottom
Case Material	Steel						Plastic	Steel		
30" Hg Vac/kPa	**PEM1297**	**PEM1397**	**PEM195**	**PEM1424**	**PEM135**	**PEM1428**	**PEM1398**	**PEM210**	**PEM1431**	**PEM220**
30"/0/15 psi/kPa	-	-	-	-	-	-	-	**PEM152**	-	-
30"/0/30 psi/kPa	-	-	-	-	-	-	-	**PEM153**	-	-
30"/0/60 psi/kPa	-	-	-	-	-	-	-	**PEM154**	-	-
30"/0/100 psi/kPa	-	-	-	-	-	-	-	PEM155	-	-
0/15 psi/kPa	**PEM1299**	**PEM1399**	**PEM196**	**PEM1425**	**PEM136**	**PEM1429**	-	**PEM211**	**PEM1436**	**PEM295**
0/30 psi/kPa	**PEM1300**	**PEM1400**	**PEM206**	**PEM1402**	**PEM199**	**PEM1403**	PEM200	**PEM212**	**PEM1437**	**PEM221**
0/60 psi/kPa	**PEM1301**	**PEM1401**	**PEM207**	**PEM1404**	**PEM201**	**PEM1405**	PEM194	**PEM213**	**PEM1438**	**PEM222**
0/100 psi/kPa	**PEM1320**	**PEM1420**	**PEM208**	**PEM1406**	**PEM202**	**PEM1407**	-	**PEM214**	**PEM1439**	**PEM223**
0/160 psi/kPa	**PEM1321**	**PEM1421**	PEM197	**PEM1408**	**PEM203**	**PEM1409**	-	**PEM215**	**PEM1440**	**PEM224**
0/200 psi/kPa	**PEM1322**	**PEM1422**	**PEM209**	**PEM1426**	**PEM204**	**PEM1410**	-	**PEM216**	**PEM1441**	**PEM225**
0/300 psi/kPa	**PEM1323**	**PEM1423**	**PEM198**	PEM1427	**PEM205**	**PEM1411**	-	**PEM217**	**PEM1442**	**PEM226**
0/400 psi/kPa	-	-	-	-	-	PEM1414	-	**PEM219**	PEM3412	**PEM227**
0/600 psi/kPa	-	-	-	-	-	PEM1412	-	**PEM218**	PEM3413	-
0/1,000 psi/kPa	-	-	-	-	-	-	-	**PEM290**	-	-
0/3,000 psi/kPa	-	-	-	-	-	-	-	**PEM291**	-	-
0/5,000 psi/kPa	-	-	-	-	-	-	-	**PEM292**	-	-

PEM-LF Order Codes (products in bold are normally stock in North America)

Dial Size	1.5" (40mm)		2" (50mm)				2.5" (63mm)		4" (100mm)
Connection	1/8" Bottom	1/8" Back (CB)	1/8" Bottom	1/8" Back (CB)	1/4" Bottom	1/4" Back (CB)	1/4" Bottom	1/4" Back (CB)	1/4" Bottom
Case Material	Steel						Steel		
30" Hg Vac/kPa	PEM1297LF	PEM1397LF	PEM195LF	PEM1424LF	PEM135LF	PEM1428LF	**PEM210LF**	PEM1431LF	PEM220LF
30"/0/15 psi/kPa	-	-	-	-	-	-	PEM152LF	-	-
30"/0/30 psi/kPa	-	-	-	-	-	-	PEM153LF	-	-
30"/0/60 psi/kPa	-	-	-	-	-	-	PEM154LF	-	-
30"/0/100 psi/kPa	-	-	-	-	-	-	PEM155LF	-	-
0/15 psi/kPa	PEM1299LF	PEM1399LF	PEM196LF	PEM1425LF	**PEM136LF**	**PEM1429LF**	**PEM211LF**	PEM1436LF	-
0/30 psi/kPa	PEM1300LF	**PEM1400LF**	PEM206LF	PEM1402LF	**PEM199LF**	**PEM1403LF**	**PEM212LF**	PEM1437LF	PEM221LF
0/60 psi/kPa	PEM1301LF	PEM1401LF	PEM207LF	PEM1404LF	**PEM201LF**	**PEM1405LF**	**PEM213LF**	PEM1438LF	**PEM222LF**
0/100 psi/kPa	**PEM1320LF**	**PEM1420LF**	**PEM208LF**	PEM1406LF	**PEM202LF**	**PEM1407LF**	**PEM214LF**	**PEM1439LF**	**PEM223LF**
0/160 psi/kPa	PEM1321LF	**PEM1421LF**	PEM197LF	PEM1408LF	**PEM203LF**	**PEM1409LF**	**PEM215LF**	**PEM1440LF**	**PEM224LF**
0/200 psi/kPa	PEM1322LF	**PEM1422LF**	**PEM209LF**	PEM1426LF	**PEM204LF**	**PEM1410LF**	**PEM216LF**	**PEM1441LF**	PEM225LF
0/300 psi/kPa	PEM1323LF	PEM1423LF	PEM198LF	PEM1427LF	**PEM205LF**	PEM1411LF	**PEM217LF**	PEM1442LF	PEM226LF
0/400 psi/kPa	-	-	-	-	-	-	PEM219LF	-	PEM227LF
0/600 psi/kPa	-	-	-	-	-	-	PEM218LF	PEM3413LF	-
0/1,000 psi/kPa	-	-	-	-	-	-	PEM290LF	-	-
0/3,000 psi/kPa	-	-	-	-	-	-	PEM291LF	-	-
0/5,000 psi/kPa	-	-	-	-	-	-	PEM292LF	-	-

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.
For options, attach suffix to end of order code: i.e. PEM1399-GL15 for 1.5" GLASS LENS.

Option suffix:

ECASE15SSBK = 1.5" (40mm) SS back case connection
ECASE15SSBTM = 1.5" (40mm) SS bottom connection
ECASE20SSBK = 2" (50mm) SS case back connection
ECASE20SSBTM = 2" (50mm) SS case bottom connection

EN = EN837-1 compliant
GL15 = Glass lens for 1.5" (40mm) dial
GL2 = Glass lens for 2" (50mm) dial
GL25 = Glass lens for 2.5" (63mm) dial

Note: For 1.5" to 2" SS internals, please see PRL Series Regulator Gauges.

1.5” Bottom Connection

1.5” Back Connection

2” Bottom Connection

2” Back Connection

2.5” Bottom Connection

2.5” Back Connection

4” Bottom Connection

PEU Economy Panel Mounted Gauge

Description & Features:

- Most economical pressure gauge used for panels
- 1.5” (40mm) to 2.5” (63mm) dial sizes
- Black steel case
- Brass wetted parts
- Stainless steel crimp-on bezel
- Stud-style U-Clamp design for secure panel mounting
- ±3-2-3% accuracy
- Dual scale (psi/kPa)
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- For measuring gases, air, water and oils when equipment or processes require an economical panel mounted gauge
- Suitable for non-clogging, non-corrossive media

Specifications	
Dial	1.5” (40mm), 2” (50mm), 2.5” (63mm) white aluminum with black and red markings
Case	Steel, painted black
Lens	Acrylic
Ring	SS
Socket	Brass
Connection	1/8” NPT or 1/4” NPT standard
Bourdon Tube	Phosphor bronze
Movement	Brass
Pointer	Aluminum, black
Welding	Silver alloy
Over-pressure Limit	25% of full scale value
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	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Order Codes (products in bold are normally stock in North America)

Dial Size	1.5” (40mm)	2” (50mm)	2” (50mm)	2.5” (63mm)
Connection	**1/8”**	**1/8”**	**1/4”**	**1/4”**
30” Hg Vac/kPa	**PEU1399UC**	PEU1396UC	PEU1428UC	PEU1431UC
0/15 psi/kPa	**PEU1398UC**	**PEU1397UC**	PEU1429UC	PEU1436UC
0/30 psi/kPa	**PEU1400UC**	**PEU1402UC**	**PEU1403UC**	PEU1437UC
0/60 psi/kPa	**PEU1401UC**	PEU1404UC	**PEU1405UC**	PEU1438UC
0/100 psi/kPa	**PEU1420UC**	**PEU1406UC**	**PEU1407UC**	**PEU1439UC**
0/160 psi/kPa	**PEU1421UC**	**PEU1408UC**	**PEU1409UC**	**PEU1440UC**
0/200 psi/kPa	PEU1422UC	**PEU1412UC**	PEU1410UC	PEU1441UC
0/300 psi/kPa	PEU1423UC	PEU1413UC	PEU1411UC	PEU1442UC

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.

1.5” Panel Mounted

Panel cut-out

1.63”(42mm)

Outer diameter

1.84”(47mm)

2” Panel Mounted

Panel cut-out

2.12”(54mm)

Outer diameter

2.29”(58mm)

2.5” Panel Mounted

Panel cut-out

2.44”(62mm)

Outer diameter

2.65”(67mm)

PDT Differential Gauge

Description & Features:

- Brass or stainless steel wetted parts
- Both conventional and balanced scale available
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Single pointer to show difference from two pressure sources
- Typically used to measure pressure drops across a filter, pump or other equipment

Specifications	
Dial	4.5” (115mm), 6” (150mm) white aluminum with black markings
Case	Aluminum, painted black
Front Flange	SS
Back Flange	Black steel
Lens	Glass
Ring	4.5” (115mm): SS 6“ (150mm): Aluminum
Socket	Brass or 316 SS
Connections	1/4” NPT standard
Scale	PSID only
Bourdon Tubes	Phosphor bronze or AISI 316 SS, independent, matched
Movement	Brass
Pointer	Aluminum (micrometer)
Welding	Tin/copper alloy for brass internals, TIG argonarc for SS internals
Over-pressure Limit	30% of full scale value
Working Pressure	Maximum 75% of full scale value
Ambient/Process Temperature	-40°F to 150°F (-40°C to 65°C)
Accuracy	±1% ANSI/ASME Grade 1A
Warning (brass internals only)	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Order Codes

Dial Size	Max. Static Pressure	4.5” (115mm)				6” (150mm)			
Connection		1/4” Bottom	1/4” Back (LB)	1/4” Bottom	1/4” Back (LB)	1/4” Bottom	1/4” Back (LB)	1/4” Bottom	1/4” Back (LB)
Socket, Tube		Brass		SS		Brass		SS	
0/15 psi	22 psi	PDT8051	PDT8051B	PDT8061	PDT8061B	PDT8071	PDT8071B	PDT8081	PDT8081B
0/30 psi	45 psi	PDT8052	PDT8052B	PDT8062	PDT8062B	PDT8072	PDT8072B	PDT8082	PDT8082B
0/60 psi	90 psi	PDT8053	PDT8053B	PDT8063	PDT8063B	PDT8073	PDT8073B	PDT8083	PDT8083B
0/100 psi	150 psi	PDT8054	PDT8054B	PDT8064	PDT8064B	PDT8074	PDT8074B	PDT8084	PDT8084B
0/160 psi	240 psi	PDT8055	PDT8055B	PDT8065	PDT8065B	PDT8075	PDT8075B	PDT8085	PDT8085B
0/200 psi	300 psi	PDT8056	PDT8056B	PDT8066	PDT8066B	PDT8076	PDT8076B	PDT8086	PDT8086B
0/300 psi	450 psi	PDT8057	PDT8057B	PDT8067	PDT8067B	PDT8077	PDT8077B	PDT8087	PDT8087B
0/600 psi	900 psi	PDT8058	PDT8058B	PDT8068	PDT8068B	PDT8078	PDT8078B	PDT8088	PDT8088B

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes. Bi-directional or zero positioned at 12 o’clock on dial is available. Low Differential Pressure/High Static Pressure gauges are also available (PPD, PRD, PSD and PVD Series’).

4.5” Bottom Connection

4.5” Back Connection

6” Bottom Connection

6” Back Connection

PDX Duplex Gauge

Description & Features:

- Heavy duty, highly accurate, aluminum case
- Brass and stainless steel wetted parts available
- Two separate bourdon tubes and pointers
- One red and one black pointer
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Comparing two separate process pressures on the same gauge
- Utilized on pump and filter installations

Specifications	Stainless Steel	Brass
Dial	4.5” (115mm), 6” (150mm) white aluminum with black markings	4.5” (115mm), 6” (150mm) white aluminum with black markings
Case	Aluminum, painted black	Aluminum, painted black
Front Flange	SS	SS
Back Flange	Black steel	Black steel
Lens	Glass	Glass
Ring	4.5” (115mm): SS 6” (150mm): Aluminum	4.5” (115mm): SS 6” (150mm): Aluminum
Socket	316 SS	Brass
Connections	1/4” NPT standard	1/4” NPT standard
Scale	PSI only	PSI only
Bourdon Tubes	AISI 316 SS, independent, matched	Phosphor bronze, independent, matched
Movement	Brass	Brass
Pointer	Aluminum, micrometer	Aluminum, micrometer
Welding	TIG argonarc	Tin/copper alloy
Over-pressure Limit	30% of full scale value	30% of full scale value
Working Pressure	Maximum 75% of full scale value	Maximum 75% of full scale value
Ambient/Process Temperature	-40°F to 150°F (-40°C to 65°C)	-40°F to 150°F (-40°C to 65°C)
Accuracy	±1% ANSI/ASME Grade 1A	±1% ANSI/ASME Grade 1A
Warning (brass internals only)	N/A	**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Order Codes

Dial Size	4.5” (115mm)				6” (150mm)			
Connection	1/4” Bottom	1/4” Back (LB)	1/4” Bottom	1/4” Back (LB)	1/4” Bottom	1/4” Back (LB)	1/4” Bottom	1/4” Back (LB)
Socket, Tube	Brass		SS		Brass		SS	
0/15 psi	PDX8011	PDX8011B	PDX8021	PDX8021B	PDX8091	PDX8091B	PDX8101	PDX8101B
0/30 psi	PDX8012	PDX8012B	PDX8022	PDX8022B	PDX8092	PDX8092B	PDX8102	PDX8102B
0/60 psi	PDX8013	PDX8013B	PDX8023	PDX8023B	PDX8093	PDX8093B	PDX8103	PDX8103B
0/100 psi	PDX8014	PDX8014B	PDX8024	PDX8024B	PDX8094	PDX8094B	PDX8104	PDX8104B
0/160 psi	PDX8015	PDX8015B	PDX8025	PDX8025B	PDX8095	PDX8095B	PDX8105	PDX8105B
0/200 psi	PDX8016	PDX8016B	PDX8026	PDX8026B	PDX8096	PDX8096B	PDX8106	PDX8106B
0/300 psi	PDX8017	PDX8017B	PDX8027	PDX8027B	PDX8097	PDX8097B	PDX8107	PDX8107B
0/600 psi	PDX8018	PDX8018B	PDX8028	PDX8028B	PDX8098	PDX8098B	PDX8109	PDX8109B

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.

4.5” Bottom Connection

4.5” Back Connection

PFD WinAIR Differential Gauge

Description & Features:

- Resistance-free differential gauge for all air and non-corrosive gas installations
- Industrial grade die-cast aluminum case
- Extreme temperature tolerance with o-ring seal
- Easily accessible re-zero adjustment screw
- 2% full scale accuracy*
- 3 mounting adapters with screws included, other mounting accessories also available
- 5 year warranty

Applications:

- Low pressure and differential monitoring for air and non-combustible gases including filters, blowers, vacuums, air handlers and clean rooms

Specifications	
Dial	4” (100mm), white aluminum with black markings
Case	Die-cast black aluminum
Lens	Polycarbonate lens with UV protection
Ring	Threaded die-cast black aluminum
Connection	1/8” NPTF high & low pressure taps, side & back
Movement	Resistance-free and magnetic
Pointer	Aluminum, anodized black
Over-pressure Limit	Maximum pressure of 14.5 psi / 100 kPa
Ambient/Process Temperature	-40°F to 140°F (-40°C to 60°C) 14°F to 140°F (-10°C to 60°C)
Accuracy	±2% of full scale value*
Enclosure Rating	IP67
Warning	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Note: PFD to only be mounted in a vertical position.

* Unless otherwise noted.

"H2O Order Codes (products in bold are normally stock in North America)

Dial Size	4" (100mm)
Connection	1/8" Side & Back
Case Material	Aluminum
-0.25/0/0.25 "H2O	PFD40100▪
-0.5/0/0.5 "H2O	PFD40101
-1/0/1 "H2O	PFD40102
-2/0/2 "H2O	PFD40103
-5/0/5 "H2O	PFD40104
-10/0/10 "H2O	PFD40105
-15/0/15 "H2O	PFD40106
0/0.25 "H2O	PFD40010▲
0/0.5 "H2O	PFD40011▪
0/1 "H2O	**PFD40012**
0/2 "H2O	PFD40013
0/3 "H2O	**PFD40014**
0/4 "H2O	PFD40015
0/5 "H2O	PFD40016
0/6 "H2O	PFD40017
0/8 "H2O	PFD40018
0/10 "H2O	PFD40019
0/12 "H2O	PFD40020
0/15 "H2O	PFD40021
0/20 "H2O	PFD40022
0/25 "H2O	PFD40023
0/30 "H2O	**PFD40024**
0/40 "H2O	PFD40025
0/50 "H2O	PFD40026
0/60 "H2O	PFD40027
0/80 "H2O	PFD40028
0/100 "H2O	PFD40029
0/120 "H2O	PFD40030
0/150 "H2O	PFD40031

Note: Max. pressure rating is 14.5 psi

mmH2O Order Codes

Dial Size	4" (100mm)
Connection	1/8" Side & Back
Case Material	Aluminum
-3/0/3 mmH2O	PFD40350▲
-5/0/5 mmH2O	PFD40351▪
-10/0/10 mmH2O	PFD40352
0/6 mmH2O	PFD40300▲
0/10 mmH2O	PFD40301▪
0/15 mmH2O	PFD40302
0/20 mmH2O	PFD40303
0/25 mmH2O	PFD40304
0/30 mmH2O	PFD40305
0/50 mmH2O	PFD40306
0/80 mmH2O	PFD40307
0/100 mmH2O	PFD40308
0/125 mmH2O	PFD40309
0/150 mmH2O	PFD40310
0/200 mmH2O	PFD40311
0/250 mmH2O	PFD40312
0/300 mmH2O	PFD40313

kPa Order Codes

Dial Size	4" (100mm)
Connection	1/8" Side & Back
Case Material	Aluminum
0/0.5 kPa	PFD40500
0/1 kPa	PFD40501
0/1.5 kPa	PFD40502
0/2 kPa	PFD40503
0/2.5 kPa	PFD40504
0/3 kPa	PFD40505
0/4 kPa	PFD40506
0/5 kPa	PFD40507
0/6 kPa	PFD40508
0/8 kPa	PFD40509
0/10 kPa	PFD40510
0/15 kPa	PFD40511
0/20 kPa	PFD40512
0/25 kPa	PFD40513
0/30 kPa	PFD40514

RSP - Setpoint indicator

PSI Order Codes (products in bold are normally stock in North America)

Dial Size	4" (100mm)
Connection	1/8" Side & Back
Case Material	Aluminum
0/1 psi	PFD40150
0/2 psi	**PFD40151**
0/3 psi	PFD40152
0/4 psi	PFD40153
0/5 psi	PFD40154

PA Order Codes (products in bold are normally stock in North America)

Dial Size	4" (100mm)
Connection	1/8" Side & Back
Case Material	Aluminum
-50/0/50 PA	PFD40200▲
-60/0/60 PA	PFD40201▲
-100/0/100 PA	PFD40202▪
-125/0/125 PA	PFD40403▪
-150/0/150 PA	PFD40404
-200/0/200 PA	PFD40405
-250/0/250 PA	PFD40406
-300/0/300 PA	PFD40407
-500/0/500 PA	PFD40408
0/50 PA	PFD40210▲
0/60 PA	PFD40211▲
0/100 PA	PFD40212▪
0/125 PA	PFD40213▪
0/150 PA	PFD40214▪
0/200 PA	PFD40215
0/250 PA	PFD40216
0/300 PA	PFD40217
0/500 PA	PFD40218
0/750 PA	PFD40219
0/1,000 PA	PFD40220

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.

For options, attach suffix to end of order code: i.e. PFD40031-RSP for SETPOINT INDICATOR. Contact Winters for additional options

Option suffix:

RSP = Setpoint indicator (IP54 rated)

▪ ±3% of full scale value accuracy
▲ ±4% of full scale value accuracy

Options Order Codes

Description	Code
Hanging Bracket	PFD1001
Surface Mounting Bracket	PFD1002
3-Way Valve	PFD1003
Flush Mounting Bracket	PFD1004
Air Filter Kit	PFD1005
2" Pipe Mounting Kit	PFD1006
Flange for Panel Mounting	PFD1007
Square Flush Mount Kit	PFD1008

Description	Code
Static Tip	PFD1009
Plastic Tubing 25M	PFD1010
Plastic Tubing 50M	PFD1011
Plastic Tubing 100M	PFD1012
Plastic Tubing 200M	PFD1013
Surface Mounting Bracket (Plastic)	PFD1016

PFD WinAIR Compact Differential Gauge

Description & Features:

- Resistance-free differential gauge for all air and non-corrosive gas installations
- Compact size and easy to read dial
- Industrial grade nylon case
- Easily accessible re-zero adjustment screw
- 5% full scale accuracy
- Mounting bracket with screws included
- 5 year warranty

Applications:

- Low pressure and differential monitoring for air and non-combustible gases including filters, blowers, vacuums, air handlers and clean rooms

Specifications	
Dial	2 1/16” (52.4mm), white aluminum with black markings
Case	Glass filled nylon, black
Lens	Polycarbonate
Ring	Threaded die-cast black aluminum
Process Connections	3/16" barbed for ID tubing
Movement	Resistance-free and magnetic
Pointer	Aluminum, anodized black
Over-pressure Limit	Maximum pressure of 30 psi / 207 kPa
Ambient/Process Temperatures	20°F to 120°F (-7°C to 49°C)
Accuracy	± 5% of full scale
Approvals	CE
Accessories	Panel mounting bracket, allen key, two nuts & bolts
Installation Attention	Only in vertical position
Warning	This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

Note: PFD to only be mounted in a vertical position.

* Unless otherwise noted.

Order Codes

Pressure Range			
Pa		inH_2O	
0- 125	PFD20213	0 - 0.5	PFD20011
0 - 250	PFD20216	0 - 1.0	PFD20012
0 - 300	PFD20217	0 - 2.0	PFD20013
0 - 500	PFD20218	0 - 3.0	PFD20014
0 - 750	PFD20219	0 - 5.0	PFD20016
		0 - 10.0	PFD20019

Optional Order Codes

Static Pressure tip with Flange	PVC Tubing, 20m (65’)
WPS1010	WPS1020

Dimensions (mm)

PPD, PRD PSD, PVD

High Static Pressure Differential Gauges

Description & Features:

- Versatile high static low differential pressure gauges
- Four types of sensing elements for a large variety of ranges
- Switches available for actuation
- ASME B40.100 compliant
- IP65 enclosure rating
- 5 year warranty

Applications:

- Used for filtration systems, low pressure gas installations and for leak detection in low pressure, high static systems

Specifications	Piston Gauge (PPD)	Rolling Diaphragm Gauge (PRD)	Small Convoluted Diaphragm Gauge (PSD)	Convoluted Diaphragm Gauge (PVD)
Dial	2.5” (63mm), 3.5” (90mm), 4.5” (115mm)	2.5” (63mm)	2.5” (63mm), 3.5” (90mm), 4.5” (115mm)	3.5” (90mm), 4.5” (115mm)
Case	Aluminum or engineered plastic	Engineered plastic	Aluminum or engineered plastic	Aluminum or engineered plastic
Lens	Shatter resistant acrylic (standard), safety glass (optional)	Shatter resistant acrylic (standard), safety glass (optional)	Shatter resistant acrylic (standard), safety glass (optional)	Shatter resistant acrylic (standard), safety glass (optional)
Line Connection Locations	In-line, back or bottom	In-line (only)	In-line, back, dual top & bottom or bottom	Dual top & bottom
Connections	1/4” NPTF (standard), 1/2” NPTF, 7/16”-20 SAE	1/4” NPTF (only)	1/4” NPTF (standard), 1/2” NPTF, 7/16”-20 SAE	Dual 1/4” NPTF
Wetted Parts Materials	SS piston with ceramic magnet (standard), Aluminum, Bronze or Monel® piston (optional)	SS parts with Buna N seals	SS parts with Buna N seals	SS parts with Buna N seals (standard), Hastelloy® C parts with Buna N seals (optional)
Body Material	SS, aluminum, bronze or Monel®	SS, aluminum or acetal	SS, aluminum or brass	SS, aluminum, brass, engineered plastic or Hastelloy® C
Internals/Movement	Magnetic coupling using piston & spring	Magnetic coupling with rolling diaphragm sensor	Magnetic coupling with convoluted diaphragm sensor	Magnetic coupling with convoluted diaphragm sensor
Migration of Media	Marginal	Zero	Zero	Zero
Seal	Buna N (standard), PTFE, FKM, neoprene	Buna N (standard), FKM	Buna N (standard), FKM, silicone, neoprene	Buna N (standard), FKM, silicone, neoprene
Standard Differential Ranges	0-5 thru 110 psid (0.4-8 bar)	0-5 thru 50 psid (0.4-3 bar)	0-25 thru 100 psid (1.5-7 bar)	0-5 thru 400” H_2O (12.4 mbar-1 bar)
Maximum System Pressure	Aluminum: 3,000 psi (200 bar) Bronze, Monel®: 5,000 psi (350 bar) SS: 6,000 psi (400 bar)* *CRN not available	Aluminum, SS: 1,000 psi (70 bar) Acetal: 500 psi (35 bar)	Aluminum, SS: 3,000 psi (200 bar) Brass: 1,500 psi (100 bar)	Aluminum, brass, SS: 500 psi (35 bar) Engineered plastic: 300 psi (20 bar) Hastelloy® C: 500 psi (35 bar)
Ambient Temperature	-40°F to 200°F (-40°C to 93°C)	-40°F to 200°F (-40°C to 93°C)	-40°F to 200°F (-40°C to 93°C)	-40°F to 200°F (-40°C to 93°C)
Accuracy	±2% of full scale value	±5% of full scale value	±2% of full scale value	0-5 thru 9.9” H_2O: ±5% of full scale 0-10 thru 400” H_2O: ±2% of full scale
Warning (brass internals only)	N/A	N/A	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.	

Hastelloy® is a registered trademark of Haynes International, Inc.
Monel® is a registered trademark of Inco Alloys International

Piston Type (PPD)

- Most suitable for general purpose applications including filters, pumps and chillers. Uses a piston as a sensor to separate high & low pressure in response to pressure differentiation.
- Standard Differential Range: 0/5 thru 110 psid (0.4/8 bar)
- Maximum System Pressure Aluminum: 3,000 psi (200 bar)
- Maximum System Pressure Bronze, Monel®: 3,000 psi (200 bar)
- Maximum System Pressure SS: 6,000 psi (400 bar)
- Accuracy ±2% full scale ascending

Rolling Diaphragm Gauge (PRD)

- Operates on rolling diaphragm as a sensor, which assures complete separation of the high and low pressure ports. Suitable for use on dissimilar fluids, wet gas and process fluids with particulates present. Used in high line pressure and differential pressure ranges up to 50 psid.
- Standard Differential Range: 0/5 thru 50 psid (0.4/3 bar)
- Maximum System Pressure Aluminum, SS: 1,000 psi (70 bar)
- Maximum System Pressure Acetal: 500 psi (35 bar)
- Accuracy ±5% full scale ascending

Small Convoluted Diaphragm Gauge (PSD)

- Operates on a convoluted diaphragm as a sensor which separates high and low pressure ports. Ideally suited for use on dissimilar fluids and wet gas or fluids with high concentration of particles. Suitable for use with a diaphragm/chemical seal.
- Standard Differential Range: 0/25 thru 100 psid (1.5/7 bar)
- Maximum System Pressure Aluminum, SS: 3,000 psi (200 bar)
- Maximum System Pressure Brass: 1,500 psi (100 bar)
- Accuracy ±2% full scale ascending

Convoluted Diaphragm Gauge (PVD)

- Operates on a convoluted diaphragm sensor for low range flow, liquid and vacuum applications. Used in tank level, horizontal or vertical flow applications, filtering of very low pressure gases.
- Standard Differential Range: 0/5 thru 400” H_2O (12.4 mbar/1 bar)
- Maximum System Pressure Aluminum, brass, SS: 500 psi (35 bar)
- Maximum System Pressure Engineered plastic: 300 psi (20 bar)
- Maximum System Pressure Hastelloy® C: 500 psi (35 bar)
- Accuracy 0/5 thru 9.9” H_2O ±5%, 0/10 thru 400” H_2O ±2%

Note: Technical drawings are available upon request

Piston Gauge (High Static Pressure Differential)

Series Number (for custom, non-standard product)

P P D - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] [ ] [ ]

SERIES TYPE	Aluminum body / Stainless Steel piston (Max system pressure 3,000 psi)	A
	316 Stainless Steel body / Stainless Steel piston (Max system pressure 6,000 psi)	S
	Monel body / Monel piston, 5% accuracy (Max system pressure 5,000 psi)	M
	-> available differential ranges 0/10,15,20,25,30 only)	
	Aluminum Bronze body / Aluminum Bronze piston, 5% accuracy (Max system pressure 5,000 psi)	N
	-> available differential ranges 0/10,15,20,25,30 only)	
	Special	Z
DIAL SIZE	2.5" Round Uni-directional dial, plastic case (standard)	A
	4.5" Round Uni-directional dial, plastic case	C
	4.5" Round Bi-directional dial, plastic case	D
	3.5" Round Uni-directional dial, aluminum case	E
	4.5" Round Uni-directional dial, aluminum case	G
	4.5" Round Bi-directional dial, aluminum case	H
	Special	Z
SEAL	Buna-N (standard)	0
	Viton	1
	Neoprene	2
	PTFE	4
	Ethylene Propylene	5
	Special	Z
CONNECTION	1/4" NPTF Back (standard), not available with Gauge Options M & N	0
	1/4" NPTF End / In-line	2
	1/4" NPTF Bottom, not available with Gauge Options M & N	3
	1/2" NPTF End	4
	7/16"-20 SAE with "O" ring Back, with Gauge Options A & S	6
	Special	Z
OPTIONS	No additional options required (standard)	O
	Reversed High / Low process connections	A
	Mounting Holes in gauge body for field mounting (switch options A & B only)	C
	Mounting Holes in gauge body for field mounting (switch options L & M only)	D
	Two (2) 1/4 - 20 mounting holes (not available for C & D switch options)	E
	Carbon steel 2" pipe mounting kit (not available for C & D switch options)	F
	Stainless steel 2" pipe mounting kit (not available for C & D switch options)	G
	1/2" NPTF stainless steel adapters	K
	Glycerin filled 2.5" case (not available with Safety glass or Maxi-pointer)	L
	Glycerin filled 4.5" case (not available with Safety glass or Maxi-pointer)	L
	Maxi-pointer 2.5" case (not available with Safety glass)	M
	Maxi-pointer 4.5" case (not available with Safety glass)	M
	NACE (for sour gas applications, not available in Bronze case)	N
	CRN (Canadian Registration Number, aluminum or SS body only)	Q
	Safety glass (4.5" aluminum case only)	S
	Oxygen cleaning	T
	Stainless steel tag with SS wire	U
	Stainless steel tag with SS screw	V
	Wall mount kit (not available with Back Connections or C & D electrical options)	W
	Special	Z
SWITCH	No electrical options required (standard)	O
	1 switch in standard enclosure with grommet wire seal	A
	2 switches in standard enclosure with grommet wire seal	B
	1 switch in standard enclosure with 1/4" NPTF electrical connection & NEMA 4X	C
	2 switches in standard enclosure with 1/4" NPTF electrical connection & NEMA 4X	D
	1 switch and Differential pressure gauge in NEMA 4X plastic enclosure (not available with End connections)	G
	2 switch and Differential pressure gauge in NEMA 4X plastic enclosure (not available with End connections)	H
	1 switch in standard enclosure with DIN plug connector (DIN43650 IP65)	L
	2 switches in standard enclosure with DIN plug connector (DIN43650 IP65)	M
	Special	Z
ELECTRICAL	No electrical options required (standard)	O
	SPDT 3W, 0.25A 125VAC / VDC, adjustable range 10-90%	A
	SPDT 60W, 3.0A 240VAC / VDC, Normally open, adjustable range 25-95%	E
	SPDT 60W, 3.0A 240VAC / VDC, Normally closed, adjustable range 25-95%	F
	SPDT 60W, 3.0A 240VAC / VDC, 1 x Normally open 1 x Normally closed, adjustable range 25-95%	G
	SPDT 60W, 1.0A 240VAC / VDC, adjustable range 25-100 (price per switch)	H
	Special	Z
DIFF. RANGE	Minimum differential range 0/5psid (example) - Maximum differential range 0/110psid - Maximum system pressure of 3,000 or 5,000 or 6,000psi (based on above)	0 0 5 psid

Series Number (for custom, non-standard product)

P R D - ☐ - ☐ - ☐ - ☐ - ☐ - ☐ - ☐ - ☐ ☐ ☐ ☐

SERIES		
TYPE	Aluminum body / Stainless steel, Ceramic & Acetal moving components (Max system pressure 1,000 psi)	A
	Acetal (plastic) body / Stainless steel, Ceramic & Acetal moving components (Max system pressure 500 psi)	P
	Stainless steel body / Stainless steel, Ceramic & Acetal moving components (Max system pressure 1,000 psi)	S
	Special	Z
DIAL SIZE	2.5" Round Uni-directional dial, plastic case (standard)	A
	Special	Z
SEAL	Buna-N (standard)	0
	FKM	1
	Special	Z
CONNECTION	1/4" NPTF End / In-line (standard)	2
	Special	Z
OPTIONS	Two (2) 10-32 mounting holes, spaced 1.75" apart x 0.330" deep	E
	Special	Z
SWITCH	No electrical options required (standard)	O
	1 switch in standard enclosure with DIN plug connector (DIN43650 IP65), NENA 4X	L
	Special	Z
ELECTRICAL	No electrical options required (standard)	O
	SPDT 60W, 3.0A 240VAC / VDC, Normally open, adjustable range 40-95%	E
	Special	Z
	Minimum differential range 0/5psid (example) - Maximum differential range 0/50psid - Maximum system pressure of 500psi or 1,000psi (based on above)	0 0 5 psid

Small Convoluted Diaphragm Gauge (High Static Pressure Differential)

Series Number (for custom, non-standard product)

P S D - ☐ - ☐ - ☐ - ☐ - ☐ - ☐ - ☐ - ☐ ☐ ☐

SERIES TYPE	Aluminum body / Stainless Steel internal parts, Buna-N diaphragm & seals, PTFE guide bushings, 1/4" NPTF back connections & engineered plastic gauge case (Max system pressure 3,000 psi)	A
	Brass body / Stainless Steel internal parts, Buna-N diaphragm & seals, PTFE guide bushings, 1/4" NPTF back connections & engineered plastic gauge case (Max system pressure 1,500 psi)	B
	Stainless steel body / Stainless steel internal parts, Buna-N diaphragm & seals, PTFE guide bushings, 1/4" NPTF back connections & engineered plastic gauge case (Max system pressure 3,000 psi)	S
	Special	Z
DIAL SIZE	2.5" Round (standard)	A
	4.5" Round	C
	3.5" Round anodized aluminum case	E
	4.5" Round anodized aluminum case	G
	Special	Z
SEAL	Buna-N (standard)	0
	Viton	1
	Silicone	2
	Ethylene Propylene	5
	Special	Z
CONNECTION	1/4" NPTF Back connections (standard)	0
	1/4" NPTF top & bottom connections (non-electrical option units only)	2
	1/4" NPTF Bottom connections	3
	7/16"-20 SAE straight thread O-ring (back connections)	4
	1/2" NPTF End / In-line connections (Max system pressure 2,000 psi)	7
	1/2" NPTF End / In-line connections (Max system pressure 2,000 psi)	8
	Special	Z
OPTIONS	No additional options required (standard)	O
	Reversed High / Low process connections, not available with switch options T & W	A
	Two (2) 1/4 - 20 mounting holes	E
	Carbon steel 2" pipe mounting kit (not available for reversed port switch option)	F
	Stainless steel 2" pipe mounting kit (not available for reversed port switch option)	G
	1/2" NPTF stainless steel adapters (not available with End / In-line connections)	K
	Glycerin filled 2.5" case (not available with Safety glass or Maxi-pointer)	L
	Glycerin filled 4.5" case (not available with Safety glass or Maxi-pointer)	L
	Maxi-pointer 2.5" case (not available with Safety glass)	M
	Maxi-pointer 4.5" case (not available with Safety glass)	M
	NACE (for sour gas applications, available in Aluminum or SS body only)	N
	CRN (Canadian Registration Number, available in Aluminum or SS body only)	Q
	Safety glass (4.5" aluminum case only)	S
	Oxygen cleaning	T
	Stainless steel tag with SS wire	U
	Stainless steel tag with SS screw	V
	Wall mount kit	W
	Diaphragm seal assembly	X
	Special	Z
SWITCH	No electrical options required (standard)	O
	1 Reed switch in NEMA 4X / IP66 enclosure	A
	2 Reed switches in NEMA 4X / IP66 enclosure	B
	4/20mA transmitter in NEMA 4X / IP66 enclosure	T
	Special	Z
ELECTRICAL	No electrical options required (standard)	O
	SPDT 3W, 0.25A 125VAC / VDC	A
	SPDT 25W, 0.5A 230VAC / VDC, Normally open	B
	4/20mA transmitter, 8/28 VDC loop power, 2% accuracy ascending from 20-100% of scale	T
	Special	Z
	Minimum differential range 0/25psid (example) - Maximum differential range 0/100psid - Maximum system pressure of 3,000 or 1,500psi (based on above)	0 2 5 psid

Series Number (for custom, non-standard product)

P V D - [ ][ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ][ ][ ]

SERIES TYPE	Stainless Steel internal metal parts (Max system pressure 300 psi) glass reinforced engineered plastic body, two x 1/4" carbon steel compression fittings	P C
	Aluminum body, stainless Steel internal metal parts (Max system pressure 500 psi) dual 1/4" NPTF connections top & bottom	A C
	Brass body, stainless Steel internal metal parts (Max system pressure 500 psi) dual 1/4" NPTF connections top & bottom	B C
	Stainless steel body, stainless Steel internal metal parts (Max system pressure 500 psi) dual 1/4" NPTF connections top & bottom	S C
	Hastelloy-C body, Hastelloy-C internal metal parts (Max system pressure 500 psi) dual 1/4" NPTF connections top & bottom (+/- 5% ascending accuracy)	H C
DIAL SIZE	4.5" Round dial, plastic case	C
	3.5" Round dial, anodized aluminum case	E
	4.5" Round dial, anodized aluminum case	G
	Special	Z
SEAL	Buna-N (standard)	0
	FKM 0/20"H2O to 0/400"H2O	1
	Silicone 0/5"H2O to 0/100"H2O	2
	Neoprene 0/5"H2O to 0/100"H2O	3
	Ethylene Propylene 0/20"H2O to 0/400"H2O	5
	Special	Z
CONNECTION	1/4" carbon steel compression tube fittings (2) for above model P or 1/4" NPTF (4) for above models A, B or S	0
	1/4" stainless steel compression tube fittings (2)	1
	1/4" NPTF brass adapters (2) for above model P only	2
	1/4" NPTF stainless steel adapters (2) for above model P only	3
	Special	Z
OPTIONS	No additional options required (standard)	O
	Drain & bleed plugs, stainless steel (2), above model P only	B
	Drain & bleed in NEMA 4X enclosure	D
	Pipe mounting kit, carbon steel	F
	Pipe mounting kit, stainless steel	G
	Hastelloy-C internal wetted metal parts and fittings, poly body only	H
	1/2" NPTF stainless steel adapters (2), available on above models A, B & S only	K
	Maxi-pointer	M
	NACE (for sour gas applications, not available in Bronze case)	N
	CRN (Canadian Registration Number, aluminum or SS body only)	Q
	Safety glass (4.5" aluminum case only)	S
	Oxygen cleaning	T
	Stainless steel tag with SS wire	U
	Stainless steel tag with SS screw	V
	Wall mount kit (not available with Switches)	W
	Special	Z
SWITCH	No electrical options required (standard)	O
	1 Reed switch with condulet enclosure	H
	2 Reed switches with condulet enclosure	I
	1 Reed switch with condulet enclosure and plug-in connector (DIN 43650)	J
	2 Reed switches with condulet enclosure and plug-in connector (DIN 43650)	K
	1 switch in NEMA 4X plastic enclosure	L
	2 switches in NEMA 4X plastic enclosure	M
	Special	Z
ELECTRICAL	No electrical options required (standard)	O
	SPDT 3W, 0.25A 125VAC / VDC, adjustable range 10-90%	A
	Special	Z

Minimum differential range 0/5"H2O (example) - Maximum differential range 0/400"H2O - Maximum system pressure 300psi or 500psi — 0 0 5 "H2O

PAG 3A Premium Pharmaceutical & Sanitary Gauge

Description & Features:

- Designed for food, beverage & dairy and pharmaceutical applications
- ±0.75% full scale value accuracy
- Food grade glycerin filling standard
- Re-zero feature standard
- Crack/breakage-resistant polycarbonate lens standard
- Clean-In-Place design
- Steam-In-Place design
- Autoclavable
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Designed for all sanitary applications including food & beverage, dairy, pharmaceutical and biotechnical
- Built to withstand the harshest of sanitary applications and where 3A approval is required
- For gas, air, liquid, pasty or powdery media

Specifications	
Dial	2.5” (63mm), 4” (100mm) aluminum
Case	304 SS, polished
Repeatability	0.25% of full scale value
Linearity	0.25% of full scale value
Lens	3/16” thick polycarbonate
Over-range Capability	50% of full scale
Hysteresis	0.25% of full scale
CIP Temperature Limit	250°F (121°C) continuous
SIP Temperature Limit	300°F (149°C) 1 hour, dry
Bourdon Tube	316L SS, welded
Socket	316L SS, welded
Storage Temperature	-22°F to 195°F (-30°C to 91°C)
Temperature Effect	Less than 0.16% per 10°F (5.5°C) change in process or ambient temperature
Actuating Fill	Food grade glycerin standard (Mineral oil, silicone and Neobee-20 optional)
Case Fluid	Food grade glycerin standard (Dry, mineral oil, silicone and Neobee-20 optional)
Pulsation Dampening	Standard
Re-zero Feature	Externally adjustable micrometer pointer
Wetted Parts	316L SS, Ra = 8 microinches
Bezel	304 SS, polished
Ambient Temperature	40°F to 140°F (4°C to 60°C)
Process Temperature	0°F to 250°F (-18°C to 121°C)
Accuracy	±0.75% of full scale value

Order Codes

Dial Size	2.5" (63mm)				4" (100mm)			
Tri-Clamp® Connection	1.5" (40mm) Bottom	1.5" (40mm) Back	2" (50mm) Bottom	2" (50mm) Back	1.5" (40mm) Bottom	1.5" (40mm) Back	2" (50mm) Bottom	2" (50mm) Back
30"/0/30 psi/bar	PAG15798	PAG15798B	PAG20798	PAG20798B	PAG151021	PAG151021B	PAG201021	PAG201021B
30"/0/60 psi/bar	PAG15799	PAG15799B	PAG20799	PAG20799B	PAG151022	PAG151022B	PAG201022	PAG201022B
30"/0/100 psi/bar	PAG15791	PAG15791B	PAG20791	PAG20791B	PAG151023	PAG151023B	PAG201023	PAG201023B
30"/0/150 psi/bar	PAG15793	PAG15793B	PAG20793	PAG20793B	PAG151025	PAG151025B	PAG201025	PAG201025B
30"/0/200 psi/bar	PAG15794	PAG15794B	PAG20794	PAG20794B	PAG151026	PAG151026B	PAG201026	PAG201026B
30"/0/300 psi/bar	PAG15795	PAG15795B	PAG20795	PAG20795B	PAG151027	PAG151027B	PAG201027	PAG201027B
0/30 psi/bar	PAG15802	PAG15802B	PAG20802	PAG20802B	PAG15602	PAG15602B	PAG20602	PAG20602B
0/60 psi/bar	PAG15803	PAG15803B	PAG20803	PAG20803B	PAG15603	PAG15603B	PAG20603	PAG20603B
0/100 psi/bar	PAG15804	PAG15804B	PAG20804	PAG20804B	PAG15604	PAG15604B	PAG20604	PAG20604B
0/160 psi/bar	PAG15805	PAG15805B	PAG20805	PAG20805B	PAG15605	PAG15605B	PAG20605	PAG20605B
0/200 psi/bar	PAG15806	PAG15806B	PAG20806	PAG20806B	PAG15606	PAG15606B	PAG20606	PAG20606B
0/300 psi/bar	PAG15807	PAG15807B	PAG20807	PAG20807B	PAG15607	PAG15607B	PAG20607	PAG20607B
0/600 psi/bar	PAG15808	PAG15808B	PAG20808	PAG20808B	PAG15608	PAG15608B	PAG20608	PAG20608B

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.
Autoclavable option available on 4" (100mm) dry only.

Dial	A	B1 Tri-Clamp® Bottom	B2 Tri-Clamp® Back	C
2.5"	2.5" (63mm)	3 13/16" (96.8mm)	2 5/8" (66.8mm)	1 5/16" (33.3mm)
4"	4" (100mm)	5 7/16" (138.2mm)	3 7/16" (87.4mm)	1 15/16" (49.3mm)

Tri-Clamp® is a registered trade mark of Tri-Clover

PSQ 3A All-Purpose Quality Sanitary Gauge

Description & Features:

- Quality series for all sanitary gauge systems
- Food grade glycerin filling standard
- Electro-polish finish
- Industrial grade polycarbonate lens standard
- Clean-In-Place and steam-in-place design
- 0.75”, 1.5” and 2” Tri-Clamp® connection bottom and back
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Designed for all sanitary applications including food & beverage, dairy, pharmaceutical and biotechnical
- Built to withstand the harshest of sanitary applications and where 3A approval is required
- For gas, air, liquid, pasty or powdery media

Specifications	
Dial	2.5” (63mm), 4” (100mm) aluminum
Case	304 SS, polished
Bezel	304 SS, polished
Lens	Polycarbonate
Over Pressure Limit	25% up to 600 psi (41 bar) 15% over 600 psi (41 bar)
CIP Temperature Limit	250°F (121°C) continuous
SIP Temperature Limit	266°F (130°C) 1 hour, dry
Bourdon Tube	316 SS
Socket	316 SS
Movement	304 SS
Enclosure Rating	IP65/NEMA 4X
System Fill	Food grade glycerin standard (Mineral oil, silicone and Neobee-20 optional)
Case Fill	Food grade glycerin standard (Dry, mineral oil, silicone and Neobee-20 optional)
Re-zero Feature	Adjustable micrometer pointer (4” (100mm) dial only)
Wetted Parts	316L SS, Ra = 8 microinches
Ambient Temperature	Glycerin filled: 40°F to 150°F (4°C to 65°C)
Process Temperature	0°F to 250°F (-18°C to 121°C)
Accuracy	2.5” (63mm): ±1.5% of full scale 4” (100mm): ±1.0% of full scale
Agency Compliance	3A standard 74-06

Order Codes (products in bold are normally stock in North America)

Dial Size	2.5” (63mm)						4” (100mm)			
Tri-Clamp® Connection	0.75” (20mm) Bottom	0.75” (20mm) Back	1.5” (40mm) Bottom	1.5” (40mm) Back	2” (50mm) Bottom	2” (50mm) Back	1.5” (40mm) Bottom	1.5” (40mm) Back	2” (50mm) Bottom	2” (50mm) Back
30” Hg Vac/bar	PSQ34797	PSQ34797B	PSQ15797	PSQ15797B	PSQ20797	PSQ20797B	PSQ15202	PSQ15202B	PSQ20120	PSQ20120B
30”/0/30 psi/bar	PSQ34798	PSQ34798B	PSQ15798	PSQ15798B	PSQ20798	PSQ20798B	PSQ151021	PSQ151021B	PSQ201021	PSQ201021B
30”/0/60 psi/bar	PSQ34799	PSQ34799B	PSQ15799	PSQ15799B	PSQ20799	PSQ20799B	PSQ151022	PSQ151022B	PSQ201022	PSQ201022B
30”/0/100 psi/bar	PSQ34791	PSQ34791B	PSQ15791	PSQ15791B	PSQ20791	PSQ20791B	PSQ151023	PSQ151023B	PSQ201023	PSQ201023B
30”/0/150 psi/bar	PSQ34793	PSQ34793B	PSQ15793	PSQ15793B	PSQ20793	PSQ20793B	PSQ151025	PSQ151025B	PSQ201025	PSQ201025B
30”/0/200 psi/bar	PSQ34794	PSQ34794B	PSQ15794	PSQ15794B	PSQ20794	PSQ20794B	PSQ151026	PSQ151026B	PSQ201026	PSQ201026B
30”/0/300 psi/bar	PSQ34795	PSQ34795B	PSQ15795	PSQ15795B	PSQ20795	PSQ20795B	PSQ151027	PSQ151027B	PSQ201027	PSQ201027B
0/30 psi/bar	PSQ34802	PSQ34802B	**PSQ15802**	PSQ15802B	PSQ20802	PSQ20802B	PSQ15602	PSQ15602B	PSQ20602	PSQ20602B
0/60 psi/bar	PSQ34803	PSQ34803B	**PSQ15803**	PSQ15803B	PSQ20803	PSQ20803B	PSQ15603	PSQ15603B	PSQ20603	PSQ20603B
0/100 psi/bar	PSQ34804	PSQ34804B	**PSQ15804**	PSQ15804B	PSQ20804	PSQ20804B	PSQ15604	PSQ15604B	PSQ20604	PSQ20604B
0/160 psi/bar	PSQ34805	PSQ34805B	**PSQ15805**	PSQ15805B	PSQ20805	PSQ20805B	PSQ15605	PSQ15605B	PSQ20605	PSQ20605B
0/200 psi/bar	PSQ34806	PSQ34806B	**PSQ15806**	PSQ15806B	PSQ20806	PSQ20806B	PSQ15606	PSQ15606B	PSQ20606	PSQ20606B
0/300 psi/bar	PSQ34807	PSQ34807B	PSQ15807	PSQ15807B	PSQ20807	PSQ20807B	PSQ15607	PSQ15607B	PSQ20607	PSQ20607B
0/600 psi/bar	PSQ34808	PSQ34808B	PSQ15808	PSQ15808B	PSQ20808	PSQ20808B	PSQ15608	PSQ15608B	PSQ20608	PSQ20608B
0/1,000 psi/bar	PSQ34809	PSQ34809B	PSQ15809	PSQ15809B	PSQ20809	PSQ20809B	PSQ15609	PSQ15609B	PSQ20609	PSQ20609B

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.

2.5” Bottom Connection 0.75” Tri-Clamp®

2.5” Bottom Connection 1.5” Tri-Clamp®

2.5” Bottom Connection 2” Tri-Clamp®

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2.5” Back Connection 0.75” Tri-Clamp®

2.5” Back Connection 1.5” Tri-Clamp®

2.5” Back Connection 2” Tri-Clamp®

4” Bottom Connection 1.5” Tri-Clamp®

4” Bottom Connection 2” Tri-Clamp®

4” Back Connection 1.5” Tri-Clamp®

4” Back Connection 2” Tri-Clamp®

Description & Features:

- Economical 2” (50mm) gauge with built-in safety features
- Safety blowout back steel case
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Beverage dispensing, regulators and tanks.
- Low pressures are used on the down stream side of a regulator. High pressures are used for measuring cylinder gas or tank pressures

Specifications	
Dial	1.5” (40mm), 2” (50mm)
Case	Steel with blowout back, painted black
Lens	Acrylic
Ring	Steel, painted black
Socket	Brass
Connection	1/8” NPT or 1/4” NPT, bottom or back
Bourdon Tube	Brass
Movement	Brass
Pointer	Aluminum, painted black
Over-pressure Limit	25% of full scale value
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	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Order Codes

Dial Size	1.5” (40mm)	2” (50mm)	
Connection	1/8” Back	1/8” Back	1/4” Bottom
0/30 psi	PCG9014	-	PCG9020
0/60 psi	PCG9015	-	PCG9021
0/100 psi	-	PCG9017	PCG9022
0/160 psi	PCG9016	PCG9018	PCG9023
0/300 psi	-	PCG9019	PCG9024
0/2,000 psi	-	-	PCG9025
0/3,000 psi	-	-	PCG9026

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.

1.5” Back Connection

2” Back Connection

Description & Features:

- Small diameter, all stainless steel gauge
- 1.5” (40mm) and 2” (50mm) dials
- Full view snap-in lens
- Back and bottom connection
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Regulators, valve positioners and actuators that require a reliable and corrosion-resistant pressure gauge

Specifications	
Dial	1.5” (40mm), 2” (50mm) white aluminum with black and red markings
Case	304 SS
Lens	Acrylic, snap-in type
Socket	316 SS
Connection	1/8” NPT or 1/4” NPT standard
Bourdon Tube	316 SS
Movement	304 SS
Pointer	Aluminum, painted black
Welding	Silver alloy
Over-pressure Limit	25% of full scale value
Working Pressure	Maximum 75% of full scale value
Ambient/Process Temperature	-40°F to 150°F (-40°C to 65°C)
Accuracy	±2.5% of full scale value
Enclosure Rating	IP52

Order Codes (products in bold are normally stock in North America)

Dial Size	1.5” (40mm)		2” (50mm)			
Connection	1/8” Bottom	1/8” Back (CB)	1/8” Bottom	1/8” Back (CB)	1/4” Bottom	1/4” Back (CB)
30”/0/15 psi/kPa	-	-	-	-	PRL017	PRL026
30”/0/60 psi/kPa	-	-	-	PRL040	PRL018	PRL027
30”/0/100 psi/kPa	-	-	-	-	PRL019	PRL028
30”/0/160 psi/kPa	-	-	-	-	PRL020	PRL029
0/30 psi/kPa	PRL001	**PRL005**	PRL009	PRL013	PRL021	PRL030
0/60 psi/kPa	PRL002	PRL006	PRL010	PRL014	PRL022	PRL031
0/100 psi/kPa	PRL003	PRL007	PRL011	PRL015	PRL023	PRL032
0/160 psi/kPa	PRL004	PRL008	PRL012	PRL016	PRL024	PRL033
0/200 psi/kPa	-	-	-	-	PRL042	-
0/400 psi/kPa	-	-	-	-	PRL036	-
0/600 psi/kPa	-	-	-	-	-	PRL034
0/3,000 psi/kPa	PRL038	PRL041	-	-	PRL025	PRL035
0/5,000 psi/kPa	-	PRL039	-	-	-	-

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.

1.5” Bottom Connection

1.5” Back Connection

2” Bottom Connection

2” Back Connection

LISTED

Description & Features:

- Reliable, small diameter, low profile gauge
- 1” (25mm) to 1.5” (40mm) sizes
- 1/8” NPT socket
- Direct drive (no linkages or hairsprings) eliminating premature failure from the gear and movement
- Safety over-pressure port on the lens
- “Use No Oil” for use in oxygen service
- ASME B40.100 compliant
- CRN registered
- UL listed for 1.25” and 1.5” gauges
- 5 year warranty

Applications:

- Commonly used on portable pneumatic equipment such as compressors, hand-held sprayers, pressurized recreational guns, oxygen tanks and regulators, pumps and fire extinguishers

1.25” (32mm) and 1.5” (40mm)
UL252A Recognized - Low pressures up to 1,000 psi, Listing No. MH25761
UL404 Listed - High pressures - 0 to 3,000 psi, Listing No. SA12053
Note: Non-UL Listed PSP gauges also available

Specifications	
Dial	1” (25mm), 1.125” (30mm), 1.25” (32mm) or 1.5” (40mm) white aluminum with black markings
Case	1” (25mm): Nickel plated brass Others: 304 SS
Lens	Plexiglass
Spiral/Socket	60 to 2,000 psi: Brass 3,000 psi and above: 304 SS
Connection	1/8” NPT standard, back
Pointer	2,000 psi and below: Brass 3,000 psi and above: 304 SS
Over-pressure Limit	10% of full scale value 25% of full scale value (0-3,000 psi, UL404 listed)
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	IP65
Warning (brass internals only)	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Order Codes*

Dial Size	1” (25mm)	1.125” (30mm)	1.25” (32mm)	1.5” (40mm)
0/60 psi	-	PSP115060	PSP125060	PSP150060
0/100 psi	PSP10100	PSP1150100	PSP1250100	PSP1500100
0/160 psi	PSP10160	PSP1150160	PSP1250160	PSP1500160
0/200 psi	PSP10200	PSP1150200	PSP1250200	PSP1500200
0/300 psi	PSP10300	PSP1150300	PSP1250300	PSP1500300
0/600 psi	PSP10600	PSP1150600	PSP1250600	PSP1500600
0/1,000 psi	PSP101000	PSP11501000	PSP12501000	PSP15001000
0/1,500 psi	PSP101500	PSP11501500	PSP12501500	PSP15001500
0/2,000 psi	PSP102000	PSP11502000	PSP12502000	PSP15002000
0/3,000 psi	PSP103000	PSP11503000	PSP12503000	PSP15003000
0/4,000 psi	PSP104000	PSP11504000	PSP12504000	PSP15004000
0/5,000 psi	PSP105000	PSP11505000	PSP12505000	PSP15005000

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.
For options, attach suffix to end of order code: i.e. PSP15001500-1.5BOOT for 1.5” PROTECTIVE BOOT

Option suffix:
1.25BOOT = 1.25” (32mm) Protective rubber boot
1.5BOOT = 1.5” (40mm) Protective rubber boot
*Minimum order quantity required

1” Spiral Hex Tube Gauge

1.125” Spiral Tube Gauge

1.25” Spiral Tube Gauge

1.5” Spiral Tube Gauge

Description & Features:

- Economical, non-sparking brass case gauge
- 1.5” (40mm), 2” (50mm) and 2.5” (63mm) brass case
- “USE NO OIL” on dial
- Brass socket
- Threaded-on polycarbonate lens
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Welding tank regulators or manifolds, beverage dispensing regulators and other pressurized tanks
- Used on the down stream side of a regulator and high pressure of cylinder gases

Specifications	
Dial	1.5” (40mm), 2” (50mm), 2.5” (63mm) white aluminum with black and red markings
Case	Brass, polished
Lens	Polycarbonate, threaded
Socket	Brass
Connection	1.5” (40mm) dial: 1/8” NPT bottom, 2” (50mm), 2.5” (63mm): 1/4” NPT bottom
Bourdon Tube	Phosphor bronze
Movement	Brass
Pointer	Aluminum, painted black
Welding	Silver alloy
Over-pressure Limit	25% of full scale value
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	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Note: Also see PCG Compressed Gas Gauge for more choices

Order Codes (products in bold are normally stock in North America)

Dial Size	1.5” (40mm)	2” (50mm)	2.5” (63mm)
Connection	**1/8” Bottom**	**1/4” Bottom**	**1/4” Bottom**
0/30 psi/kPa	PWL2620	**PWL2720**	PWL2820
0/60 psi/kPa	PWL2621	PWL2721	PWL2821
0/100 psi/kPa	PWL2622	**PWL2722**	PWL2822
0/160 psi/kPa	-	PWL2723	-
0/200 psi/kPa	PWL2624	**PWL2724**	PWL2824
0/400 psi/kPa	PWL2626	**PWL2726**	PWL2826
0/600 psi/kPa	PWL2627	PWL2727	-
0/3,000 psi/kPa	-	PWL2731	-
0/4,000 psi/kPa	PWL2632	**PWL2732**	**PWL2832**

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.

2” Bottom Connection

2.5” Bottom Connection

Description & Features:

- To measure pressure and temperature of most ammonia systems
- ±0.5% to ±3-2-3% accuracy available
- 2.5” (63mm) to 10” (250mm) dial sizes
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Used to display pressure and temperature on refrigeration systems

RoHS compliant

Note: RoHS applies to SS internals only

Specifications	Accuracy: ±0.5% to ±1%	Accuracy: ±1.5%	Accuracy: ±3-2-3%
Dial	4” (100mm), 6” (150mm), 8.5” (215mm), 10” (250mm): White aluminum with black and red markings	2.5” (63mm), 3.5” (90mm), 4” (100mm): White aluminum with black and red markings	2.5” (63mm), 4” (100mm): White aluminum with black and red markings
Case	4” (100mm), 6” (150mm): AISI 304 SS 8.5” (215mm), 10” (250mm): Aluminum case	2.5” (63mm), 4” (100mm): AISI 304 SS 3.5” (90mm): Steel, painted black	2.5” (63mm), 4” (100mm): Steel, painted black
Lens	Polycarbonate	Polycarbonate	Polycarbonate
Ring	4” (100mm), 6” (150mm): 304 SS 8.5” (215mm), 10” (250mm): Aluminum	2.5” (63mm), 4” (100mm): 304 SS 3.5” (90mm): Steel painted black	2.5” (63mm), 4” (100mm): Steel painted black
Socket	316L SS	316L SS	2.5” (63mm): Steel 4” (100mm): Nickel plated steel
Connection	1/4” NPT	1/4” NPT	1/4” NPT
Bourdon Tube	316L SS, drawn seamless	316L SS, drawn seamless	316 SS
Movement	304 SS	304 SS	304 SS
Pointer	Aluminum, anodized black, micrometer adjustable	Aluminum, anodized black	Aluminum, anodized black
Welding	TIG	TIG	TIG
Over-pressure Limit	30% of full scale value	30% of full scale value	30% of full scale value
Working Pressure	Maximum 75% of full scale value	Maximum 75% of full scale value	Maximum 75% of full scale value
Ambient/Process Temperature	Dry: -40°F to 150°F (-40°C to 65°C) Glycerin filled: -4°F to 150°F (-20°C to 65°C)	Dry: -40°F to 150°F (-40°C to 65°C) Glycerin filled: -4°F to 150°F (-20°C to 65°C)	Dry: -40°F to 150°F (-40°C to 65°C)
Accuracy	4” (100mm), 6” (150mm): ±1% ANSI/ASME Grade 1A 8.5” (215mm), 10” (250mm): ±0.5% ANSI/ASME Grade 2A	±1.5% of full scale value	±3-2-3% ANSI/ASME Grade B
Enclosure Rating	2.5” (63mm), 4” (100mm), 6” (150mm): IP65 8.5” (215mm), 10” (250mm): IP52	IP65	IP52

Order Codes (products in bold are normally stock in North America)

	Accuracy: ±0.5% to ±1%		Accuracy: ±1.5%		Accuracy: ±3-2-3%	
Dial Size	**30/0/150 psi/°F**	**30/0/300 psi/°F**	**30/0/150 psi/°F**	**30/0/300 psi/°F**	**30/0/150 psi°/F**	**30/0/300 psi/°F**
2.5” (63mm) Bottom	-	-	**PAM1750**	**PAM1751**	**PAM1699**	PAM1700
2.5” (63mm) Back (CB)	-	-	PAM1752	PAM1753	-	-
3.5” (90mm) Bottom	-	-	PAM1717	**PAM1818**	-	-
4” (100mm) Bottom	PAM1705	PAM1706	**PAM1701**	**PAM1702**	PAM1695	PAM1696
4” (100mm) Back (LB)	PAM1708	PAM1709	-	-	-	-
4” (100mm) Back (CB)	-	-	PAM1703	PAM1704	PAM1697	PAM1698
6” (150mm) Bottom	PAM1710	PAM1711	-	-	-	-
8.5” (215mm) Bottom	PAM1712	PAM1713	-	-	-	-
10” (250mm) Bottom	PAM1714	PAM1715	-	-	-	-

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes. Glycerin fill available (except on 3.5” (90mm), 8.5” (215mm), 10” (250mm) dials, and gauges with a ±3-2-3% accuracy). Front/back flange and u-clamp available.

2.5” Bottom Connection

2.5” Back Connection

4” Bottom Connection

4” Back Connection

6” Bottom Connection

8.5” Bottom Connection with Back Flange

PAM with Accuracy ±1.5%
3.5” Bottom Connection

4” Bottom Connection

4” Back Connection

PAM with Accuracy ±3-2-3%
2.5” Bottom Connection

4” Bottom Connection

4” Back Connection

PAL Altitude Gauge

Description & Features:

- Premium aluminum case gauge designed to read head pressure
- Stainless steel or brass wetted parts
- PSI and Feet of Water scales
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Used to indicate liquid level in tank or stand pipe, etc.
- Economical alternative for level measurement

Specifications	Stainless Steel Internals	Brass Internals
Dial	4.5” (115mm)	4.5” (115mm)
Case	Aluminum, painted black	Aluminum, painted black
Front Flange	SS, polished	SS, polished
Back Flange	Steel, painted black	Steel, painted black
Lens	Glass	Glass
Ring	SS, polished	SS, polished
Socket	316L SS	Brass
Connection	1/4” NPT or 1/2” NPT standard	1/4” NPT or 1/2” NPT standard
Bourdon Tube	316L SS	Phosphor bronze
Movement	SS	Brass
Pointer	Aluminum, anodized black, micrometer adjustable	Aluminum, anodized black, micrometer adjustable
Welding	316L SS TIG Argonarc	Tin/copper alloy
Over-pressure Limit	30% of full scale value	30% of full scale value
Working Pressure	Maximum 75% of full scale value	Maximum 75% of full scale value
Ambient/Process Temperature	-40°F to 150°F (-40°C to 65°C)	-40°F to 150°F (-40°C to 65°C)
Accuracy	±0.5% ANSI/ASME Grade 2A	±0.5% ANSI/ASME Grade 2A
Enclosure Rating	IP52	IP52
Warning (brass internals only)	N/A	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Order Codes

Dial Size	4.5” (115mm)	
Movement, Socket, Tube	Brass	SS
0/35 ft/water	PAL6008ALT	PAL6033ALT
0/70 ft/water	PAL6009ALT	PAL6034ALT
0/140 ft/water	PAL6010ALT	PAL6035ALT
0/230 ft/water	PAL6011ALT	PAL6036ALT
0/370 ft/water	PAL6012ALT	PAL6037ALT
0/460 ft/water	PAL6013ALT	PAL6038ALT
0/690 ft/water	PAL6014ALT	PAL6039ALT

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes. **For options, attach suffix to end of order code: i.e. PAL6036ALT-B for BACK CONNECTION**

Option suffix:
300BF = Back flange
B = Back connection
MAXI45 = Maximum adjustable pointer available
MS = Monel® socket and tube
OST = Over stop protection
SFC = Solid front safety case
SG-45 = 4.5” (115mm) Safety glass lens
UST = Under stop protection

4.5” Bottom Connection with Standard Back Flange

Monel® is a registered trademark of Inco Alloys International

PFE Sprinkler Gauge

Description & Features:

- Specially designed for fire sprinkler systems
- Suitable for air and water media
- Corrosion resistant case
- Dual scales (psi/kpa, psi/bar, psi/kg/cm^2) and single scale (psi) pressure ratings
- Approved by Factory Mutual (FM) and listed by Underwriter Laboratory (UL-393), USA and Canada
- Internal pointer over-travel stop
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Ideally suited for fire sprinkler systems and fire fighting equipment
- Suitable for non-clogging and non-corrosive media

Specifications	
Dial	3.5” (90mm), white aluminum with black and red markings
Case	Black plastic
Lens	Polycarbonate, threaded
Socket	Brass
Connection	1/4” NPT standard, bottom (1/4” bspt bottom option)
Bourdon Tube	Phosphor bronze
Movement	Brass
Pointer	Aluminum, black
Welding	Silver Alloy
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% ASME Grade B
Enclosure Rating	IP52
Warning	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Order Codes (products in bold are normally stock in North America)

Product	Air	Water	Air/Water
0/80/retard/250 psi	**PFE3932R1**	-	-
0/300 psi	-	**PFE3933R1**	**PFE3935R1**
0/80/retard/250 psi/kPa	**PFE3932**	-	-
0/300 psi/kPa	-	**PFE3933**	**PFE3935**
0/80/retard/250 psi/bar	PFE3932R1R11	-	-
0/300 psi/bar	-	PFE3933R1R11	PFE3935R1R11
0/80/retard/250 psi/kg/cm^2	PFE3932R1R3	-	-
0/300 psi/kg/cm^2	-	PFE3933R1R3	PFE3935R1R3

Option suffix: BSPT - 1/4” BSPT process connection

Description & Features:

- 2.5” (63mm) to 6” (150mm) durable gauges
- 2.5” (63mm) dial has a blue or red coloured case for easy identification
- Dual scale (psi/°F)
- Flutterless movement on the 2.5” (63mm)
- Chlorofluorocarbon (CFC) temperature scales (R-12, R-22 & R-502)
- Brass internals
- 1/4” NPT standard
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Refrigeration equipment and refrigeration recovery equipment
- Suitable for non-clogging and non-corrossive media

Specifications	
Dial	2.5” (63mm), 4” (100mm), 6” (150mm): White aluminum
Case	2.5” (63mm): Plastic, colour coded, blue for low pressure and red for high pressure 4” (100mm), 6” (150mm): Steel, painted black
Lens	2,5” (63mm): Plexiglass, threaded 4” (100mm), 6” (150mm): Glass
Ring	2.5” (63mm): SS, crimped 4” (100mm): Brass, polished 6” (150mm): Steel, painted black
Connection	1/8” NPT or 1/4” NPT standard
Restrictor Screw	Standard
Recalibrator Screw	Standard
Bourdon Tube	2.5” (63mm): Phosphor bronze, vibration free (flutterless movement) 4” (100mm), 6” (150mm): Phosphor bronze
Pointer	Aluminum, anodized black
Welding	#50 tin solder
Over-pressure Limit	25% of full scale value
Scale	psi/ºF (R-12/R-22/R-502)
Working Pressure	Maximum 75% of full scale value
Ambient/Process Temperature	-40°F to 158°F (-40°C to 70°C)
Accuracy	2.5” (63mm): ±2% of full scale value 4” (100mm), 6” (150mm): ±1% ANSI/ASME Grade 1A
Enclosure Rating	IP52
Warning (brass internals only)	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Order Codes

Dial Size	2.5” (63mm)	4” (100mm)	6” (150mm)
Case Material	Plastic	Steel	
Connection	1/8” Bottom	1/4” Bottom	1/4” Bottom
30”/0/120 psi (retard 250)	**PFG1730**	PFG1734	PFG1738
30”/0/300 psi	PFG1731	PFG1735	PFG1739
0/500 psi	PFG1732	PFG1736	PFG1740

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.
Blister packaging available.

2.5” Bottom Connection

4” Bottom Connection

6” Bottom Connection

1. Bottom Connection
2. Back Connection

Description & Features:

- Highly accurate reading of low pressures
- Brass or stainless steel wetted parts
- Ranges from 15" H_2O/oz to 10 psi
- Over-pressure protection on some models (OP)
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Suitable for measuring gaseous media both corrosive and non-corrosive
- Used to measure natural gas pressure as well as air flow indication and leak detection
- Vacuum pumps, air compressors, air filters, gas burners, vacuum ovens, suction regulators and respirators

Specifications	Stainless Steel Internals	Brass Internals
Dial	2.5" (63mm), 4" (100mm), 4.5" (115mm) and 6" (150mm), white aluminum with black and red markings	2.5" (63mm), 4" (100mm), 4.5" (115mm) and 6" (150mm), white aluminum with black and red markings
Case	2.5" (63mm), 4" (100mm): AISI 304 SS 4.5" (115mm), 6" (150mm): Aluminum, painted black	2.5" (63mm), 4" (100mm): Steel, painted black 4.5" (115mm), 6" (150mm): Cast aluminum, painted black
Lens	2.5" (63mm): Polycarbonate 4" (100mm): Styrene-acrylonitrile resin 4.5" (115mm), 6" (150mm): Glass	2.5" (63mm), 4" (100mm): Polycarbonate 4.5" (115mm), 6" (150mm): Glass
Ring	2.5" (63mm), 4" (100mm): No ring 4.5" (115mm), 6" (150mm): Aluminum	2.5" (63mm): No ring 4" (100mm): Steel 4.5" (115mm), 6" (150mm): Aluminum
Socket	AISI 316 SS	Brass; 2.5' dial with restrictive orifice
Connection	1/4" NPT standard	1/4" NPT standard
Diaphragm Element	AISI 316 SS	Phosphor bronze
Movement	AISI 316 SS	2.5" (63mm): Engineering plastic upper and lower plate with brass pinion and sector; 4" (100mm), 4.5" (115mm), 6" (150mm): Brass
Pointer	Aluminum, anodized black	Aluminum, anodized black; 2.5' dial with pointer adjustment screw
Welding	TIG	Solder/brazed
Working Pressure	75% of full scale value	60% of full scale value (fluctuating) 75% of full scale value (static)
Over-pressure Limit	30% of full scale value	30% of full scale value, up to 200% with over-pressure protection (OP) option
Ambient/Process Temperature	-40°F to 150°F (-40°C to 65°C)	-40°F to 150°F (-40°C to 65°C)
Accuracy	±1.6% of full scale	±3-2-3% ANSI/ASME Grade B
Enclosure Rating	IP52	IP52
Warning (brass internals only)	N/A	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

PLP Low Pressure Gauge

Order Codes (products in bold are normally stock in North America)

Dial Size	2.5" (63mm)			4" (100mm)				4.5" (115mm)			
Case Material	Steel		SS	Steel			SS	Aluminum			
Connection	1/4" Bottom	1/4" Back (CB)	1/4" Bottom	1/4" Bottom	1/4" Back (CB)	1/4" Back (CB)	1/4" Bottom	1/4" Bottom	1/4" Back (CB)	1/4" Bottom	1/4" Back (CB)
Capsule, Movement, Socket	Brass		SS	Brass		SS		Brass		SS	
0/15" water (vac)	PLP300V	PLP340V	PLP350V	PLP310V	PLP4230V	PLP4240V	PLP4200V	PLP4250V	PLP4290V	PLP4260V	PLP4300V
0/32" water (vac)	PLP301V	PLP341V	PLP351V	PLP311V	PLP4231V	PLP4241V	PLP4201V	PLP4251V	PLP4291V	PLP4261V	PLP4301V
0/55" water (vac)	PLP302V	PLP342V	PLP352V	PLP312V	PLP4232V	PLP4242V	PLP4202V	PLP4252V	PLP4292V	PLP4262V	PLP4302V
0/100" water (vac)	**PLP304V**	PLP343V	PLP353V	PLP313V	PLP4233V	PLP4243V	PLP4203V	PLP4253V	PLP4293V	PLP4263V	PLP4303V
0/200" water (vac)	**PLP303V**	-	PLP356V	-	-	-	-	-	-	-	-
0/15" water/oz	**PLP300**	**PLP340**	PLP350	PLP310	PLP4230	PLP4240	PLP4200	PLP4250	PLP4290	PLP4260	PLP4300
0/32" water/oz	**PLP301**	**PLP341**	PLP351	**PLP311**	PLP4231	PLP4241	PLP4201	PLP4251	PLP4291	PLP4261	PLP4301
0/55" water/oz	**PLP302**	**PLP342**	PLP352	PLP312	PLP4232	PLP4242	PLP4202	PLP4252	PLP4292	PLP4262	PLP4302
0/100" water/oz	**PLP304**	**PLP343**	PLP353	PLP313	PLP4233	PLP4243	PLP4203	PLP4253	PLP4293	PLP4263	PLP4303
0/200" water/oz	**PLP303**	PLP346	PLP356	PLP316	PLP4236	PLP4246	PLP4206	PLP4256	PLP4296	PLP4266	PLP4306
0/5 psi/kPa	**PLP305**	**PLP344**	PLP354	PLP314	PLP4234	PLP4244	PLP4204	PLP4254	PLP4294	PLP4264	PLP4304
0/10 psi/kPa	**PLP306**	PLP345	PLP355	PLP315	PLP4235	PLP4245	PLP4205	PLP4255	PLP4295	PLP4265	PLP4305

Dial Size	6" (150mm)			
Case Material	Aluminum			
Connection	1/4" Bottom	1/4" Back (CB)	1/4" Bottom	1/4" Back (CB)
Capsule, Movement, Socket	Brass		SS	
0/15" water (vac)	PLP4310V	-	PLP4320V	-
0/32" water (vac)	PLP4311V	-	PLP4321V	-
0/55" water (vac)	PLP4312V	-	PLP4322V	-
0/100" water (vac)	PLP4313V	-	PLP4323V	-
0/15" water/oz	PLP4310	-	PLP4320	PLP4360
0/32" water/oz	PLP4311	PLP4351	PLP4321	PLP4361
0/55" water/oz	PLP4312	-	PLP4322	-
0/100" water/oz	PLP4313	PLP4353	PLP4323	PLP4363
0/200" water/oz	PLP4316	-	PLP4326	-
0/5 psi/kPa	PLP4314	PLP4354	PLP4324	PLP4364
0/10 psi/kPa	PLP4315	PLP4355	PLP4325	PLP4365

Dial Size	2.5" (63mm)
Case Material	Steel
Connection	1/4" Bottom
Capsule, Movement, Socket	Brass w/Over-pressure protection
0/5 psi/kPa	PLP305OP
0/8 psi/kPa	**PLP307OP**
0/10 psi/kPa	PLP306OP

Description	Code
Test Block Only	EGT

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes. **For options, attach suffix to end of order code: i.e. PLP340-UC for U-CLAMP**

Option suffix:

3Y = 4" (100mm) PBT Enclosure
LPBF = Back flange (all sizes except 2.5" (63mm))
LPFF = 4.5" (115mm) Front flange
LPFF6 = 6" (150mm) Front flange
UC = 2.5" (63mm) U-clamp

2.5" Bottom Connection Brass

2.5" Back Connection Brass

4” Bottom Connection Brass

4” Back Connection Brass

4.5” Bottom Connection Stainless Steel

4.5” Back Connection Stainless Steel with Front Flange

6” Bottom Connection Stainless Steel

6” Back Connection Stainless Steel with Front Flange

Test Block

PET, PET-LF — Economy Test Gauge, Lead Free Economy Test Gauge

1. Gas Test Gauge
2. Water Test Gauge

Description & Features:

- Economical pressure gauge and valve body assembly used for pressure testing
- Bleed port and plated housing on the gas test assembly
- Swivel hose adaptor on the Water Test Gauge
- Black steel case
- Brass or lead free brass wetted parts
- Dual scale (PSI/kPa)
- ±3-2-3% accuracy
- ASME B40.100 compliant
- CRN registered
- Lead free version NSF-61-372 certified
- 5 year warranty

Applications:

- Residential & commercial pressure testing of natural gas, air and water lines
- Lead free version for potable water systems
- Suitable for non-clogging and non-corroding media

Specifications	
Dial	2” (50mm), 2.5” (63mm) white aluminum with black and red markings
Case	Steel painted black
Lens	PETG: Polycarbonate PETM, PETM-LF, PETW, PETW-LF: Acrylic
Ring	Steel, painted black
Bourdon Tube	PET: Phosphor bronze PET-LF: Lead free phosphor bronze, NSF-61-372 certified
Movement	PET: Brass, PET-LF: SS
Pointer	Aluminum, black
Connection	PETG: 3/4” NPTF PETM, PETM-LF, PETW, PETW-LF: 3/4” female swivel hose connection
Maximum Pointer	Available on Water Test Gauge only
Welding	#50 tin solder
Gas Test Ambient/Process Temperature	-40°F to 150°F (-40°C to 65°C)
Water Test Ambient/Process Temperature	32°F to 150°F (0°C to 65°C)
Working Pressure	Maximum 75% of full scale value
Accuracy	±3-2-3% ANSI/ASME Grade B
Enclosure Rating	IP52
Warning	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

PET Order Codes (products in bold are normally stock in North America)

Product	Gas Test Gauge	Water Test Gauge	Maximum Pointer Water Test Gauge
Dial Size	2” (50mm)	2.5” (63mm)	2.5” (63mm)
Connection	Adapts to 3/4” NPTF	3/4” Female Swivel Hose Connection	3/4” Female Swivel Hose Connection
0/15 psi	**PETG201**	-	-
0/30 psi/kPa	**PETG202**	-	-
0/60 psi/kPa	**PETG203**	-	-
0/100 psi/kPa	**PETG204**	-	-
0/160 psi/kPa	**PETG205**	**PETW213**	**PETM213**
0/300 psi/kPa	-	**PETW217**	**PETM217**

PET-LF Order Codes (products in bold are normally stock in North America)

Product	Water Test Gauge	Maximum Pointer Water Test Gauge
Dial Size	2.5” (63mm)	2.5” (63mm)
Connection	3/4” Female Swivel Hose Connection	3/4” Female Swivel Hose Connection
0/160 psi/kPa	PETW213LF	**PETM213LF**
0/300 psi/kPa	PETW217LF	**PETM217LF**

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.

2” Gas Test Gauge

2.5” Water Test Gauge

PGTK Gas Line Test Kit

Description & Features:

- Highly accurate reading of low pressures
- Brass wetted parts
- Adjustable red set pointer
- Built in over pressure protection
- Restricted orifice
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Suitable for measuring low pressure gas media
- Used to measure natural gas pressure as well as air flow indication and leak detection
- Low pressure pumps, air compressors, air filters, gas burners, ovens, regulators and respirators

Specifications	
Dial	Dial 4” (100mm), white aluminum dial with black, blue and red markings
Case	Steel, painted black
Lens	Lens Polycarbonate with adjustable red set pointer
Ring	Steel
Socket	Brass
Connection	1/4” NPTM gauge with 3/4” NPTF x M8x0.8 chrome plated test block
Diaphragm Element	Phosphor bronze
Movement	Brass
Pointer	Aluminum, anodized black
Welding	Solder/brazed
Working Pressure	60% of full scale value (fluctuating) 75% of full scale value (static)
Overload Protection	2X full scale value
Ambient/Process Temperature	-40°F to 150°F (-40°C to 65°C)
Accuracy	±1% Grade 1A
Enclosure Rating	IP52
Warning	**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Order Codes (products in bold are normally stock in North America

Pressure Range	Code
0/6 psi/Hg	**PGTK314CM.**
0/15 psi/Hg	**PGTK315CM.**

Gauge

Test Block

Description & Features:

- Low and high pressure gauge kit in a protective plastic blow molded case
- Re-zero with external recalibration screw
- Plastic blow molded case for added durability
- Sleek design featuring secure latch
- Pump and fitting for simplified and quick connections
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Portable leak and loss of pressure detection unit for gas and water lines

Specifications	Gas Test Gauge (1)	Water Test Gauge (2)
Dial	2.5” (63mm) white aluminum with black markings	2” (50mm) white aluminum with black marking
Case/Ring	Steel, painted black with steel ring	Steel, painted black
Lens	Polycarbonate snap in	Polycarbonate
Connection	Rubber hand pump with hose and mini ball valve with handle and 1/2” NPTF x 1/4” NPTF test block and1/2” NPTM x 1/2” NPTM nipple	3/4” NPTF x M8x0.8 test block with cap
Pressure Range	0/5 psi	0/160 psi
Movement	Engineered plastic upper and lower plate with brass pinion and secto	Brass
Pointer	Aluminum, anodized black	Aluminum, black
Ambient Temperature	-40ºF to 150ºF (-40ºC to 65ºC)	-40ºF to 150ºF (-40ºC to 65ºC)
Accuracy	±3-2-3% ANSI/ASME Grade B	±3-2-3% ANSI/ASME Grade B
Enclosure Rating	IP52	IP52
Case	Plastic blow molded (11.875” x 18”)	
Warning	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.	

Order Codes (products in bold are normally stock in North America

Kit	Additional Hand Pump
Case PGWT0100	**PHPT0100**

PLPT Low Pressure Gas Test Kit

Description & Features:

- Low presseure gauge kit in a protective plastic blow molded case
- Re-zero with external recalibration screw
- Plastic blow molded case for added durability
- Sleek design featuring secure latch
- Pump and fittings for simplified and quick connections
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Portable leak and loss of pressure detection unit for gas lines

Especificações do Manômetro	
Mostrador	Alumínio branco de 2,5” (63 mm) com marcações pretas
Caixa/Anel	Aço, pintado de preto com anel de aço
Visor	Encaixe de policarbonato
Conexão	Bomba manual de borracha com mangueira e mini válvula de esfera com alça e teste de bloqueio de 1/2 ”NPTF x 1/4” NPTF e bocal de 1/2 ”NPTM x 1/2” NPTM, 1/2 ”NPTF x 3/4” NPTM adaptador e adaptador NPTF de 3/4 ”x 1” NPTM
Mecanismo	Placa superior e inferior de plástico projetado
Ponteiro	Alumínio anodizado preto
Temperatura Ambiente	-40ºF a 150ºF (-40ºC a 65ºC)
Precisão	±3-2-3% ANSI/ASME Grau B
Índice de Proteção	IP52
Maleta	Plástico moldado (11.875” x 18”)
Aviso	⚠ **AVISO:** O uso deste produto pode expô-lo a vários elementos químicos, incluindo o chumbo, reconhecido pelo Estado da Califórnia como uma possível causa de câncer, defeitos congênitos ou danos no sistema reprodutivo. Para mais informações, acesse www.P65Warnings.ca.gov

Especificações da Caixa e Acessórios	
Bomba de mão e mangueira	Mangueira de borracha de 10 ”com bomba manual
Válvula Mini Esfera	Válvula da série SMV com corpo de latão forjado 1/4 “NPTF x 1/4” NPTM
Teste de Bloqueio	Aço cromado
Acessórios	Conexão de pressão com braçadeira fácil de instalar
Bico	Aço carbono 1/2” NPTM
Peças	Aço carbono 1/2” NPTF x 3/4” NPTM e 3/4” NPTF x 1” NPTM
Aviso	⚠ **AVISO:** O uso deste produto pode expô-lo a vários elementos químicos, incluindo o chumbo, reconhecido pelo Estado da Califórnia como uma possível causa de câncer, defeitos congênitos ou danos no sistema reprodutivo. Para mais informações, acesse www.P65Warnings.ca.gov

Códigos de Ordem (os produtos em negrito normalmente possuem estoque nos EUA)

Intervalo de Pressão	Código
0/5 psi	**PLPT0005**

Description & Features:

- Low pressure gauge built into protective case for ease in use and durability
- Sensitive diaphragm gauge available in 3 pressure ranges
- Re-zero with external recalibration screw (PLT35 only)
- Easier to use than a manometer
- Plastic blow molded case for added durability
- Sleek design featuring secure latch
- Facilitates safe handling
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Test kit for low pressure gas installations
- Suitable for non-clogging and non-corroding media

Gauge Specifications	
Dial	2.5” (63mm), white aluminum with red and black markings
Case/Ring	Steel, painted black
Lens	Polycarbonate
Connection	Brass hose barb (1/4”) (gear clamp included)
Diaphragm Element	Phosphor bronze
Movement	Engineering plastic upper and lower plate with brass pinion and sector, with zero adjustment*
Ambient Temperature	-40°F to 150°F (-40°C to 65°C)
Accuracy	±3-2-3% ANSI/ASME Grade B
Enclosure Rating	IP52
Warning	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Case and Accessory Specifications	
Tube Nipple	Rubber: 0.256” (6.5mm) ID x 0.472” (12mm) OD x 1.339” (34mm) 1/4” NPTM x 1/4” hose barb
Case Material	Plastic blow molded: 5.75” x 8.25” (146mm x 210mm)
Hose Tube	Rubber: 3’ (91cm) in length; 0.197” (5mm) ID x 0.315” (8mm) OD
Accessory	Easy to install clamp

Order Codes (products in bold are normally stock in North America)

Pressure Range	Code
0/15" water / 0/8 oz/in^2	PLT15
0/35" water / 0/20 oz/in^2	**PLT35**
0/100" water / 0/58 oz/in^2	PLT100

PTK Pressure and Temperature Kit

Kit Contents
1. Gauge
2. Gauge Adaptor
3. Bimetal Pocket Thermometer 0°F to 250°F (-17°C to 121°C)
4. Bimetal Pocket Thermometer -40°F to 160°F (-40°C to 71°C)
5. Carrying Case

Description & Features:

- A portable kit with durable carrying case to protect the test instruments between uses and test locations
- Includes two thermometers for high or low temperature tests
- Pressure gauge includes secondary adjustable set pointer to assist the operator in pressure test evaluations
- Hardened stainless steel gauge adaptor probe for test plug insertion
- Eliminates the need for costly, permanently installed pressure gauges or recording devices
- Multi-scale (psi/ft H_2O/kPa/meters H_2O) pressure gauge dial face for acceptance in a variety of applications
- CRN registered
- 5 year warranty

Applications:

- To determine pressure or temperature levels where test plugs are installed in the process
- Used at start-up or periodic testing of pipelines or pressure vessels
- Chilled and hot water systems, refrigeration and hydronics, pneumatics, prototype equipment, new building construction, building maintenance

Specifications	
Case	Black plastic with custom cut foam inserts for parts
Pressure Gauge	3.5” (90mm) dial, brass wetted, 0-100 psi/Ft H_2O/kPa/meters H_2O, 1/4” NPT bottom with attached gauge adaptor ±2-1-2% ANSI/ASME Grade A, red stationary pointer
Gauge Adaptor (picture #2)	1.75” (45mm) x 0.125” (3mm) SS probe with 1/4” NPTF swivel gauge fitting
Thermometer (picture #3)	1” (25mm) dial, 5” (127mm) x 0.142” (4mm) stem, includes plastic sheath ±1% accuracy Range: 0°F to 250°F (-17°C to 121°C)
Thermometer (picture #4)	1” (25mm) dial, 5” (127mm) x 0.142” (4mm) stem, includes plastic sheath ±1% accuracy Range: -40°F to 160°F (-40°C to 71°C)
Warning	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Order Codes

Kit Code
PTK1500

Code	Specifications Pressure Gauge
P9S90223R99STAT	3.5”, 1/4 NPT bottom, 0/100 psi

Note: Contact Winters for gauges under 500 psi

Code	Specifications Gauge Adaptor
STP003	2.75” x 1.75” x 0.125” probe

Optional Adaptor: STP004 = 2.25” x 1.75” x 0.125” probe

Bimetal Pocket Thermometer		
Product Code	Temperature Range	Specifications
TBM10050B15	-40°F to 160°F only	1” dial, 5” stem
TBM10050B19	0°F to 250°F only	1” dial, 5” stem

Optional Pocket Thermometers:
TBM10050B14 = -40° to 120°F (F only)
TBM10050B17 = 0° to 200°F (F only)
TBM10050B22 = 50° to 550°F (F only)
TBM10050B4 = -40° to 160°F (Dual scale)
TBM10050B8 = 0° to 250°F (Dual scale)
TBM10050B11 = 50° to 550°F (Dual scale)
TBM10050B12 = 150 to 750°F (Dual scale)
TBM10050B31 = -20° to 120°C (C only)
TBM10050B33 = 0° to 200°C (C only)

Thermometer Selection Guide

	Series	Dial Size								Scale Size					Case Material					Wetted Parts		Connec-tion Size			Accuracy						
Catalogue Page		≤2"	2.5"	3"	3.5"	4"	4.5"	5"	≥6"	4.5"	5"	6"	8"	9"	Steel	SS	Aluminum	Valox®*	Plastic	Brass	SS	1/4" NPT	1/2" NPT	3/4" NPT	1% (Grade A)	2% (Grade B)	2.5% (Grade B)	3% (Grade B)	With thermowell	RoHS compliant	Lead Free Option
195	TAG HVAC Gold Case Thermometer									x		x					x			x	x		x			x			x		
197	TAS/TAS-LF Industrial/Lead Free Industrial 5" Thermometer										x								x	x			x			x			x	x	x
199	TBM Bi-Metal Thermometer	x		x		x		x	x							x					x	x	x		x					x	
204	TBT HVAC Bi-Metal Thermometer				x										x					x			x			x					
205	TCT Clamp-On Thermometer		x												x													x			
206	THR HVAC Remote Reading Thermometer	x	x													x				x							x				
208	THS Solar Digital Bi-Metal Thermometer			x												x					x		x		x					x	
209	TIM/TIM-LF Industrial/Lead Free Industrial 9" Thermometer													x			x	x		x				x	x				x	x	x
211	TMT Surface Magnet Thermometer	x													x											x					
212	TNR Food & Beverage Bi-Metal Thermometer			x												x					x		x		x					x	
213	TRR Gas or Vapour Remote Reading Thermometer		x		x	x	x		x						x	x	x			x	x		x	x	x	x				x	
219	TSD Industrial Solar Digital									x									x	x				x	x				x	x	
221	TSW/TSW-LF Hot Water/Lead Free Hot Water Thermometer	x	x										x		x		x			x			x		x				x		x
223	TTD Tridicator		x	x											x					x		x	x					x			

Valox® is a registered trademark of the General Electric Company

Note: When selecting a thermometer, always refer to ASME B40.200 (2008)

Description & Features:

- Available in 4.5” (115mm) or 6” (150mm) scales
- Brass socket 1/2” NPT is standard (stainless steel optional)
- Available in either a straight model (bottom connection) or 90° angle model (back connection)
- ASME B40.200 and ASTM E2251 compliant
- 5 year warranty

Applications:

- Heating, plumbing, air conditioning and ventilation applications

Specifications	
Scale	Aluminum, black markings
Case	4.5” (115 mm), 6” (150 mm) aluminum, anodized gold
Tube	Glass, cushioned
Liquid Filling	Organic liquid red (other colors available)
Stem	Brass (SS optional)
Connection	1/2” NPT (1/2” BSP optional)
Swivel Nut	Brass (SS optional; swivel and stem one unit)
Ambient/Process Temperature	-40°F to 400°F (-40°C to 204°C)
Operating Temperature	Maximum 80% of full scale value recommended
Accuracy	±2% of full scale
Enclosure Rating	IP65
Warning	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Order Codes

	Straight		Angle	
Range	**4.5” (110mm)**	**6” (150mm)**	**4.5” (110mm)**	**6” (150mm)**
-40°F to 110°F & -40°C to 40°C	TAG130AG4	TAG130AG6	TAG140AG4	TAG140AG6
20°F to 180°F & -5°C to 80°C	TAG131AG4	TAG131AG6	TAG141AG4	TAG141AG6
30°F to 240°F & 0°C to 115°C	TAG132AG4	TAG132AG6	TAG150AG4	TAG150AG6
30°F to 300°F & 0°C to 150°C	TAG134AG4	TAG134AG6	TAG143AG4	TAG143AG6
50°F to 400°F & 10°C to 210°C	TAG133AG4	TAG133AG6	TAG142AG4	TAG142AG6

Other ranges and connection sizes available upon request. 304 SS thermowell available upon request.

TAG HVAC Gold Case Thermometer

Angle

Straight

Dimensions

Case Height (H)	Stem Length (L1)	L (Angle)	L (Straight)
4.5” (114mm)	2” (50.8mm)	3.69” (93.7mm)	7.17” (182.1mm)
6” (152.4mm)			8.67” (220.2mm)

Description & Features:

- An all-purpose, economical thermometer with a vertical sensing tube and case
- Separable brass, lead free brass or stainless steel thermowell
- Impact resistant ABS case
- Red liquid-in glass
- Dual scale (°F & °C)
- Straight or angle connection
- 1/2” NPT process connection
- ASME B40.200 and ASTM E2251 compliant
- 5 year warranty

Applications:

- Hot water lines, boilers, heating, ventilation and air conditioning
- Lead free version for potable water systems

LEAD FREE

RoHS compliant

Note: RoHS applies only to SS thermowell

Specifications	
Scale	Aluminum, painted white with black markings
Case	5” (127mm) black ABS
Lens	Glass
Tube	Glass, cushioned
Sensing Liquid	Kerosene, tinted red (other colors available)
Stem	Brass
Thermowell	TAS: Brass 1/2” NPT standard, (3/4” and SS optional) TAS-LF: Lead free brass 1/2” NPT (3/4” optional)
Operating Pressure	Maximum 710 psi (4,895 kPa)
Ambient Temperature	-40°F to 122°F (-40°C to 50°C)
Process Temperature	-40°F to 400°F (-40°C to 204°C)
Accuracy	±2% of full scale
Enclosure Rating	IP50
Warning	**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

TAS, TAS-LF

Industrial 5” Thermometer, Lead Free Industrial 5” Thermometer

TAS Order Codes (products in bold are normally stock in North America)

Range	Straight	Angle
-40°F to 110°F & -40°C to 40°C	**TAS130**	**TAS140**
20°F to 180°F & -5°C to 80°C	**TAS131**	**TAS141**
30°F to 240°F & 0°C to 115°C	**TAS132**	**TAS150**
30°F to 300°F & 0°C to 150°C	TAS134	**TAS143**
50°F to 400°F & 10°C to 200°C	TAS133	TAS142

Thermowell

Connection	Material	Code
1/2“ NPT - Standard (Included with thermometer)	Brass	TAS62
1/2“ NPT - Optional	304 SS	TAS62-1
3/4“ NPT - Optional	Brass	TAS64
3/4“ NPT - Optional	304 SS	TAS64-1

TAS-LF Order Codes (products in bold are normally stock in North America)

Range	Straight	Angle
-40°F to 110°F & -40°C to 40°C	TAS130LF	TAS140LF
20°F to 180°F & -5°C to 80°C	TAS131LF	TAS141LF
30°F to 240°F & 0°C to 115°C	TAS132LF	**TAS150LF**
30°F to 300°F & 0°C to 150°C	TAS134LF	TAS143LF
50°F to 400°F & 10°C to 200°C	TAS133LF	TAS142LF

Thermowell (products in bold are normally stock in North America)

Connection	Material	Code
1/2“ NPT - Standard (Included with thermometer)	Brass	**TAS62LF**
3/4“ NPT - Optional	Brass	TAS64LF

Other ranges and connection sizes available upon request. 304 SS thermowell available upon request. Plastic lens available upon request. 3/4” NPT connection available upon request.

Straight

Angle

RoHS compliant

Description & Features:

- A general purpose, versatile 1” (25mm) to 6” (150mm) dial, 304 stainless steel thermometer
- Bi-metallic sensing element for reliable readings
- Back, bottom or adjustable angle connection
- Welded stem length from 2.5” (63mm) and up
- ±1% accuracy
- Anti-parallax dial that reduces operator reading errors (3” (75mm)-6” (150mm))
- Recalibrator screw is standard on all dial sizes
- Use with TBR or TWF thermowells
- ASME B40.200 compliant
- 5 year warranty

Applications:

- Industrial process, heating and air conditioning, ventilation and waste water
- Commercial installations such as barbecues, home brewing systems and cooking devices

Specifications	
Dial	1” (25mm), 2” (50mm): Aluminum with black markings, flat dial 3” (75mm), 4” (100mm), 5” (127mm), 6” (150mm): Aluminum with black markings, anti-parallax dial
Case	AISI 304 SS
Stem	AISI 304 SS welded to socket, centre back, bottom or adjustable angle configurations (316 SS optional*) 1” (25mm), 2” (50mm) dial: Centre back connection only
Recalibrator Screw	Standard
Lens	1” (25mm): Polycarbonate Others: Glass standard, hermetically sealed
Ring	AISI 304 SS
Connection	1” (25mm): None 2” (50mm): 1/4” NPT standard 3” (75mm), 4” (100mm), 5” (127mm), 6” (150mm): 1/2” NPT standard
Sensing Element	Bi-metallic coil
Pointer	Aluminum, painted black
Maximum Operating Pressure	125 psi (861 kPa)
Operating Temperature	75% of full scale value (recommended maximum)
Ambient Temperature	-58°F to 248°F (-50°C to 120°C)
Accuracy	±1% of full scale
Enclosure Rating	2” (50mm) to 6” (150mm): IP68, 1” (25mm): IP52

*Contact Winters for 316 SS requirements
Note: The use of a thermowell is recommended to protect the thermometer in corrosive or pressure applications, as well as to maintain a closed system during its removal from the process

Order Codes (products in bold are normally stock in North America)

1” (25mm) Dial, Fixed Centre Back	
Temperature Range	5” Stem Length Code
-40°F to 160°F	**TBM10050B15**
0°F to 250°F	**TBM10050B19**
50°F to 500°F&C	**TBM10050B11**

2” (50mm) Dial, Fixed Centre Back		
Temperature Range	2.5” Stem Length Code	4” Stem Length Code
-40°F to 120°F&C	TBM20025B2	-
0°F to 200°F&C	**TBM20025B6**	-
0°F to 240°F&C	-	TBM20040B7
0°F to 250°F&C	**TBM20025B8**	**TBM20040B8**
50°F to 300°F&C	**TBM20025B9**	-
50°F to 400°F&C	TBM20025B10	-
50°F to 500°F&C	**TBM20025B11**	-

3” (75mm) Dial, Fixed Centre Back				
Temperature Range	2.5” Stem Length Code	4” Stem Length Code	6” Stem Length Code	9” Stem Length Code
-40°F to 120°F&C	**TBM30025B2**	-	TBM30060B2	-
0°F to 140°F&C	**TBM30025B3**	-	-	-
-40°F to 160°F&C	**TBM30025B4**	-	-	-
0°F to 200°F&C	**TBM30025B6**	**TBM30040B6**	**TBM30060B6**	-
20°F to 240°F&C	**TBM30025B7**	**TBM30040B7**	**TBM30060B7**	-
0°F to 250°F	TBM30025B19	**TBM30040B19**	-	-
0°F to 250°F&C	**TBM30025B8**	**TBM30040B8**	**TBM30060B8**	**TBM30090B8**
50°F to 300°F&C	**TBM30025B9**	**TBM30040B9**	**TBM30060B9**	TBM30090B9
50°F to 400°F&C	TBM30025B10	**TBM30040B10**	TBM30060B10	-
50°F to 500°F&C	**TBM30025B11**	**TBM30040B11**	**TBM30060B11**	TBM30090B11
150°F to 750°F&C	-	-	**TBM30060B12**	TBM30090B12
200°F to 1,000°F&C	-	-	**TBM30060B13**	-

3” (75mm) Dial, Bottom		
Temperature Range	2.5” Stem Length Code	4” Stem Length Code
0°F to 200°F	**TBM31025B17**	-
0°F to 200°F&C	TBM31025B6	-
0°F to 250°F&C	TBM31025B8	-
20°F to 240°F&C	TBM31025B7	TBM31040B7
50°F to 500°F&C	-	TBM31040B11

3” (75mm) Dial, Adjustable Angle		
Temperature Range	2.5” Stem Length Code	4” Stem Length Code
0°F to 200°F&C	TBM32025B6	TBM32040B6
0°F to 250°F&C	**TBM32025B8**	**TBM32040B8**
50°F to 300°F&C	**TBM32025B9**	-

5” (127mm) Dial, Fixed Centre Back				
Temperature Range	2.5” Stem Length Code	4” Stem Length Code	6” Stem Length Code	9” Stem Length Code
-40°F to 120°F&C	TBM50025B2	-	TBM50060B2	TBM50090B2
0°F to 140°F&C	TBM50025B3	-	-	-
20°F to 240°F&C	TBM50025B7	-	-	-
0°F to 250°F&C	**TBM50025B8**	**TBM50040B8**	-	-
50°F to 300°F&C	TBM50025B9	**TBM50040B9**	**TBM50060B9**	-
50°F to 500°F&C	TBM50025B11	-	**TBM50060B11**	-
150°F to 750°F&C	-	TBM50040B12	TBM50060B12	-

5” (127mm) Dial, Adjustable Angle				
Temperature Range	2.5” Stem Length Code	4” Stem Length Code	6” Stem Length Code	9” Stem Length Code
0°F to 140°F&C	**TBM52025B3**	**TBM52040B3**	**TBM52060B3**	-
-40°F to 160°F&C	-	-	TBM52060B4	-
0°F to 200°F&C	-	TBM52040B6	-	-
20°F to 240°F&C	TBM52025B7	-	-	-
0°F to 250°F&C	**TBM52025B8**	**TBM52040B8**	**TBM52060B8**	TBM52090B8
50°F to 300°F&C	-	**TBM52040B9**	-	-

Order Codes: To order, specify the code for each dial/stem length and the range: i.e. TBM20025 - B26

Dial Size	Stem Length	Fixed Centre Back	Bottom	Adjustable Angle
1" (25mm) pocket thermometer	5" (127mm)	TBM10050	-	-
2" (50mm) lab thermometer	8" (200mm)	TBM20080	-	-
2" (50mm)	2.5" (63mm)	TBM20025	-	-
	4" (100mm)	TBM20040	-	-
	6" (150mm)	TBM20060	-	-
	9" (230mm)	TBM20090	-	-
	12" (300mm)	TBM20120	-	-
	15" (370mm)	TBM20150	-	-
3" (75mm)	2.5" (63mm)	TBM30025	TBM31025	TBM32025
	4" (100mm)	TBM30040	TBM31040	TBM32040
	6" (150mm)	TBM30060	TBM31060	TBM32060
	9" (230mm)	TBM30090	TBM31090	TBM32090
	12" (300mm)	TBM30120	TBM31120	TBM32120
	15" (370mm)	TBM30150	TBM31150	TBM32150
4" (100mm)	2.5" (63mm)	TBM40025	TBM41025	TBM42025
	4" (100mm)	TBM40040	TBM41040	TBM42040
	6" (150mm)	TBM40060	TBM41060	TBM42060
	9" (230mm)	TBM40090	TBM41090	TBM42090
	12" (300mm)	TBM40120	TBM41120	TBM42120
	15" (370mm)	TBM40150	TBM41150	TBM42150
5" (127mm)	2.5" (63mm)	TBM50025	TBM51025	TBM52025
	4" (100mm)	TBM50040	TBM51040	TBM52040
	6" (150mm)	TBM50060	TBM51060	TBM52060
	9" (230mm)	TBM50090	TBM51090	TBM52090
	12" (300mm)	TBM50120	TBM51120	TBM52120
	15" (370mm)	TBM50150	TBM51150	TBM52150
6" (150mm)	2.5" (63mm)	TBM60025	TBM61025	TBM62025
	4" (100mm)	TBM60040	TBM61040	TBM62040
	6" (150mm)	TBM60060	TBM61060	TBM62060
	9" (230mm)	TBM60090	TBM61090	TBM62090
	12" (300mm)	TBM60120	TBM61120	TBM62120
	15" (370mm)	TBM60150	TBM61150	TBM62150

°F & °C (Dual)	Code	°F only	Code	°C only	Code	°C & °F (Dual)	Code
-100°F to 150°F & -70°C to 70°C	B1	-40°F to 120°F	B14	-80°C to 50°C	B26	-30°C to 70°C & -20°F to 150°F	B75
-40°F to 120°F & -40°C to 50°C	B2	-40°F to 160°F	B15	-50°C to 50°C	B27	0°C to 120°C & 30°F to 250°F	B76
0°F to 140°F & -20°C to 60°C	B3	0°F to 140°F	B16	0°C to 50°C	B28	0°C to 300°C & 30°F to 570°F	B77
-40°F to 160°F & -40°C to 70°C	B4	0°F to 200°F	B17	-50°C to 100°C	B29	0°C to 200°C & 30°F to 400°F	B79
25°F to 125°F & - 5°C to 50°C	B5	20°F to 240°F	B18	0°C to 100°C	B30	0°C to 250°C & 30°F to 480°F	B80
0°F to 200°F & -20°C to 90°C	B6	0°F to 250°F	B19	-20°C to 120°C	B31	0°C to 50°C & 30°F to 120°F	B81
20°F to 240°F & - 5°C to 115°C	B7	50°F to 300°F	B20	0°C to 150°C	B32	-20°C to 60°C & -4°F to 140°F	B85
0°F to 250°F & -20°C to 120°C	B8	50°F to 400°F	B21	0°C to 200°C	B33	-	-
50°F to 300°F & 10°C to 150°C	B9	50°F to 550°F	B22	0°C to 300°C	B34	-	-
50°F to 400°F & 10°C to 200°C	B10	150°F to 750°F	B23	0°C to 450°C	B35	-	-
50°F to 500°F & 10°C to 260°C	B11	0°F to 800°F	B24	100°C to 550°C	B36	-	-
150°F to 750°F & 70°C to 400°C	B12	200°F to 1,000°F	B25	0°C to 500°C	B39	-	-
200°F to 1,000°F & 100°C to 550°C	B13	14°F to 140°F	B38	-10°C to 60°C	B40	-	-
14°F to 140°F & -10°C to 60°C	B37	-	-	100°C to 400°C	B41	-	-
32°F to 212°F & 0°C to 100°C	B52	-	-	100°C to 540°C	B42	-	-
32°F to 140°F & 0°C to 60°C	B84	-	-	-30°C to 70°C	B45	-	-
-60°F to 300°F & -50°C to 150°C	B86	-	-	20°C to 120°C	B46	-	-
-	-	-	-	-30°C to 170°C	B47	-	-
-	-	-	-	0°C to 120°C	B48	-	-
-	-	-	-	0°C to 400°C	B49	-	-
-	-	-	-	0°C to 250°C	B50	-	-
-	-	-	-	20°C to 60°C	B51	-	-
-	-	-	-	0°C to 60°C	B82	-	-

Other ranges, stem lengths and connection sizes available upon request. For glycerin fill, maximum temperature limit is 300°F (150°C). Silicone fill available.

Option suffix for above order code only:

AP3 = 3" (75mm) acrylic lens
AP4 = 4" (100mm) acrylic lens
AP5 = 5" (127mm) acrylic lens
AP6 = 6" (150mm) acrylic lens
BG3 = 3" (75mm) glycerin filling
BG4 = 4" (100mm) glycerin filling
BG5 = 5" (127mm) glycerin filling
BG6 = 6" (150mm) glycerin filling
DUCT = Aluminum duct flange
RSP4 = 4" (100mm) Red set pointer
RSP5 = 5" (127mm) Red set pointer
RSP6 = 6" (150mm) Red set pointer
SCK = Socket conversion kit
SPG3 = 3" (75mm) Shatterproof glass lens
SPG4 = 4" (100mm) Shatterproof glass lens
SPG5 = 5" (127mm) Shatterproof glass lens
SPG6= 6" (150mm) Shatterproof glass lens

Note: The use of a thermowell is recommended to protect the thermometer from corrosive or damaging environments, as well as to maintain a closed system during its removal from the process

1” Back Connection

2” Back Connection

3” Adjustable Angle Connection

4” Back Connection

5” Bottom Connection

5” Adjustable Angle Connection

6” Back Connection

6” Bottom Connection

TBT HVAC Bi-Metal Thermometer

Description & Features:

- A durable and accurate thermometer with a rigid connection
- Separable thermowell
- Rugged steel case
- Bi-metallic element
- Dual scale (°F & °C)
- Back or bottom connected
- 1/2” NPT process connection
- ASME B40.200 compliant
- 5 year warranty

Applications:

- Hot water lines, boilers and hydronic heating

Specifications	
Dial	3.5” (90mm), aluminum with black markings
Case	Steel
Lens	Glass
Ring	Steel, chrome plated
Stem	Brass
Thermowell	Brass, 1/2” NPT (standard), separable
Sensing Element	Bi-metallic coil
Pointer	Aluminum, painted black
Over Range Enclosure Rating	±25% of full scale value
Reset	Standard
Ambient Temperature	-22°F to 158°F (-30°C to 70°C)
Process Temperature	-22°F to 250°F (-30°C to 120°C)
Accuracy	±2% of full scale
Enclosure Rating	IP50
Warning	**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Order Codes (products in bold are normally stock in North America)

Range	Bottom	Back
30°F to 250°F & 0°C to 121°C	**TBT165**	**TBT160**
0°F to 120°F	-	**TBT161**

Other ranges and connection sizes available upon request.

Bottom Connection

Description & Features:

- Provides an economical and accurate method to measure surface temperatures on a 1/2” (12.5mm) to 4” (100mm) pipe
- Clamp-on design with steel spring
- Dual scale (°F & °C)
- 3 ranges available
- Easy to install
- ASME B40.200 compliant
- 5 year warranty

Applications:

- To measure surface temperature on pipe in the heating, ventilation, air conditioning, wastewater, industrial process markets

Specifications	
Dial	2.5” (63mm) aluminum with black markings
Case	Mild steel
Lens	Plexiglass
Ring	Steel, chrome plated
Sensing Element	Bi-metallic coil
Pointer	Aluminum, painted black
Over-Range Enclosure Rating	25% of full scale value
Ambient/Process Temperature	-40°F to 390°F (-40°C to 200°C)
Accuracy	±3% of full scale
Enclosure Rating	IP52

Order Codes (products in bold are normally stock in North America)

Range	Code
-40°F to 110°F & -40°C to 40°C	TCT166
30°F to 250°F & 0°C to 120°C	**TCT167**
30°F to 390°F & 0°C to 200°C	**TCT168**

Other ranges and connection sizes available upon request.

THR HVAC Remote Reading Thermometer

Description & Features:

- An economical thermometer for remote reading applications
- Stainless steel case
- Vapour actuated
- Panel mounted (Front Flange or U-Clamp)
- Dual scale (°F & °C)
- 9' capillary length
- ASME B40.200 compliant
- 5 year warranty

Applications:

- Freezers, walk-in refrigeration units, food storage cabinets, heating and ventilation
- Widely specified in the HVAC, commercial and mechanical industry segments

Specifications	
Dial	Aluminum, painted white with black markings
Case	SS front flange, SS U-Clamp case
Lens	Plexiglass
Bourdon Tube	Phosphor bronze
Movement	Brass
Pointer	Aluminum, painted black
Welding	Silver alloy
Capillary	9' (3m) nickel plated brass
Protective Spring	SS
Bulb	Nickel plated brass
Operating Temperature	Recommended maximum 75% of full scale value
Accuracy	±2.5% of full scale
Enclosure Rating	IP52
Warning	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Order Codes

Dial Size	Panel Cut-out	Case Style	Range	Code
2" (50mm)	2.05" (52mm)	Front Flange	-40°F to 60°F & -40°C to 15°C	THR2214090R4
2" (50mm)			-20°F to 120°F & -30°C to 50°C	THR2214090R5
2" (50mm)		U-Clamp	-40°F to 60°F & -40°C to 15°C	THR2514090R4
2" (50mm)			-20°F to 120°F & -30°C to 50°C	THR2514090R5
2.5" (63mm)	2.55" (64mm)	Front Flange	-40°F to 60°F & -40°C to 15°C	THR3214090R4
2.5" (63mm)			-20°F to 120°F & -30°C to 50°C	THR3214090R5
2.5" (63mm)		U-Clamp	-40°F to 60°F & -40°C to 15°C	THR3514090R4
2.5" (63mm)			-20°F to 120°F & -30°C to 50°C	THR3514090R5

Other ranges and connection sizes available upon request.

2” with U-Clamp

2” with Front Flange

2.5” with U-Clamp

2.5” with Front Flange

THS Solar Digital Bi-Metal Thermometer

Description & Features:

- A solar powered digital thermometer that provides a local temperature reading to 1/10 of a degree
- 304 stainless steel case, stem and socket
- Hermetically sealed thermometer case
- Minimum required light 35 Lux
- Ceramic resistance sensing element
- 1/2” adjustable angle connection
- 4” (100mm), 6” (150mm) and 9” (230mm) stem lengths
- °F or °C scales available
- ASME B40.200 compliant
- 5 year warranty

Applications:

- Temperature sensing for heating, ventilation, air conditioning, waste water, industrial processes or compressors

Specifications	
Dial	3” (75mm)
Case	304 SS
Lens	Glass (3mm thickness)
Ring	304 SS, bezel, hermetically sealed
Display	LCD
Stem	304 SS, 0.25” (6mm) diameter with lengths 2.5” (63mm) to 24” (600mm)
Connection	1/2” NPT fully adjustable
Sensor	Ceramic resistance
Lux Rating	35 Lux
Ambient Temperature	-4°F to 122°F (-20°C to 50°C)
Temperature Range	-58°F to 320°F (-50°C to 160°C)
Read Interval	Every 6 seconds
Accuracy	±1%
Enclosure Rating	NEMA 4 / IP68

Order Codes

Stem Length	°F Scale	°C Scale
2.5” (63mm)	THS32025F	THS32025C
4” (100mm)	THS32040F	THS32040C
6” (150mm)	THS32060F	THS32060C
9” (230mm)	THS32090F	THS32090C
12” (300mm)	THS32120F	THS32120C
15” (370mm)	THS32150F	THS32150C
18” (450mm)	THS32180F	THS32180C
24” (600mm)	THS32240F	THS32240C

Other ranges and connection sizes available upon request. 1/4” NPT and 3/8” NPT connection available. Longer stem lengths available up to 72”. 316 SS wetted parts and sharp tip are available.

Description & Features:

- Widely specified in the industrial and commercial plumbing trade
- Includes a separable brass or lead free brass thermowell
- Can also be used with TIW/TIW-LF or TDF thermowells
- 3.5” (90mm) and 6” (150mm) stem
- Available in aluminum or Valox® (9”) case
- Organic filled tube (magnifying)
- Dual scale (°F & °C)
- Adjustable angle connection and 360° case rotation for easy installation
- Graphite filled bulb chamber for maximum heat conduction
- ASME B40.200 and ASTM E2251 compliant
- CAN/CGSB-14.4-M88 compliant
- ±1% accuracy
- 5 year warranty

Applications:

- New construction, plumbing, water lines, boilers, heating, ventilation and air conditioning
- Lead free version for potable water systems

LEAD FREE

RoHS compliant

Note: RoHS applies only to 304 SS and 316 SS thermowells

Specifications	
Scale	9” (230mm) aluminum or Valox® case, impact resistant
Lens	Glass (polycarbonate available)
Connection	3/4” NPT with thermowell 1 1/4” - 18 UNF swivel nut (no thermowell)
Scales	Aluminum, painted white with black markings
Bulb Chamber	Tapered cast aluminum with graphite fill
Tube and Sensing Liquid	Glass (magnifying), organic green fluid (other colours optional)
Adjustment	Fully adjustable
Thermowell	TIM: 3/4” Brass, separable socket (SS optional) TIM-LF: 3/4” Lead free brass, separable socket
Accuracy	±1%
Enclosure Rating	IP54
Warning	**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Note: For an Industrial Thermowell, please refer to the Industrial Thermowell product page

TIM Order Codes (products in bold are normally stock in North America)

	Aluminum Case		Valox® Case	
Stem	**3.5” (90mm)**	**6” (150mm)**	**3.5” (90mm)**	**6” (150mm)**
-40°F to 110°F & -40°C to 40°C	**TIM101A**	TIM101-6A	**TIM101**	TIM101-6
0°F to 120°F & -15°C to 50°C	**TIM102A**	**TIM102-6A**	**TIM102**	**TIM102-6**
0°F to 160°F & -15°C to 70°C	**TIM103A**	TIM103-6A	**TIM103**	TIM103-6
30°F to 180°F & 0°C to 80°C	**TIM104A**	TIM104-6A	**TIM104**	TIM104-6
30°F to 240°F & 0°C to 115°C	**TIM100A**	**TIM100-6A**	TIM100	TIM100-6
30°F to 300°F & 0°C to 150°C	**TIM105A**	**TIM105-6A**	**TIM105**	**TIM105-6**

Other ranges and connection sizes available upon request. Duct flange available upon request. Union connection available upon request.

Option suffix:
B = Blue fill fluid
R = Red fill fluid

Valox® is a registered trademark of the General Electric Company

Industrial 9” Thermometer, Lead Free Industrial 9” Thermometer

TIM-LF Order Codes (products in bold are normally stock in North America)

	Aluminum Case		Valox® Case	
Stem	**3.5” (90mm)**	**6” (150mm)**	**3.5” (90mm)**	**6” (150mm)**
-40°F to 110°F & -40°C to 40°C	TIM101ALF	TIM101-6ALF	TIM101LF	TIM101-6LF
0°F to 120°F & -15°C to 50°C	TIM102ALF	TIM102-6ALF	**TIM102LF**	TIM102-6LF
0°F to 160°F & -15°C to 70°C	TIM103ALF	TIM103-6ALF	TIM103LF	TIM103-6LF
30°F to 180°F & 0°C to 80°C	**TIM104ALF**	TIM104-6ALF	**TIM104LF**	TIM104-6LF
30°F to 240°F & 0°C to 115°C	TIM100ALF	TIM100-6ALF	TIM100LF	TIM100-6LF
30°F to 300°F & 0°C to 150°C	**TIM105ALF**	TIM105-6ALF	TIM105LF	TIM105-6LF

Other ranges available upon request.

Option suffix:
B = Blue fill fluid
R = Red fill fluid

Valox® is a registered trademark of the General Electric Company

TIW-LF Thermowell Order Codes (products in bold are normally stock in North America)

Stem Length	Overall Length	Material	Insertion Length	3/4” NPT Connection
3.5” Without Lagging	4.25" (108mm)	Lead Free Brass	2.5” (63mm)	**TIW01LF**
6” Without Lagging	6.75" (172mm)	Lead Free Brass	5” (127mm)	**TIW04LF**

3.5” Stem

With Socket Without Socket

6” Stem

With Socket Without Socket

Description & Features:

- Provides an economical and accurate method for measuring the temperature on a flat metallic surface
- 2" (50mm) dial
- Dual scale (°F & °C)
- 3 ranges available
- Easy to install
- ASME B40.200 compliant
- 5 year warranty

Applications:

- Ductwork or motor housings

Specifications	
Dial	2" (50mm) aluminum with black and red markings
Case	Steel, painted black
Lens	Glass
Sensing Element	Bi-metallic coil
Pointer	Aluminum, painted black
Ambient/Process Temperature	Recommended maximum 75% of full scale value
Accuracy	±2% of full scale
Enclosure Rating	IP52

Order Codes (products in bold are normally stock in North America)

Range	Code
0°F to 250°F & -20°C to 120°C	**TMT7412**
0°F to 500°F & -15°C to 260°C	**TMT7410**
50°F to 750°F & 10°C to 400°C	TMT7409

Other ranges and connection sizes available upon request.

TNR Food & Beverage Bi-Metal Thermometer

Description & Features:

- A general purpose, tamper-proof, 304 stainless steel thermometer
- Hermetically sealed case
- Bi-metallic sensing element for reliable readings
- Back connected
- Stem length from 2.5” (63mm) and up
- ±1% accuracy
- Anti-parallax dial that reduces operator reading errors
- Lexan® lens
- Can be used with TSN thermowells
- 5 year warranty

Applications:

- Food processing and beverage industry

Specifications	
Dial	3” (75mm) dish shaped dial, aluminum with black markings
Case/Ring	AISI 304 SS
Lens	Lexan®, hermetically sealed
Stem	AISI 304 SS
Connection	1/2” NPT, centre back
Sensing Element	Bi-metallic coil
Pointer	Aluminum, painted black
Welding	TIG
Maximum Operating Pressure	125 psi (861 kPa)
Operating Temperature	Recommended maximum 75% of full scale value
Ambient/Process Temperature	Maximum 248°F (120°C)
Accuracy	±1%
Enclosure Rating	IP68

Note: The use of a thermowell is recommended to protect the thermometer in corrosive or pressure applications, as well as to maintain a closed system during its removal from the process

Order Codes (products in bold are normally stock in North America)

Dial and Stem	Code
3” (75 mm) dial with 2.5” (63mm) stem	**TNR33025**
3” (75 mm) dial with 4” (100mm) stem	TNR33040
3” (75 mm) dial with 6” (150mm) stem	TNR33060
3” (75 mm) dial with 9” (225mm) stem	TNR33090

Dual Scale Range	Code Suffix
-40°F to 120°F & -40°C to 50°C	**B2**
-40°F to 160°F & -40°C to 70°C	B4
0°F to 200°F & -20°C to 90°C	B6
0°F to 250°F & -20°C to 120°C	**B8**
50°F to 300°F & 10°C to 150°C	B9
50°F to 400°F & 10°C to 200°C	B10
50°F to 500°F & 10°C to 260°C	**B11**
150°F to 750°F & 100°C to 400°C	B12
200°F to 1,000°F & 100°C to 540°C	B13

Other ranges and connection sizes available upon request.

*(i.e. 3” TNR with 4” (100mm) stem, -40°F to 160°F & -40°C to 70°C = **TNR33040B4**)*

Lexan® is a registered trademark of the General Electric Company

Note: RoHS applies only with SS bulb, SS capillary and SS thermowell

Description & Features:

- Versatile, heavy duty gas or vapour thermometer for remote reading
- Many varieties are available from stock; special requests are built to order
- Brass or stainless steel capillary and bulbs
- Plain, sliding union or thermowell connection
- Capillary lengths over 5' available
- 1/2" bulb diameter
- Panel or direct mount
- Gas: ±1% accuracy; Vapour: ±2% accuracy
- ASME B40.200 compliant
- 5 year warranty

Applications:

- For remote temperature sensing of tanks, reservoirs and process lines
- Appropriate for industrial and commercial installations

Specifications	
Dial	2.5" (63mm), 3.5" (90mm), 4" (100mm), 4.5" (115mm), 6" (150mm), 8.5" (215mm)
Case/Ring	2.5" (63mm): 316 SS 3.5" (90mm), 4" (100mm): Steel, painted black Others: Aluminum, painted black
Lens	2.5" (63mm) to 6" (150mm): Glass Others: Polycarbonate
Connection	Plain, Brass or 316 SS sliding union, Brass or 316 SS thermowell
Sensing Fill	Gas or vapour
Movement	Gas: 304 SS Vapour: Brass
Pointer	Aluminum, painted black
Accuracy	Gas: ±1% of full scale value Vapour: ±2% of full scale value
Bulb	6" (150mm), 1/2" diameter standard Custom sizes available
Warning (brass connection only)	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Selection Notes

Gas-filled Systems

- For industrial applications requiring accurate and uniform response over the entire range. Scale is linear
- The capillary should be located in an area that has an ambient temperature of approximately 74°F (23°C). If the temperature around the capillary is significantly higher than 74°F (23°C), the thermometer will show a reading that is higher than actual process temperature. If the capillary ambient temperature is significantly lower than 74°F (23°C), the reading will be lower than the actual process temperature

Vapour-filled Systems

- Have non-linear scales and provide economical but reliable service for most industrial applications
- To ensure accurate readings, the operating temperature should fall in the 2/3 of the scale
- Thermometer may show a temperature offset to actual temperature value when the bulb and thermometer are installed at different elevations. To avoid this, install the bulb and thermometer at the same elevation wherever possible. Offset errors only occur when the thermometer's ambient temperature is higher than the bulb temperature

Capillary Protection

- Is recommended to protect the capillary from physical damage
- Copper braided armour is used in conjunction with brass bulb
- Stainless steel armour shall be used in conjunction with 316 SS bulb

Note: Winters recommends using a stainless steel bulb and capillary for all process temperatures above 500°F (260°C)

Gas-filled Systems - Order Codes (products in bold are normally in stock)

Dial Size	2.5" (63mm)				3.5" (90mm)	
Bulb and Capillary Material	SS					
Capillary Length and Connection	5' Bottom	5' Back	10' Bottom	10' Back	5' Back	10' Back
30°F to 240°F&C	-	-	-	TRR12253100G18	TRR12353050G18	TRR12353100G18
40°F to 220°F&C	TRR11253050G19	TRR12253050G19	TRR11253100G19	TRR12253100G19	TRR12353050G19	TRR12353100G19
80°F to 300°F&C	TRR11253050G20	TRR12253050G20	TRR11253100G20	TRR12253100G20	TRR12353050G20	TRR12353100G20
100°F to 400°F&C	TRR11253050G21	TRR12253050G21	TRR11253100G21	TRR12253100G21	TRR12353050G21	TRR12353100G21
100°F to 500°F&C	TRR11253050G22	-	TRR11253100G22	-	-	-

Dial Size	4" (100mm)			
Bulb and Capillary Material	SS			
Capillary Length and Connection	5' Bottom	5' Back	10' Bottom	10' Back
30°F to 240°F&C	-	TRR12403050G18	-	TRR12403100G18
40°F to 220°F&C	TRR11403050G19	TRR12403050G19	TRR11403100G19	TRR12403100G19
80°F to 300°F&C	TRR11403050G20	TRR12403050G20	TRR11403100G20	TRR12403100G20
100°F to 400°F&C	TRR11403050G21	TRR12403050G21	TRR11403100G21	TRR12403100G21
100°F to 500°F&C	TRR11403050G22	-	TRR11403100G22	-

Dial Size	4.5" (115mm)			
Bulb and Capillary Material	SS			
Capillary Length and Connection	5' Bottom	5' Back	10' Bottom	10' Back
30°F to 240°F&C	-	TRR12453050G18	-	TRR12453100G18
40°F to 220°F&C	TRR11453050G19	TRR12453050G19	TRR11453100G19	TRR12453100G19
80°F to 300°F&C	TRR11453050G20	TRR12453050G20	TRR11453100G20	TRR12453100G20
100°F to 400°F&C	TRR11453050G21	TRR12453050G21	TRR11453100G21	TRR12453100G21
100°F to 500°F&C	TRR11453050G22	-	TRR11453100G22	-

Gas-filled Systems - Order Codes (products in bold are normally in stock)

Dial Size	6" (150mm)			
Bulb and Capillary Material	SS			
Capillary Length and Connection	5' Bottom	5' Back	10' Bottom	10' Back
30°F to 240°F&C	-	TRR12603050G18	-	TRR12603100G18
40°F to 220°F&C	TRR11603050G19	TRR12603050G19	TRR11603100G19	TRR12603100G19
80°F to 300°F&C	TRR11603050G20	TRR12603050G20	TRR11603100G20	TRR12603100G20
100°F to 400°F&C	TRR11603050G21	TRR12603050G21	TRR11603100G21	TRR12603100G21
100°F to 500°F&C	TRR11603050G22	-	TRR11603100G22	-

Vapour-filled Systems - Order Codes (products in bold are normally in stock)

Dial Size	2.5" (63mm)				3.5" (90mm)	
Bulb and Capillary Material	Brass and Copper					
Capillary Length and Connection	5' Bottom	5' Back	10' Bottom	10' Back	5' Back	10' Back
-40°F to 110°F&C	TRR31251050V9	-	-	-	-	-
0°F to 180°F&C	TRR31251050V11	TRR32251050V11	TRR31251100V11	-	TRR32351050V11	TRR32351100V11
20°F to 220°F&C	-	TRR32251050V12	TRR31251100V12	-	TRR32351050V12	-
50°F to 250°F&C	TRR31251050V13	-	TRR31251100V13	TRR32251100V13	-	TRR32351100V13
100°F to 350°F&C	TRR31251050V15	TRR32251050V15	TRR31251100V15	TRR32251100V15	-	TRR32351100V15

Dial Size	4" (100mm)			
Bulb and Capillary Material	Brass and Copper			
Capillary Length and Connection	5' Bottom	5' Back	10' Bottom	10' Back
0°F to 180°F&C	TRR31401050V11	-	TRR31401100V11	TRR32401100V11
20°F to 220°F&C	TRR31401050V12	TRR32401050V12	TRR31401100V12	TRR32401100V12
50°F to 250°F&C	TRR31401050V13	-	-	TRR32401100V13
100°F to 350°F&C	TRR31401050V15	TRR32401050V15	TRR31401100V15	TRR32401100V15

Dial Size	4.5" (115mm)			
Bulb and Capillary Material	Brass and Copper			
Capillary Length and Connection	5' Bottom	5' Back	10' Bottom	10' Back
0°F to 180°F&C	TRR31451050V11	TRR32451050V11	TRR31451100V11	TRR32451100V11
20°F to 220°F&C	TRR31451050V12	TRR32451050V12	TRR31451100V12	TRR32451100V12
50°F to 250°F&C	TRR31451050V13	TRR32451050V13	TRR31451100V13	TRR32451100V13
100°F to 350°F&C	TRR31451050V15	TRR32451050V15	TRR31451100V15	TRR32451100V15

Dial Size	6" (150mm)			
Bulb and Capillary Material	Brass and Copper			
Capillary Length and Connection	5' Bottom	5' Back	10' Bottom	10' Back
0°F to 180°F&C	TRR31601050V11	TRR32601050V11	TRR31601100V11	TRR32601100V11
20°F to 220°F&C	TRR31601050V12	-	TRR31601100V12	TRR32601100V12
50°F to 250°F&C	TRR31601050V13	TRR32601050V13	-	TRR32601100V13
100°F to 350°F&C	TRR31601050V15	TRR32601050V15	-	TRR32601100V15

Built-to-Order Codes

Specify the code for each section and the range:
e.g. TRR3 - 2 - 35 - 1 - 05 - 1 - 50/250°F
(Section I - II - III - IV - V - VI - range)

TRR's are made to order in 4-6 weeks. For stocked TRR's see the previous page

Section	Code	Description Type
I	TRR1	Gas Remote Reading
	TRR2	Gas Direct Reading
	TRR3	Vapour Remote Reading
	TRR4	Vapour Direct Reading
II	**Case Type, Connection**	
	1	Bottom connection, back flange
	2	Back connection, front flange
	3	Back connection, back flange
	4	Vari-angle connection, (Direct reading only)
III	**Dial Size**	
	25	2.5" (63mm)
	35	3.5" (90mm) Back connection only
	40	4" (100mm)
	45	4.5" (115mm)
	60	6" (150mm)
	85	8.5" (215mm)

Section	Code	Description Bulb and Capillary			
		Bulb Dimensions	Bulb Material	Capillary Material	Capillary Protection
IV	1	6" (150mm) OAL, 1/2" OD	Brass	Copper	Copper Dbl Braided
	2	6" (150mm) OAL, 1/2" OD	316 SS	316 SS	None
	3	6" (150mm) OAL, 1/2" OD	316 SS	316 SS	SS Armour
V	**Capillary Length (ft)**				
	05	05			
	10	10			
	30	30			
	XX	XX			
VI	**Connection**				
	0	None			
	1	1/2" NPT brass sliding union			
	2	1/2" NPT SS sliding union			
	3	3/4" NPT brass sliding union			
	4	3/4" NPT SS sliding union			
	5	1/2" NPT brass thermowell			
	6	1/2" NPT SS thermowell			
	7	3/4" NPT brass thermowell			
	8	3/4" NPT SS thermowell			
	Z	Custom connection			

Ranges	°F only	°F & °C	°C only
Gas Ranges	-40°F to 110°F	-40°F to 110°F & -40°C to 40°C	-40°C to 40°C
	-20°F to 120°F	-20°F to 120°F & -28°C to 48°C	-28°C to 48°C
	30°F to 150°F	30°F to 150°F & 0°C to 65°C	0°C to 65°C
	0°F to 180°F	0°F to 180°F & -20°C to 80°C	-20°C to 80°C
	30°F to 240°F	30°F to 240°F & 0°C to 115°C	0°C to 115°C
	40°F to 220°F	40°F to 220°F & 5°C to 105°C	5°C to 105°C
	80°F to 300°F	80°F to 300°F & 30°C to 150°C	30°C to 150°C
	100°F to 400°F*	100°F to 400°F* & 40°C to 200°C*	40°C to 200°C
	100°F to 500°F*	100°F to 500°F* & 40°C to 260°C*	40°C to 260°C
	0°F to 600°F*	0°F to 600°F* & -20°C to 320°C*	-20°C to 320°C
	200°F to 1,000°F*	200°F to 1,000°F* & 90°C to 540°C*	90°C to 540°C
Vapour Ranges	-40°F to 110°F	-40°F to 110°F & -40°C to 40°C	-40°C to 40°C
	0°F to 100°F	0°F to 100°F & -20°C to 38°C	-20°C to 38°C
	0°F to 180°F	0°F to 180°F & -20°C to 80°C	-20°C to 80°C
	20°F to 220°F	20°F to 220°F & 0°C to 100°C	0°C to 100°C
	50°F to 250°F	50°F to 250°F & 10°C to 120°C	10°C to 120°C
	100°F to 350°F	100°F to 350°F & 40°C to 175°C	40°C to 175°C

*Ranges require stainless steel capillary and bulb

Please contact us for:
Duct flanges, sliding union, various bulb dimensions, averaging bulb (gas only), other ranges, stainless steel 4" (100mm) and 6" (150mm) cases and capillary available on gas remote/direct reading models

Note: The use of a thermowell is recommended to protect the thermometer in corrosive or pressure applications, as well as to maintain a closed system during its removal from the process.

4” Back Connection, Front Flange, Plain Bulb

4” Back Connection, Front Flange, Sliding Union

4” Bottom Connection, Back Flange, Sliding Union

4.5” Bottom Connection, Back Flange, Plain Bulb

6” Bottom Connection, Back Flange, Sliding Union

6” Bottom Connection, Back Flange, Sliding Union

Note: RoHS applies only with SS TIW thermowell

Description & Features:

- A versatile thermometer that provides a solar powered digital read out commonly used in the industrial and commercial plumbing trade
- Low light compatible (16 Lux minimum)
- Includes a separable thermowell
- Durable ABS case
- Switchable temperature scale (°F or °C)
- Adjustable angle connection for easy installation
- ±1% accuracy
- ASME B40.200 compliant
- 5 year warranty

Applications:

- New construction, plumbing, water lines, boilers, heating, ventilation and air conditioning

Specifications	
Display	2.55” x 4.67” (63.7mm x 116.7mm) solar powered display
Housing	High impact ABS plastic housing with aluminum movable parts
Lux Rating	16 Lux
Sensing Element	Liquid
Stem Length	3.5” (90mm), 6” (150mm)
Connection / Thermowell	3/4” NPT, with brass thermowell standard, (SS optional) 1-1/4” UNF swivel nut (without thermowell)
Temperature Range	-50°F to 320°F (-45°C to 160°C)
Read Interval	Every 6 seconds
Ambient Temperature	14°F to 150°F (-10°C to 65°C)
Process Temperature	-50°F to 320°F (-45°C to 160°C)
Accuracy	±1%
Enclosure Rating	NEMA 5 / IP54
Warning (brass thermowell only)	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Order Codes (products in bold are normally stock in North America)

Stem/Ranges	Code (Includes Thermowell)
3.5” (90mm) Stem (-50°F to 320°F or -45°C to 160°C)	**TSD9ITSD**
6” (150mm) Stem (-50°F to 320°F or -45°C to 160°C)	**TSD9ITSD6**

Other ranges and connection sizes available upon request. Duct flange and union connection available upon request. 6” (150mm) stem available. For an Industrial Thermowell, please refer to the Industrial Thermowell product page.

3.5” Stem with Thermowell

3.5” Stem without Thermowell

6” Stem with Thermowell

6” Stem without Thermowell

Hot Water Thermometer, Lead Free Hot Water Thermometer

TSW, TSW-LF

Dial Type

Scale Type

Description & Features:

- An economical and accurate way to measure air or water temperatures
- Separable brass or lead free brass thermowell
- Bi-metallic element (dial type only)
- Dual scale (°F & °C)
- Dial type or vertical scale type
- Easy to install
- 1/2" NPT process connection
- ASME B40.200 compliant
- 5 year warranty

Applications:

- Hot water lines, boilers and hydronic heating
- Lead free version for potable water systems

Dial Type Specifications	
Dial	2" (50mm), 2.5" (63mm) aluminum, painted white with black and red markings
Case	Aluminum
Lens	Glass
Ring	Steel, chrome plated
Thermowell	TSW: Brass (HPB59-1), 1/2" NPT standard, separable TSW-LF: Lead free brass, 1/2" NPT standard, separable
Stem	Brass
Sensing Element	Bi-metallic element
Pointer	Aluminum, painted black
Recalibrator	Standard
Accuracy	±1%
Warning	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Scale Type Specifications	
Scale/Case	8" (200mm) scale with steel case, painted white with black markings
Tube	#N-16 glass
Sensing Liquid	Organic fluid (red)
Thermowell	TSW: Brass (HPB59-1), 1/2" NPT standard, separable TSW-LF: Lead free brass, 1/2" NPT standard, separable
Accuracy	±1%
Warning	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

TSW Dial Order Codes (products in bold are normally stock in North America)

Dial	Range	Connection	Code
2" (50mm)	30°F to 250°F & 0°C to 120°C	1/2" NPT centre back	**TSW174-2**
2.5" (63mm)	30°F to 250°F & 0°C to 120°C	1/2" NPT centre back	**TSW174**
		3/4" Sweatwell	**TSW174-SW**

Other ranges, stem lengths, dial and connection sizes available upon request.

TSW Scale Order Codes (products in bold are normally stock in North America)

Scale	Range	Connection	Code
8" (200mm)	40°F to 280°F & 5°C to 135°C	Straight	**TSW172**
		Angle	**TSW173**

Other ranges and connection sizes available upon request.

TSW-LF Dial Order Codes (products in bold are normally stock in North America)

Dial	Range	Connection	Code
2" (50mm)	30°F to 250°F & 0°C to 120°C	1/2" NPT centre back	**TSW174-2LF**
2.5" (63mm)	30°F to 250°F & 0°C to 120°C	1/2" NPT centre back	**TSW174LF**
		3/4" Sweatwell	TSW174-SWLF

Other ranges, stem lengths, dial and connection sizes available upon request.

TSW-LF Scale Order Codes (products in bold are normally stock in North America)

Scale	Range	Connection	Code
8" (200mm)	40°F to 280°F & 5°C to 135°C	Straight	**TSW172LF**
		Angle	**TSW173LF**

Other ranges and connection sizes available upon request.

Thermowell Order Codes (products in bold are normally stock in North America)

Connection	Material	Code
1/2" NPT (for TSW174-2)	Lead Free Brass	TSW45LF
1/2" NPT (for TSW174)	Lead Free Brass	**TSW65LF**
1/2" NPT (for TSW174-SW)	Lead Free Brass	**TSW85LF**
1/2" NPT (for TSW172 & TSW173)	Lead Free Brass	TSW25LF

2" Dial Type

2.5" Dial Type

Scale Type

Back Connection

Bottom Connection

Optional Thermowell

Description & Features:

- Measures both pressure and temperature on the same dial
- 2.5” (63mm) and 3” (75mm) dials
- Dual scale (°F & °C)
- Back or bottom connection
- Brass wetted parts
- 1” (25mm), 2” (50mm) and 2.5” (63mm) stems
- Multiple pressure and temperature ranges available
- Can be used with TST thermowells
- Ranges are compliant to industry standard ASME Boiler Code Section IV HG-612
- 5 year warranty

Applications:

- Hot water and steam pressure for boilers

Specifications	
Dial	2.5” (63mm), 3” (75mm) aluminum, painted white
Case	Steel, painted black
Lens	2.5” (63mm): Acrylic, threaded 3” (75mm): Glass
Ring	3” (75mm): Chrome
Stem	Brass
Socket	Brass
Tube	Phosphor bronze
Movement	Brass and phosphor bronze
Sensing Element	Temperature: Bi-metallic coil Pressure: Bourdon tube
Pointer	Aluminum, anodized black
Welding	Tin-alloy solder
Pressure Limit	75% of full scale range
Ambient Temperature	23°F to 122°F (-5°C to 50°C)
Process Temperature	75% of full scale range
Accuracy	Pressure: ±3-2-3% Temperature: ±3% of full scale
Enclosure Rating	IP50
Warning	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Order Codes (products in bold are normally stock in North America)

Range	Dial	Connection	Stem Length	Code	Tridicator Shut-off Thermowell
0-75psi/kPa, 70°F to 320°F & 20°C to 160°C	2.5" (63mm)	1/4" NPT, Back	1" (25mm)	**TTD410**	-
0-75psi/kPa, 70°F to 320°F & 20°C to 160°C	2.5" (63mm)	1/4" NPT, Extension Back	2" (50mm)	**TTD401**	TST025
0-75psi/kPa, 70°F to 320°F & 20°C to 160°C	2.5" (63mm)	1/4" NPT, Back	2" (50mm)	**TTD404**	
0-75psi/kPa, 70°F to 320°F & 20°C to 160°C	3" (75mm)	1/2" NPT, Bottom	2.5" (63mm)	**TTD403**	TST050
0-75psi/kPa, 70°F to 320°F & 20°C to 160°C	3" (75mm)	1/2" NPT, Back	2.5" (63mm)	**TTD402**	
0-100psi/kPa, 70°F to 320°F & 20°C to 160°C	3" (75mm)	1/2" NPT, Bottom	2.5" (63mm)	**TTD409**	
0-100psi/kPa, 70°F to 320°F & 20°C to 160°C	3" (75mm)	1/2" NPT, Back	2.5" (63mm)	**TTD408**	
0-200psi/kPa, 70°F to 320°F & 20°C to 160°C	3" (75mm)	1/2" NPT, Bottom	2.5" (63mm)	**TTD405**	
0-200psi/kPa, 70°F to 320°F & 20°C to 160°C	3" (75mm)	1/2" NPT, Back	2.5" (63mm)	**TTD407**	
0-250psi/kPa, 70°F to 320°F & 20°C to 160°C	3" (75mm)	1/2" NPT, Bottom	2.5" (63mm)	**TTD399**	
0-250psi/kPa, 70°F to 320°F & 20°C to 160°C	3" (75mm)	1/2" NPT, Back	2.5" (63mm)	**TTD398**	

Other ranges, stem lengths, dial and connection sizes available upon request.

Option Suffix:

FAF0015(Bushing) = ¼" NPT internal to ½ NPT external glass bushing; for TTD410, TTD401 and TTD404

2.5" Back Connection, 1" Stem

2.5" Back Connection

2.5" Extension Back Connection

3" Bottom Connection

3" Back Connection

RoHS compliant

RoHS applies only to 304 SS and 316 SS thermowells

Description & Features:

- Available in a wide range of materials for use on most applications
- Standard “stepped construction” offering is complemented by an array of custom thermowells including: straight, tapered, sanitary and flanged configurations
- CRN registered
- 5 year warranty

Applications:

- Allows for the creation of a “sealed system”, whereby the thermometer can be removed from the application without the need for shutting down or draining the system
- To protect the thermometer from possible exposure to the process media

Specifications	
Thermometer Connection	1/2” NPTF connection standard Other thread sizes are available upon request
Process Connection	3/4”, 1/2” or 1” NPT connection standard Other thread sizes are available upon request
Bore	0.260” (6.5mm) bore standard
Construction	Stepped construction standard Tapered construction available upon request
Material	Brass, 304 SS, 316 SS standard Other materials available upon request
Warning (brass thermowells only	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Material	Pressure - Temperature Rating (PSI)						
	70°F (21°C)	200°F (93°C)	400°F (204°C)	600°F (316°C)	800°F (427°C)	1,000°F (538°C)	1,200°F (649°C)
Brass	5,000	4,200	1,000	-	-	-	-
304 SS	7,000	6,200	5,600	5,400	5,200	4,500	1,650
316 SS	7,000	7,000	6,400	6,200	6,100	5,100	2,500

Note: For process media velocities above 10m/s (30 feet/s) contact Winters

TBR Bi-Metal Threaded Thermowell

Order Codes (Thermowells without lag. Products in bold are normally stock in North America)

Stem Length A	NPT Connection P	Material	Code	Standard Insertion Length U	Shank Diameter
2.5" (63mm)	1/2"	Brass	**TBR2550**	1-3/8" (35mm)	1/2" (12.5mm)
		304 SS	**TBR2550-1**		
		316 SS	TBR2550-2		
	3/4"	Brass	**TBR25**		
		304 SS	**TBR25-1**		
		316 SS	**TBR25-2**		
4" (100mm)	1/2"	Brass	**TBR3550**	2.5" (63mm)	1/2" (12.5mm)
		304 SS	**TBR3550-1**		
		316 SS	TBR3550-2		
	3/4"	Brass	**TBR35**		
		304 SS	**TBR35-1**		
		316 SS	**TBR35-2**		
	1"	Brass	TBR35100		
		304 SS	TBR35100-1		
		316 SS	TBR35100-2		
6" (150mm)	1/2"	Brass	**TBR650**	4.5" (115mm)	5/8" (16mm)
		304 SS	**TBR650-1**		
		316 SS	TBR650-2		
	3/4"	Brass	**TBR6**		3/4" (19mm)
		304 SS	**TBR6-1**		
		316 SS	**TBR6-2**		
	1"	Brass	TBR6100		7/8" (22mm)
		304 SS	TBR6100-1		
		316 SS	TBR6100-2		
9" (229mm)	1/2"	Brass	TBR950	7.5" (190mm)	5/8" (16mm)
		304 SS	TBR950-1		
		316 SS	TBR950-2		
	3/4"	Brass	TBR9		3/4" (19mm)
		304 SS	**TBR9-1**		
		316 SS	TBR9-2		
	1"	Brass	TBR9100		7/8" (22mm)
		304 SS	TBR9100-1		
		316 SS	TBR9100-2		
12" (305mm)	1/2"	Brass	TBR1250	10.5" (266mm)	5/8" (16mm)
		304 SS	TBR1250-1		
		316 SS	TBR1250-2		
	3/4"	Brass	TBR12		3/4" (19mm)
		304 SS	TBR12-1		
		316 SS	TBR12-2		
	1"	Brass	TBR12100		7/8" (22mm)
		304 SS	TBR12100-1		
		316 SS	TBR12100-2		
15" (370mm)	3/4"	Brass	TBR15	13" (330mm)	3/4" (19mm)
		304 SS	TBR15-1		
		316 SS	TBR15-2		

Order Codes (Thermowells with lag.)

Stem Length A	NPT Connection P	Material	Code	Standard Insertion Length U	Lag Length T	Shank Diameter
6” (150mm)	1/2”	Brass	TBRN650	2.5” (63mm)	2” (50mm)	1/2” (12.5mm)
		304 SS	TBRN650-1			
		316 SS	TBRN650-2			
	3/4”	Brass	**TBRN6**			
		304 SS	TBRN6-1			
		316 SS	TBRN6-2			
	1”	Brass	TBRN6100			
		304 SS	TBRN6100-1			
		316 SS	TBRN6100-2			
9” (229mm)	1/2”	Brass	TBRN950	4.5” (115mm)	3” (75mm)	5/8” (16mm)
		304 SS	TBRN950-1			
		316 SS	TBRN950-2			
	3/4”	Brass	TBRN9			3/4” (19mm)
		304 SS	TBRN9-1			
		316 SS	TBRN9-2			
	1”	Brass	TBRN9100			7/8” (22mm)
		304 SS	TBRN9100-1			
		316 SS	TBRN9100-2			
12” (305mm)	1/2”	Brass	TBRN1250	7.5” (190mm)		5/8” (16mm)
		304 SS	TBRN1250-1			
		316 SS	TBRN1250-2			
	3/4”	Brass	TBRN12			3/4” (19mm)
		304 SS	TBRN12-1			
		316 SS	TBRN12-2			
	1”	Brass	TBRN1210			7/8” (22mm)
		304 SS	TBRN1210-1			
		316 SS	TBRN1210-2			

Other configurations available. 1/4” NPT thermometer connection available. BSP threads available upon request. Tapered construction available upon request. Other lengths available up to 48” (welded construction only). Other materials such as Monel®, Inconel®, Hastelloy® C and Titanium are available upon request.

Note: Standard well is stepped as shown to 0.5” OD except U=2.5”. Straight shank supplied as an option. Specify additional lagging extensions as needed

Option suffix:
SCK = Socket Conversion Kit
W60 = Brass cap and chain (1/2”)
W60-1 = Stainless steel cap and chain (1/2”)

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Monel® is a registered trademark of Inco Alloys International

Standard Thermowell without lag

Standard Thermowell with lag

Description & Features:

- Ideal for ventilation installations
- Lightweight aluminum construction for durable mounting
- Instrument connections available for both TIM and TBM thermometers
- 304 SS and 316 SS options available
- 5 year warranty

Applications:

- Specially designed for heating and air conditioning ventilation systems in residential and commercial buildings and industrial plants

Specifications	
Material	Aluminum
Thermometer Connection	1-1/4”-18 UNEF or 1/2” NPTF

Order Codes

Thermometer	Thermometer Connection	Thermometer	Code
TIM Series	1-1/4”-18 UNEF	2 hole	TDF100
TBM Series	1/2” NPT		TDF200

3 or 4 hole options available.

TDF100

TDF200

TIW, TIW-LF

Industrial Thermowell, Lead Free Industrial Thermowell

Description & Features:

- Designed for use with all 9" (230mm) industrial thermometers to create a "sealed system"
- Allows the easy replacement of thermometers without the need to shut down or drain the system
- CAN/CGSB-14.4-M88 compliant
- CRN registered
- 5 year warranty

Applications:

- HVAC, pipes, chill water and hot water lines
- Lead free version for potable water systems

LEAD FREE

RoHS compliant

Note: RoHS applies only to 304 SS and 316 SS thermowells

Specifications	
Material	TIW: Brass, AISI 304 SS, AISI 316 SS TIW-LF: Lead free brass
Bore Diameter	7/16" tapered
Form	Stepped standard, straight available
Thermometer Connection	1-1/4" UNF
Process Connection	3/4" NPTM standard
Warning (brass and lead free brass thermowells only)	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

TIW Thermowell Order Codes (products in bold are normally stock in North America)

Stem Length	Overall Length	Material	Insertion Length	Lagging Extension	1/2" NPT Connection	3/4" NPT Connection
3.5" Without Lagging	4.25" (108mm)	Brass	2.5" (63mm)	-	-	**TIW01**
		304 SS			-	**TIW01-1**
		316 SS			-	TIW01-2
3.5" With Lagging	4.25" (108mm)	Brass	1.75" (44mm)	1" (25mm)	**TIW02**	**TIW03**
		304 SS			TIW02-1	TIW03-1
		316 SS			TIW02-2	TIW03-2
6" Without Lagging	6.75" (172mm)	Brass	5" (127mm)	-	-	**TIW04**
		304 SS			-	**TIW04-1**
		316 SS			-	TIW04-2
6" With Lagging	6.75" (172mm)	Brass	2.5" (63mm)	2.5" (63mm)	-	TIW07
		304 SS			-	TIW07-1
		316 SS			-	TIW07-2

TIW-LF Thermowell Order Codes (products in bold are normally stock in North America)

Stem Length	Overall Length	Material	Insertion Length	Lagging Extension	3/4" NPT Connection
3.5" Without Lagging	4.25" (108mm)	Lead Free Brass	2.5" (63mm)	-	**TIW01LF**
3.5" With Lagging		Lead Free Brass	1.75" (44mm)	1" (25mm)	TIW03LF
6" Without Lagging	6.75" (172mm)	Lead Free Brass	5" (127mm)	-	**TIW04LF**
6" With Lagging		Lead Free Brass	2.5" (63mm)	2.5" (63mm)	TIW07LF

Other configurations available. Other threads available upon request. Longer thermowells available upon request.
Other materials such as Monel®, Inconel®, Hastelloy® C and Titanium are available upon request.

Option suffix:
W61 = Brass cap and chain (1.25" UNF)
W61-1 = SS cap and chain (1.25" UNF)

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3.5” Stem Without Lagging

3.5” Stem With Lagging

6” Stem Without Lagging

6” Stem With Lagging

TSN Sanitary Thermowell

Description & Features:

- Allows for easy installation and replacement of bi-metallic dial thermometers without draining the process
- 3A approved
- 5 year warranty

Applications:

- Designed specifically for the sanitary requirements of the food and dairy industries

Specifications	
Material	316 SS
Connection	1.5” (40mm) or 2” (50mm) Tri-Clamp®
Thermometer Connection	1/2” NPT
Bore	0.260” (6.6mm) standard
Other	Lengths fit all standard bi-metal thermometers

Order Codes

Tri-Clamp®	Stem Length	U Dimensions	Code
1.5” (40mm)	2.5” (63mm)	1.5” (40mm)	TSN15SANI2
	4” (100mm)	3” (75mm)	TSN15SANI4
	6” (150mm)	5” (125mm)	TSN15SANI6
	9” (225mm)	8” (200mm)	TSN15SANI9
2” (50mm)	2.5” (63mm)	1.5” (40mm)	TSN2SANI2
	4” (100mm)	3” (75mm)	TSN2SANI4
	6” (150mm)	5” (125mm)	TSN2SANI6
	9” (225mm)	8” (200mm)	TSN2SANI9

Tri-Clamp® is a registered trademark of Tri-Clover

Description & Features:

- Spring loaded allowing TST to stay open when tridicator is installed. Once tridicator is removed thermowell closes preventing media from exiting the system
- Minimizes system downtime with quick instrument replacement
- CRN registered
- Up to 250 psi pressure rating (matching TTD Tridicator)
- 5 year warranty

Applications:

- Boilers and hydronic heating systems

Specifications	
Material	Brass
Tridicator Connection	1/4” or 1/2” NPTM standard
Warning	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Order Codes (products in bold are normally stock in North America)

Stem Length	Maximum Extension (X)	Instrument & Pipe NPT Connection	Code
1.92” (48.8mm)	1.3" (33.8mm)	1/4”	**TST025**
2.65” (67.3mm)	1.6" (41.5mm)	1/2”	**TST050**

1/4” TST025

1/2” TST050

TWF Flanged Bi-Metal Thermowell

Description & Features:

- Designed for use on a closed system
- 5 year warranty

Applications:

- Isolates temperature sensor from process media

Order Codes

Element Length	U Dimension	Material	Flange Size and Rating 150# Code		
			1” (25mm)	1.5” (40mm)	2” (50mm)
4” (100mm) stem	2” (50mm)	304 SS	TWF11504304	TWF151504304	TWF21504304
		316 SS	TWF11504316	TWF151504316	TWF21504316
6” (150mm) stem	4” (100mm)	304 SS	TWF11506304	TWF151506304	TWF21506304
		316 SS	TWF11506316	TWF151506316	TWF21506316
9” (225mm) stem	7” (178mm)	304 SS	TWF11509304	TWF151509304	TWF21509304
		316 SS	TWF11509316	TWF151509316	TWF21509316
12” (300mm) stem	10” (254mm)	304 SS	TWF115012304	TWF1515012304	TWF215012304
		316 SS	TWF115012316	TWF1515012316	TWF215012316
15” (370mm) stem	13” (330mm)	304 SS	TWF115015304	TWF1515015304	TWF215015304
		316 SS	TWF115015316	TWF1515015316	TWF215015316

Element Length	U Dimension	Material	Flange Size and Rating 300# Code		
			1” (25mm)	1.5” (40mm)	2” (50mm)
4” (100mm) stem	2” (50mm)	304 SS	TWF13004304	TWF153004304	TWF23004304
		316 SS	TWF13004316	TWF153004316	TWF23004316
6” (150mm) stem	4” (100mm)	304 SS	TWF13006304	TWF153006304	TWF23006304
		316 SS	TWF13006316	TWF153006316	TWF23006316
9” (225mm) stem	7” (178mm)	304 SS	TWF13009304	TWF153009304	TWF23009304
		316 SS	TWF13009316	TWF153009316	TWF23009316
12” (300mm) stem	10” (254mm)	304 SS	TWF130012304	TWF1530012304	TWF230012304
		316 SS	TWF130012316	TWF1530012316	TWF230012316
15” (370mm) stem	13” (330mm)	304 SS	TWF130015304	TWF1530015304	TWF230015304
		316 SS	TWF130015316	TWF1530015316	TWF230015316

Other configurations available.

RoHS compliant

Description & Features:

- Designed to be welded in place within the system
- Economical
- 5 year warranty

Applications:

- Tanks or feed water system on boilers where no internal threads are available

Specifications	
Material	304 or 316 SS
Thermometer Connection	1/2” NPT
Bore	0.260” (6.5mm) standard

Order Codes

Stem Length	Pipe Diameter	Dimension P	Dimension Q	Dimension U	Material	Code
4” (100mm)	3/4”	1.05” (27mm)	1/2” (12.5mm)	2.5” (63mm)	304 SS	TWS754304
					316 SS	TWS754316
	1”	1.315” (33mm)	7/8” (22mm)		304 SS	TWS14304
					316 SS	TWS14316
6” (150mm)	3/4”	1.05” (27mm)	3/4” (19mm)	4.5” (115mm)	304 SS	TWS756304
					316 SS	TWS756316
	1”	1.315” (33mm)	7/8” (22mm)		304 SS	TWS16304
					316 SS	TWS16316
9” (230mm)	3/4”	1.05” (27mm)	3/4” (19mm)	7.5” (191mm)	304 SS	TWS759304
					316 SS	TWS759316
	1”	1.315” (33mm)	7/8” (22mm)		304 SS	TWS19304
					316 SS	TWS19316
12” (300mm)	3/4”	1.05” (27mm)	3/4” (19mm)	10.5” (267mm)	304 SS	TWS7512304
					316 SS	TWS7512316
	1”	1.315” (33mm)	7/8” (22mm)		304 SS	TWS112304
					316 SS	TWS112316

Other configurations available.

TWW Weld-In Threaded Thermowell

Description & Features:

- Utilized where a welded thermowell is required
- 5 year warranty

Applications:

- Where high pressure or high flow of media is present (i.e. pipes)

Specifications	
Material	304 or 316 SS
Thermometer Connection	1/2” NPT
Bore	0.260” (6.5mm) Standard
Other	1.5” Connection pipe size standard

Order Codes

Stem Length A	Pipe Diameter	Dimension P	Dimension U	Material	Code
4” (100mm)	3/4”	1.5” (40mm)	2.5” (63mm)	304 SS	TWW154304
				316 SS	TWW154316
6” (150mm)			4.5” (115mm)	304 SS	TWW156304
				316 SS	TWW156316
9” (230mm)			7.5” (191mm)	304 SS	TWW159304
				316 SS	TWW159316
12” (300mm)			10.5” (267mm)	304 SS	TWW1512304
				316 SS	TWW1512316

Other configurations available. Cap and chain supplied as an option. Thermowells for 1” pipe available. 0.385” bores available.

Description & Features:

- Robust tees for isolation ring assembly
- 1-piece fully-welded construction
- 316 SS construction with 1/4” or 1/2” NPTF connections
- Ideal for installing pressure gauges, switches and transmitters for full functionality

Applications:

- Water treatment facilities and other slurry environments where isolation rings are installed and more than one pressure instrument is required (eg. pressure gauge with pressure switch and/or transmitter)

Order Codes

Type	1/4”	1/2”
A	FIR0014	FIR0010
B	FIR0024	FIR0020
C	FIR0034	**FIR0030**
D	FIR0044	FIR0040

Specifications	
Material	316 SS
Connections	2 or 3 instrument connections, 1 process connection
Instrument Connections	1/4” or 1/2” NPTF
Process Connection	1/2” NPTF

Type A

Type B

Type C

Type D

SAS Adjustable Snubber

Description & Features:

- Prolongs the life of pressure instruments by reducing the damaging effects of pulsation
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Can be utilized to change the amount of restriction
- Pumps, compressors, hydraulic presses or fluid power applications

RoHS compliant

Note: RoHS only applies to SS adjustable snubber

Specifications	
Body	Brass or SS
Connection	1/4” or 1/2” NPTM x NPTF
Temperature Range	-40°F to 248°F (-40°C to 120°C)
Warning (brass internals only)	**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Order Codes

Pressure Rating	Material / NPT Connection	Seal	Code
6,000 psi	Brass 1/4” MxF	PTFE	SAS540
	Brass 1/2” MxF		SAS541
	SS 1/4” MxF		SAS542
10,000 psi	SS 1/2” MxF		SAS543

Description	SS	Brass
Gland Seal	PTFE	
Stem	316 SS	
Gland	316 SS	Brass
Gland Washer	316 SS	
Body	316 SS	Brass

Caution: When adjusting the valve, do not adjust more than two turns from the closed position as leakage will occur.

1/4” NPT

1/2” NPT

Description & Features:

- Perforated case c/w spiral tubing protects pressure gauges, switches and transmitters. Used where the process media temperature exceeds the rating of the instrument
- For process media temperatures up to 570°F. Can reduce the media temperature by as much as 500°F*
- CRN registered
- 5 year warranty

Applications:

- Clean (no particulate) media, gases
- When used with a diaphragm seal, the pressure rating of the diaphragm seal must be acknowledged
- Extreme high temperature installations
- Used in oil & gas installations, chemical processing and mining

Note: Pressure gauge sold separately

Specifications	
Socket	316 L SS
Tube	316 SS
Maximum Operating Pressure	1,500 psi
Maximum Process Temperature	570°F (300°C) or 932°F (500°C)
Connection	1/4” NPTM x 1/4” NPTF 1/2” NPTM x 1/2” NPTF

Order Codes (products in bold are normally stock in North America)

Maximum Process Temperature	1/4” NPTM x 1/4” NPTF	1/2” NPTM x 1/2” NPTF
570°F (300°C)	**SCT-400**	**SCT-500**
932°F (500°C)	SCT-600	SCT-700

Other connections available upon request

SCT-400
1/4” NPTM x 1/4” NPTF

SCT-500
1/2” NPTM x 1/2” NPTF

*Degree of cooling is dependent on ambient conditions

SOP Over Pressure Protector

Description & Features:

- Setpoint adjustments are made by manipulating an external adjusting screw and lock nut
- Automatically shuts off pressure to the instrument once the adjustable preset pressure is exceeded
- CRN registered
- 5 year warranty

Applications:

- Utilized to protect pressure instruments against surges and pulsation
- Available in Bellows and Piston Type

Specifications	
Body	Bellows Type: 316 SS Piston Type: 316 SS
Gasket	FKM
Maximum Operating Pressure	10,000 psi
Temperature Rating	-40°F to 248°F (-40°C to 120°C)
Connection	1/4” NPTM x 1/4” NPTF or 1/2” NPTM x 1/2” NPTF

Order Codes

Bellows Type				
Adjustable Pressure Range	Connection NPT			
	1/4” x 1/4”	1/2” x 1/2”	1/4” x 1/4” NACE	1/2” X 1/2” NACE
2.9 to 14.5 psi	SOP32025	SOP32050	SOP32025N	SOP32050N
14.5 to 58 psi	SOP159025	SOP159050	SOP159025N	SOP159050N
58 to 145 psi	SOP9023025	SOP9023050	SOP9023025N	SOP9023050N
Piston Type				
Adjustable Pressure Range	Connection NPT			
	1/4” x 1/4”	1/2” x 1/2”	1/4” x 1/4” NACE	1/2” x 1/2” NACE
145 to 580 psi	SOP14039525	SOP14039550	SOP14039525N	SOP14039550N
580 to 2,330 psi	SOP435116025	**SOP435116050**	SOP435116025N	SOP435116050N
2,320 to 5,800 psi	SOP1450580025	SOP1450580050	SOP1450580025N	SOP1450580050N

1/4” x 1/4”

1/2” x 1/2”

Description & Features:

- Incorporates a sintered, porous 316 stainless steel snubbing element with a large surface area to ensure long term effectiveness
- Available in the three standard viscosity classifications of heavy oil, water and air
- Brass, lead free brass or stainless steel housings can be specified depending upon pressure media and operating pressure
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- To significantly lessen the damaging effects of pulsation on gauges, transducers, transmitters, manometers and pressure switches
- Lead free version for potable water systems

LEAD FREE

RoHS compliant

Note: RoHS applies only to 316 SS version

Specifications	SS	Brass
Operating Temperature	-320°F to 1,500°F (-195°C to 815°C)	-65°F to 650°F (-53°C to 343°C)
Operating Pressure	Maximum 20,000 psi (137,900 kPa)	Maximum 10,000 psi (68,950 kPa)
Burst Pressure	60,000 psi (413,700 kPa)	30,000 psi (206,850 kPa)
Housing	316 SS	SSN: Brass SSN-LF: Lead free brass
Snubbing Element	Sintered, porous type 316 SS	Sintered, porous type 316 SS
Retainer	300 series SS	300 series SS
Warning (brass internals only)	N/A	**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SSN Order Codes (products in bold are normally stock in North America)

Model	Heavy Oil	Water	Air
1/4" Brass	**SSN517**	**SSN515**	**SSN516**
1/4" SS	**SSN520**	**SSN518**	**SSN519**
1/2" Brass	SSN514	SSN512	SSN513
1/2" SS	**SSN531**	**SSN529**	SSN530

SSN-LF Order Codes (products in bold are normally stock in North America)

Model	Water
1/4" Brass	**SSN515LF**
1/2" Brass	**SSN512LF**

1/4" Snubber

1/2" Snubber

SSP Syphon

Note: RoHS applies only to 304 SS and 316 SS syphons

Description & Features:

- On steam service, the syphon will prevent hot steam from entering a pressure gauge, diaphragm seal or transmitter
- Available in brass/steel for non-corrosive applications and stainless steel for corrosive applications
- CRN registered
- 5 year warranty

Applications:

- Recommended for applications involving temperatures above 100°F (37°C)
- Ideal for steam installations

Specifications	
Material	Schedule 40 brass, schedule 40, 80 carbon steel, 304 SS or 316 SS (all types seamless)
Style	180° coil
Connection	1/4” NPTM x 1/4” NPTM or 1/2” NPTM x 1/2” NPTM
Maximum Operating Pressure	Schedule 40: Brass, carbon steel, 304 SS, 316 SS suitable up to 500 psi at 680°F (360°C) Schedule 80: Carbon steel, 304 SS, 316 SS suitable up to 1,650 psi at 630°F (332°C)
Warning (brass syphons only)	**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Order Codes (products in bold are normally stock in North America)

Material	1/4” NPT	1/2” NPT
Schedule 40 Brass	**SSP545**	SSP559
Schedule 40 Carbon Steel	**SSP525**	**SSP555**
Schedule 40 304 SS	**SSP535**	**SSP585**
Schedule 40 316 SS	**SSP554**	**SSP557**
Schedule 80 Carbon Steel	**SSP556**	**SSP2715**
Schedule 80 304 SS	SSP595	SSP2716
Schedule 80 316 SS	-	SSP2719

Note: Schedule 80 316 SS and extra-extra strong schedule available

1/4” Syphon

1/2” Syphon

Test Plugs Gauge Adaptor Plug

Description & Features:

- Facilitates quick pressure and temperature readings at recommended test points within process
- Test plugs are available in brass or lead free brass wetted parts
- Gauge adapters ship with protective aluminum sleeve
- ASME B1.20.1 compliant
- CRN registered
- 5 year warranty

LEAD FREE

Applications:

- Mainly used in plumbing, heating, ventilation and air conditioning installations
- Lead free version for potable water systems

Specifications	
Body	STP: Brass STP-LF: Lead free brass
Diaphragm/Core	NBR (Buna N)
Temperature Rating	-40°F to 302°F (-40°C to 150°C)
Maximum Pressure Rating	1,000 psi (6,895 kPa)
Connection	1/4” NPT or 1/2” NPT
Warning	⚠ **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

STP Order Codes (products in bold are normally stock in North America)

Brass Test Plug	
1/4” NPTM	**STP001**
1/2” NPTM	**STP002**

Gauge Adaptor	
2.75 OAL x 1.75” x 0.125” probe	**STP003**
2.25 OAL x 1.75” x 0.125” probe	STP004

STP-LF Order Codes (products in bold are normally stock in North America)

Lead Free Brass Test Plug	
1/4” NPTM	**STP001LF**
1/2” NPTM	**STP002LF**

Other sizes and materials available upon request.

1/4” Test Plug

1/2” Test Plug

Gauge Adaptor 2.25”

Gauge Adaptor 2.75”

Diaphragm Seals Selection Guide

Process Media and Material Compatibility: Since the wetted parts of the diaphragm seal assembly, which consist of the lower housing and diaphragm element itself, as well as any gaskets, will come in contact with the process, it is imperative to ensure the proper material is selected. The material selected must be compatible with all the various chemicals the seal may come in contact with while in service.

Temperature (Process & Ambient): Each diaphragm seal assembly is filled with an amount of fill fluid at ambient temperature. The increase of process or media temperature can cause the fill fluid to expand, creating a larger volume and pressure build up in the assembly.

Pressure Instrument: The diaphragm seal chosen must have the ability to provide enough volumetric displacement to drive the instrument through it's full range. A rule of thumb is as follows: The lower the pressure, the more displacement is needed. The larger the gauge, the more displacement is needed. The smaller the diaphragm, the less displacement it can provide.

Process Connection and Orientation: The most common connections for diaphragm seals are threaded from 1/4" to 1" NPT and flanged. Be sure to specify both the flange size and rating when selecting a flanged seal.

Pressure Range: As stated above the diaphragm selected must be able to handle the pressure range to be sensed. The lower the pressure, the larger the diaphragm element must be to ensure sensitivity and proper displacement.

Response Time: Response time to sudden changes in process pressure can be effected by many things, such as size of the diaphragm, viscosity of the fill fluid, ambient and process temperatures and the use of capillary for remote mounted gauges.

Fill Fluid: Fill fluid selection is critical to the performance of the diaphragm seal assembly. Process and ambient temperatures, pressure and compatibility with the process media must be considered. Inert fills such as Halocarbon®, Fluorolube® and Krytox® must be specified when oxidizers are present.

	Series	Instrument Connection			Process Connection							Wetted Parts Material									Pressure Range								
Catalogue Page		1/4" NPT	1/2" NPT	1/2" NPT Male	1/4" NPT	1/2" NPT	3/4" NPT	≥1" NPT	Tri-Clamp®	RF Flange	Wafer Flange	Buna	Hastelloy® C	Monel®	PVC	Stainless Steel	Tantalum	PTFE	FKM	Other	Vac - 200 psi	30-600 psi	Vac - 1,000 psi	30-1,000 psi	30-1,300 psi	30-2,500 psi	50-5,800 psi	1,000-6,000 psi	RoHS compliant
160	D10 PVC 2-Piece Seal	X			X	X									X			X			X								
161	D15 Threaded Flush Mount Seal	X					X									X											X	X	X
162	D20 Sanitary Seal	X							X							X						X							X
163	D30 High Pressure Seal	X			X											X												X	X
164	D40 Medium Duty Seal	X	X		X	X										X								X					X
165	D44 Flanged Seal (PTFE)	X	X							X								X					X						
167	D44 Flanged Seal All Welded	X	X							X			X	X	X	X	X	X	X	X						X			
169	D46 Flanged Flush Mount Seal	X	X							X						X									X				
170	D70 Heavy Duty 2-Piece Industrial Seal	X	X		X	X	X	X				X	X	X		X		X	X							X			X
172	D71 NACE 2-Piece Seals	X	X		X	X		X				X	X					X	X							X			
174	D81 Isolation Ring	X	X	X				X			X	X	X		X	X		X	X	X			X						
176	D85 In Line Flow Thru Seal	X	X		X	X	X	X								X						X							
177	D90 Saddle Weld Seal	X	X					X					X	X		X	X	X	X	X		X							

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Halocarbon® is a registered trademark of Halocarbon Products Corporation
Krytox® is a registered trademark of DuPont Corporation
Monel® is a registered trademark of Inco Alloys International
Tri-Clamp® is a registered trademark of Tri-Clover

Note: When selecting a diaphragm seal, always refer to ASME B40.100 (2013)

Vacuum to 200 psi (-100 to 1,380 kPa)

Description & Features:

- Features a durable and flexible PTFE diaphragm seal, which serves as a protective barrier between the process fluid and instrument
- High accuracy and dependability
- ASME B40.100 compliant
- 5 year warranty

Applications:

- Provides an economical solution to protect instruments from corrosion and clogging
- Used to isolate and protect a pressure instrument on ultra-pure or highly corrosive fluid lines
- Can be used with liquids such as demineralized water, sulphuric acid, hydrochloric acid and caustic gases (such as corrosive air and ammonia), where such fluids will corrode metal instruments
- Review of chemical compatibility is available upon request

Specifications	
Housing	PVC (Polyvinyl Chloride, Type 1, Grade 1)
Diaphragm	PTFE
Minimum Operating Pressure	Vacuum
Maximum Operating Pressure	200 psi (1,380 kPa)
Gauge Connection	1/4” NPTF
Process Connection	1/4”, 1/2” NPTF
Process Temperature	77°F to 104°F (25°C to 40°C)

Order Codes (products in bold are normally stock in North America)

1/4” NPTF x 1/4” NPTF	1/4” NPTF x 1/2” NPTF
D10985	D10986

D15 Threaded Flush Mount Seal

50 to 5,800 psi (345 to 40,000 kPa)

Description & Features:

- Constructed with a welded diaphragm placed at the end of the male NPT connection, eliminating the normal diaphragm chamber where solidification of the process media may render the seal inoperable
- Rugged and suitable for the most severe process applications
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Suitable for any process where freezing or solidification of the pressure media is a concern

Specifications	
Housing	AISI 316 SS
Diaphragm	AISI 316L SS, welded
Minimum Operating Pressure	50 psi (345 kPa)
Maximum Operating Pressure	5,800 psi (40,000 kPa)
Gauge Connection	1/4” NPTF
Process Connection	3/4” NPTM
Process Temperature	-20°F to 360°F (-29°C to 182°C)

Order Codes

1/4” NPTF x 3/4” NPTM
D15992

Option suffix for above order code only:
SF-D = Silicone fill (seal only)

30 to 600 psi (200 to 4,140 kPa)

Description & Features:

- Meets the requirements of dairy, food, beverage, chemical and pharmaceutical industries
- 3A approved
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- D20 may be attached to any Winters all SS gauge for sanitary installations.

Specifications	
Housing	AISI 316 SS
Diaphragm	AISI 316L SS, welded
Minimum Operating Pressure	30 psi (200 kPa)
Maximum Operating Pressure	600 psi (4,140 kPa)
Gauge Connection	1/4" NPTF
Process Connection	1.5" (40mm) and 2" (50mm) Tri-Clamp® fitting standard
Process Temperature	-4°F to 248°F (-20°C to 120°C)
Surface Finish	8 Ra

Order Codes

1.5" (40mm)	2" (50mm)
D20980	D20976

Option suffix for above order codes only:
SF-D = Silicone fill (seal only)

1.5" Tri-Clamp®

2" Tri-Clamp®

Tri-Clamp® is a registered trademark of Tri-Clover

D30 High Pressure Seal

1,000 to 6,000 psi (6,900 to 41,300 kPa)

Description & Features:

- Compact, lightweight and economical
- Constructed of AISI 316 stainless steel and is welded together into a one piece unit
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Offers protection for pressure instruments (gauges and transmitters) from corrosive, contaminated or viscous media
- Ideally suited for applications where space limitations exist

Specifications	
Housing	AISI 316 SS
Diaphragm	AISI 316L SS, welded
Minimum Operating Pressure	1,000 psi (6,900 kPa)
Maximum Operating Pressure	6,000 psi (41,300 kPa)
Gauge Connection	1/4” NPTF
Process Connection	1/4” NPTF or NPTM
Process Temperature	-49°F to 302°F (-45°C to 150°C)

Order Codes

1/4” NPTF x 1/4” NPTF	1/4” NPTF x 1/4” NPTM
D30975	D30976

Option suffix for above order codes only:
SF-D = Silicone fill (seal only)

30 to 1,000 psi (200 to 6,900 kPa)

Description & Features:

- Compact (one piece), lightweight and economical
- ASME B40.100 compliant
- CRN registered
- 5 year warranty

Applications:

- Ideally suited for applications where space limitations exist
- Primarily utilized to protect gauges and transmitters from corrosive media
- Utilized in many OEM applications

	Specifications
Housing	AISI 316 SS
Diaphragm	AISI 316L SS, welded
Minimum Operating Pressure	30 psi (200 kPa)
Maximum Operating Pressure	1,000 psi (6,900 kPa)
Gauge Connection	1/4", 1/2" NPTF
Process Connection	1/4", 1/2" NPTF or NPTM
Process Temperature	-49°F to 302°F (-45°C to 150°C)

Order Codes (products in bold are normally stock in North America)

Connection	1/4" x 1/4" NPT	1/4" x 1/2" NPT	1/2" x 1/2" NPT
F x F	**D40973**	**D40972**	**D40974**
F x M	D40975	D40976	D40977

Option suffix for above order codes only:
SF-D = Silicone fill (seal only)

D44 Flanged Seal (PTFE)

Vac to 1,000 psi (0 to 6.900 kPa)

Description & Features:

- "Continuous use" seals - backing plate will prevent diaphragm from rupturing if pressure sensing instrument fails. Pressure will be held until instrument is replaced
- Various sizes and housing materials available
- ASME B40.100 compliant
- 5 year warranty

Applications:

- Used in industrial applications such as oil refineries, pulp and paper mills and chemical plants

Specifications	
Housing	316 SS, Monel®, Hastelloy® B & C, titanium, tantalum, PVC, carbon steel, PTFE, acetal, other (nickel plated carbon steel or SS upper housing standard)
Diaphragm	PTFE for increased compatibility, sensitivity and versatility
Construction	Two piece construction
Connection	1/4", 1/2" NPTF gauge connections standard (other NPTF gauge connections available) 1" (25mm), 1.5" (40mm) and 2" (50mm) pipe size and #150 and #300 pressure rating standard (other configurations available)
Maximum Temperature Limit	400°F (204°C)

Order Codes

Type*	Instrument Connection	Diaphragm Material	Lower Housing Wetted Parts	Upper Housing Non-Wetted Parts	
				Carbon Steel	Stainless Steel
1" - 150#RF				Code	
PTFE Diaphragm	1/4" NPTF	PTFE	316 SS - PTFE lined	D44003	D44004
	1/2" NPTF			D44001	D44002
1" - 300#RF					
PTFE Diaphragm	1/4" NPTF	PTFE	316 SS - PTFE lined	D44007	D44008
	1/2" NPTF			D44005	D44006
1.5" - 150#RF					
PTFE Diaphragm	1/4" NPTF	PTFE	316 SS - PTFE lined	D44011	D44012
	1/2" NPTF			D44009	D44010
1.5" - 300#RF					
PTFE Diaphragm	1/4" NPTF	PTFE	316 SS - PTFE lined	D44015	D44016
	1/2" NPTF			D44013	D44014
2" - 150#RF					
PTFE Diaphragm	1/4" NPTF	PTFE	316 SS - PTFE lined	D44019	D44020
	1/2" NPTF			D44017	D44018
2" - 300#RF					
PTFE Diaphragm	1/4" NPTF	PTFE	316 SS - PTFE lined	D44023	D44024
	1/2" NPTF			D44021	D44022

*Replaceable diaphragms available

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150# RF C/W OPTIONAL FLUSHING PORT

300# RF C/W OPTIONAL FLUSHING PORT

D44 Flanged Seal All Welded

30 to 2,500 psi (200 to 17,250 kPa)

Description & Features:

- "Continuous use" seals - backing plate will prevent diaphragm from rupturing if pressure sensing instrument fails. Pressure will be held until instrument is replaced
- Various sizes and housing materials available
- ASME B40.100 compliant
- 5 year warranty
- CRN registered for 316SS and Hastelloy® C-276 materials

Applications:

- Used in industrial applications such as oil refineries, pulp and

Specifications	
Housing	316 SS, Monel®, Hastelloy® B & C, titanium, tantalum, PVC, carbon steel, PTFE, acetal, other (nickel plated carbon steel or SS upper housing standard)
Construction	Two piece construction
Connection	1/4", 1/2" NPTF gauge connections standard (other NPTF gauge connections available) 1" (25mm), 1.5" (40mm) and 2" (50mm) pipe size and #150 and #300 pressure rating standard (other configurations available)
Maximum Temperature Limit	450°F (232°C) PTFE lined: 400°F (204°C) (higher temperature limits available)
Other	Cleanout type for easy cleaning and calibrating. Saddle diaphragm seals available upon request. Flushing connections available

Order Codes

Type*	Instrument Connection	Diaphragm Material	Lower Housing Wetted Parts	Upper Housing Non-Wetted Parts	
				Carbon Steel	Stainless Steel
1" - 150#RF				**Code**	
Welded Diaphragm	1/4" NPTF	316 SS	316 SS	D441150SS25CS	D441150SS25SS
		Tantalum	316 SS - PTFE lined	D441150UL25CS	D441150UL25SS
		Hastelloy® C	Monel®	D441150HM25CS	D441150HM25SS
		Hastelloy® C	Hastelloy® C	D441150HH25CS	D441150HH25SS
	1/2" NPTF	316 SS	316 SS	D441150SS5CS	D441150SS5SS
		Tantalum	316 SS - PTFE lined	D441150UL5CS	D441150UL5SS
		Hastelloy® C	Monel®	D441150HM5CS	D441150HM5SS
		Hastelloy® C	Hastelloy® C	D441150HH5CS	D441150HH5SS
1" - 300#RF				**Code**	
Welded Diaphragm	1/4" NPTF	316 SS	316 SS	D441300SS25CS	D441300SS25SS
		Tantalum	316 SS - PTFE lined	D441300UL25CS	D441300UL25SS
		Hastelloy® C	Monel®	D441300HM25CS	D441300HM25SS
		Hastelloy® C	Hastelloy® C	D441300HH25CS	D441300HH25SS
	1/2" NPTF	316 SS	316 SS	D441300SS5CS	D441300SS5SS
		Tantalum	316 SS - PTFE lined	D441300UL5CS	D441300UL5SS
		Hastelloy® C	Monel®	D441300HM5CS	D441300HM5SS
		Hastelloy® C	Hastelloy® C	D441300HH5CS	D441300HH5SS

*Replaceable and PTFE diaphragms available
Other materials, pipe size and pressure ratings available upon request

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Order Codes

Type*	Instrument Connection	Diaphragm Material	Lower Housing Wetted Parts	Upper Housing Non-Wetted Parts	
				Carbon Steel	Stainless Steel
1.5" - 150#RF				**Code**	
Welded Diaphragm	1/4" NPTF	316 SS	316 SS	D4415150SS25CS	D4415150SS25SS
		Tantalum	316 SS - PTFE lined	D4415150UL25CS	D4415150UL25SS
		Hastelloy® C	Monel®	D4415150HM25CS	D4415150HM25SS
		Hastelloy® C	Hastelloy® C	D4415150HH25CS	D4415150HH25SS
	1/2" NPTF	316 SS	316 SS	D4415150SS5CS	D4415150SS5SS
		Tantalum	316 SS - PTFE lined	D4415150UL5CS	D4415150UL5SS
		Hastelloy® C	Monel®	D4415150HM5CS	D4415150HM5SS
		Hastelloy® C	Hastelloy® C	D4415150HH5CS	D4415150HH5SS
1.5" - 300#RF				**Code**	
Welded Diaphragm	1/4" NPTF	316 SS	316 SS	D4415300SS25CS	D4415300SS25SS
		Tantalum	316 SS - PTFE lined	D4415300UL25CS	D4415300UL25SS
		Hastelloy® C	Monel®	D4415300HM25CS	D4415300HM25SS
		Hastelloy® C	Hastelloy® C	D4415300HH25CS	D4415300HH25SS
	1/2" NPTF	316 SS	316 SS	D4415300SS5CS	D4415300SS5SS
		Tantalum	316 SS - PTFE lined	D4415300UL5CS	D4415300UL5SS
		Hastelloy® C	Monel®	D4415300HM5CS	D4415300HM5SS
		Hastelloy® C	Hastelloy® C	D4415300HH5CS	D4415300HH5SS
2" - 150#RF				**Code**	
Welded Diaphragm	1/4" NPTF	316 SS	316 SS	D442150SS25CS	D442150SS25SS
		Tantalum	316 SS - PTFE lined	D442150UL25CS	D442150UL25SS
		Hastelloy® C	Monel®	D442150HM25CS	D442150HM25SS
		Hastelloy® C	Hastelloy® C	D442150HH25CS	D442150HH25SS
	1/2" NPTF	316 SS	316 SS	D442150SS5CS	D442150SS5SS
		Tantalum	316 SS - PTFE lined	D442150UL5CS	D442150UL5SS
		Hastelloy® C	Monel®	D442150HM5CS	D442150HM5SS
		Hastelloy® C	Hastelloy® C	D442150HH5CS	D442150HH5SS
2" - 300#RF				**Code**	
Welded Diaphragm	1/4" NPTF	316 SS	316 SS	D442300SS25CS	D442300SS25SS
		Tantalum	316 SS - PTFE lined	D442300UL25CS	D442300UL25SS
		Hastelloy® C	Monel®	D442300HM25CS	D442300HM25SS
		Hastelloy® C	Hastelloy® C	D442300HH25CS	D442300HH25SS
	1/2" NPTF	316 SS	316 SS	D442300SS5CS	D442300SS5SS
		Tantalum	316 SS - PTFE lined	D442300UL5CS	D442300UL5SS
		Hastelloy® C	Monel®	D442300HM5CS	D442300HM5SS
		Hastelloy® C	Hastelloy® C	D442300HH5CS	D442300HH5SS

*Replaceable and PTFE diaphragms available
Other fill fluids (seal only), materials, pipe size and pressure ratings available upon request.
For technical drawings, refer to D44 PTFE.

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D46 Flanged Flush Mount Seal

30 to 1,300 psi (207 to 8,970 kPa)

Description & Features:

- One-piece design - no internal gaskets or o-rings
- Diaphragm is flush to the gasket sealing surface so no internal cavities for media buildup
- Various sizes available
- ASME B40.100 compliant
- 5 year warranty

Applications:

- Oil refineries, pulp and paper mills, chemical plants
- Where media buildup is a concern

Specifications	
Housing	316 SS
Diaphragm	316L SS bonded to housing
Construction	One piece construction
Connection	1/4", 1/2" NPTF gauge connections standard 1.5" (40mm), 2" (50mm) and 3" (75mm) pipe size
Maximum Temperature Limit	450°F (232°C)

Order Codes

Type	Instrument Connection	Code
2" - 150#RF	1/4" NPTF	D462548
	1/2" NPTF	D462549
2" - 300#RF	1/4" NPTF	D462550
	1/2" NPTF	D462551
2" - 600#RF	1/4" NPTF	D462552
	1/2" NPTF	D462553
3" - 150#RF	1/4" NPTF	D462554
	1/2" NPTF	D462555
3" - 300#RF	1/4" NPTF	D462556
	1/2" NPTF	D462557
3" - 600#RF	1/4" NPTF	D462558
	1/2" NPTF	D462559

Pipe Size	Rating	A	B	C	D
2"	150#	6"	0.88"	3.6"	2.2"
	300#	6.5"	0.88"		
	600#		1.25"		
3"	150#	7.5"	0.94"	5"	2.2" or 3"
	300#	8.2"	1.12"		
	600#		1.5"		

Other sizes available upon request

30 to 2,500 psi (207 to 17,250 kPa)

Description & Features:

- Two piece construction and designed to withstand even the most severe process applications
- “Continuous use” seals - backing plate will prevent diaphragm from rupturing if pressure sensing instrument fails. Pressure will be held until instrument is replaced
- Diaphragm is separable for servicing and is available with a 1/8” NPT or 1/4” NPT flushing connection for removing any material which may clog the process connection
- Standard diaphragm is constructed of AISI 316L stainless steel and welded to the upper chamber of the seal for pressures 30 psi (200 kPa) and above; optional FKM diaphragm available for ranges from 30” Hg Vacuum (-100 kPa) up to 100 psi (690 kPa). Other diaphragms available
- FKM diaphragm is highly recommended for applications less than 10 psi
- ASME B40.100 compliant
- CRN registered (all 316 SS only)
- 5 year warranty

Applications:

- Where the process fluid is corrosive or viscous and would clog instrument internals/solidify within the pressure gauge, switch or transmitter

Specifications	
Housing	316L SS, Monel®, Hastelloy® C
Diaphragm	316L SS, Monel®, Hastelloy® C, FKM
Construction	Two piece construction
Gasket Material	Buna N (FKM, PTFE optional)
Connection	Bottom: 1/4”, 1/2”, 3/4” and 1” NPTF Top: 1/4” and 1/2” NPTF
Process Temperature	-22°F to 212°F (-30°C to 100°C)
Other	Flushing connection available. Other materials such as PTFE, PVC, carbon steel, Alloy 20, Hastelloy® B, titanium, tantalum, Inconel 825, Inconel 625, Inconel 600, Duplex SS, Super Duplex SS, 316/316L Dual Certified, Monel 400 etc are available upon request

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D70 Heavy Duty 2-Piece Industrial Seal

Order Codes (products in bold are normally stock in North America)

Lower Housing (Bottom)	
316L SS, 1/4" NPTF	**D70954**
316L SS, 1/2" NPTF	**D70956**
316L SS, 1/2" NPTF with flushing	**D70957**
316L SS, 3/4" NPTF	D70963
316L SS, 3/4" NPTF with flushing	D70959
316L SS, 1" NPTF	**D70964**
316L SS, 1" NPTF with flushing	D70965
316L SS, 1/4" NPTF FKM	D70954V
316L SS, 1/2" NPTF FKM	D70956V
316L SS, 1/2" NPTF with flushing, FKM	D70957V
316L SS, 3/4" NPTF with flushing, FKM	D70959V
316L SS, 3/4" NPTF FKM	D70963V
316L SS, 1" NPTF FKM	D70964V
316L SS, 1" NPTF with flushing, FKM	D70965V
Monel®, 1/4" NPTF	D70954M
Monel®, 1/2" NPTF	D70956M
Monel®, 1/2" NPTF with flushing	D70957M
Monel®, 3/4" NPTF with flushing	D70959M
Monel®, 3/4" NPTF	D70963M
Monel®, 1" NPTF	D70964M
Monel®, 1" NPTF with flushing	D70965M
Hastelloy® C, 1/4" NPTF	D70954HASC
Hastelloy® C, 1/2" NPTF	D70956HASC
Hastelloy® C, 1/2" NPTF with flushing	D70957HASC
Hastelloy® C, 3/4" NPTF with flushing	D70959HASC
Hastelloy® C, 3/4" NPTF	D70963HASC
Hastelloy® C, 1" NPTF	D70964HASC
Hastelloy® C, 1" NPTF with flushing	D70965HASC

Upper Housing (Top)	
316L SS, 1/4" NPTF 316L SS diaphragm	**D70950**
316L SS, 1/4" NPTF Monel® diaphragm	D70950M
316L SS, 1/4" NPTF Hastelloy® C diaphragm	D70950HASC
316L SS, 1/4" NPTF FKM diaphragm	D70951
316L SS, 1/2" NPTF 316L SS diaphragm	**D70952**
316L SS, 1/2" NPTF Monel® diaphragm	D70952M
316L SS, 1/2" NPTF Hastelloy® C diaphragm	D70952HASC
316L SS, 1/2" NPTF FKM diaphragm	**D70953**

Option suffix for above order code only:
SF-D = Silicone fill (seal only)
FL-D = Fluorolube fill (seal only)
Other fill fluids (seal only) available upon request

Note: Both upper and lower housing must be specified
Example: D70950 - D70956

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30 to 2,500 psi (207 to 17,250 kPa)

Description & Features:

- Can be used on applications requiring a NACE compliant MR0103-2003 diaphragm seal
- ASME B40.100 compliant
- 5 year warranty

Applications:

- Sour gas applications requiring instrumentation that meet NACE International Standards

Specifications	
Housing	Hastelloy® C
Diaphragm	Hastelloy® C, welded
Construction	Two piece construction
Gasket Material	Buna N (FKM, PTFE optional)
Connection	Top: 1/4" and 1/2" NPTF Bottom: 1/4", 1/2", 3/4" and 1" NPTF
Process Temperature	-22°F to 212°F (-30°C to 100°C)
Other	Flushing connections available. Other materials available upon request.

Order Codes

Upper Housing (Top)	
Hast. C, 1/4" NPTF conn., Hastelloy® C diaphragm	D71966HASC75
Hast. C, 1/2" NPTF conn., Hastelloy® C diaphragm	D71967HASC75
Lower Housing (Bottom)	
Hastelloy® C, 1/4" NPTF	D71954HASC75
Hastelloy® C, 1/2" NPTF	D71956HASC75
Hastelloy® C, 1/2" NPTF with flushing	D71957HASC75
Hastelloy® C, 3/4" NPTF	D71963HASC75
Hastelloy® C, 3/4" NPTF with flushing	D71959HASC75
Hastelloy® C, 1" NPTF	D71964HASC75
Hastelloy® C, 1" NPTF with flushing	D71965HASC75

Option suffix for above order code only:

SF-D = Silicone fill (seal only)
FL-D = Fluorolube fill (seal only)
Other fill fluids (seal only) available upon request

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D71 NACE 2-Piece Seal (Monel®)

30 to 2,500 psi (207 to 17,250 kPa)

Description & Features:

- Can be used on applications requiring a NACE compliant MR0175-2003 diaphragm seal
- ASME B40.100 compliant
- 5 year warranty

Applications:

- Sour gas applications requiring instrumentation that meet NACE International Standards

Specifications	
Housing	316 SS
Diaphragm	Monel®, welded
Construction	Two piece construction
Gasket Material	Buna N (FKM, PTFE optional)
Connection	Top: 1/4" and 1/2" NPTF Bottom: 1/4", 1/2", 3/4" and 1" NPTF
Process Temperature	-22°F to 212°F (-30°C to 100°C)
Other	Flushing connections available. Other materials available upon request.

Order Codes

Upper Housing (Top)	
316 SS, 1/4" NPTF Monel® diaphragm	D7195003
316 SS, 1/2" NPTF Monel® diaphragm	D7195203
Lower Housing (Bottom)	
316 SS, 1/4" NPTF	D7195403
316 SS, 1/2" NPTF	D7195603
316 SS, 1/2" NPTF with flushing	D7195703
316 SS, 3/4" NPTF	D7196303
316 SS, 3/4" NPTF with flushing	D7195903
316 SS, 1" NPTF	D7196403
316 SS, 1" NPTF with flushing	D7196503

Option suffix for above order code only:

SF-D = Silicone fill (seal only)
FL-D = Fluorolube fill (seal only)
Other fill fluids (seal only) available upon request

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Vacuum to 1,000 psi (100 to 6,900 kPa)

Description & Features:

- Various materials and configurations available to fit your specific application
- Unique WinCONNECT fitting allows for easy field removal of gauge or switch for calibration, repair or replacement without interrupting process flow
- Thicker break-resistant instrument stem
- Optional tees for installation of multiple instruments
- ASME B40.100 compliant
- 5 year warranty

Applications:

- This isolation ring is ideal for measuring pressures of viscous or slurry media, utilizing a flow-through system that eliminates clogging or pressure blocking from occurring
- Designed for installation in water treatment facilities, mining and pulp & paper plants

Note: WinCONNECT comes standard with all D81 Isolation Rings

Order Codes

Specifications		
Sensor Type	WIR	Wafer, nests inside bolt circle
	RIR	Full flange (150# standard, 300# optional)
	SIR	Threaded connections
Pipe I.D.	1” - 48”	1” (25mm) up to 48” (1,220mm). Consult factory for larger sizes
Centre Section	C	Carbon Steel
	S	316 SS
End Plates	C	Carbon Steel
	S	316 SS
	A	Acetal
	TEF	PTFE
	H	Hastelloy® C
	T	Titanium
	U	UHMW / Ultra High Molecular Weight Polyethylene
Elastomer (Sleeve)	N	Neoprene (-20°F to 220°F)
	B	Nitrile (Buna N) (-20°F to 180°F)
	E	EPDM (-20°F to 300°F)
	P	PTFE (-40°F to 400°F)
	V	Fluoroelastomer (FKM) (-4°F to 392°F)
	R	Natural rubber (-49°F to 212°F)
Fill Fluid	SF	Silicone (standard)
	GF	Glycerin
	GW	Glycerin and water
Instrument Connection	4N	1/4” NPTF
	2N	1/2” NPTF

Note: Confirm the orientation upon time of ordering

Not all options are available with all sensor types

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D81 Isolation Ring

Isolation Ring - Wafer Style (WIR)

Dimensions				
Size	ID	OD	W	N
1”	1”	2.5”	1.24”	1.87”
2”	2.07”	4.00”	1.50”	2.13”
3”	3.07”	5.25”		
4”	4.03”	6.75”		
6”	5.99”	8.63”		2.25”
8”	7.98”	10.88”		2.50”
10”	10.02”	13.25”		2.75”
12”	12.00”	16.00”	1.75”	3.00”
14”	13.25”	17.63”		
16”	15.25”	20.13”		
18”	17.25”	21.50”		
20”	19.25”	23.75”		

Isolation Ring - Full Flange (RIR)

Dimensions								
ANSI ASME CLASS	Size	ID	OD	W	N	BC	BD	Number of Mounting Holes
150#	1”	1”	4.25”	1.24”	1.87”	3.27”	0.75”	4
	2”	2.07”	6.00”	1.50”	2.13”	4.75”	0.75”	4
	3”	3.07”	7.50”			6.00”		
	4”	4.03”	9.00”			7.50”		8
	6”	6.07”	11.00”		2.25”	9.50”	0.88”	
	8”	7.98”	13.50”		2.50”	11.75”		
	10”	10.02”	16.00”		2.75”	14.25”	1.00”	12
300#	2”	2.07”	6.50”		2.13”	5.00”	0.75”	8
	3”	3.07”	8.25”			6.62”	0.88”	
	4”	4.03”	10.00”			7.88”		
	6”	6.07”	12.50”		2.25”	10.62”		12
	8”	7.98”	15.00”		2.50”	13.00”	1.00”	
	10”	10.02”	17.50”		2.75”	15.25”	1.13”	16

Isolation Ring - Threaded (SIR)

Dimensions		
Size N	A	B
0.5”	2.50”	2.87”
0.75”		
1”		3.37”
1.5”	3.25”	
2”	4.00”	
3”	5.25”	
4”	6.75”	4.12”

WinCONNECT Order Codes

Connection	Material	Code
1/2” Process x 1/4” Instrument	Stainless Steel	FIR0400
1/2” Process x 1/2” Instrument		FIR0200

30 to 600 psi (207 to 4,140 kPa)

Description & Features:

- Two piece construction
- Clean-out design allows process media to flow through the seal
- Reduces potential for process media blockages inside diaphragm housing
- ASME B40.100 compliant
- 5 year warranty

Applications:

- Where the process fluid is corrosive or viscous and would clog instrument internals/solidify within the pressure gauge, switch or transmitter

Specifications	
Housing	316 SS
Diaphragm	316 SS welded
Construction	Two piece construction
Connection	Instrument: 1/4”, 1/2” NPTF Process: 1/4”, 1/2”, 3/4”, 1” NPTF or socket weld
Process Temperature	-22°F to 302°F (-30°C to 150°C). Other ranges are available upon request
Other	Other materials such as carbon steel are available upon request

Order Codes

Lower Housing (process conn.)	Upper Housing (instrument conn.)	Code
1/4” NPTF	1/4” NPTF	D852536
	1/2” NPTF	D852537
1/4” Socket Weld	1/4” NPTF	D852538
	1/2” NPTF	D852539
1/2” NPTF	1/4” NPTF	D852540
	1/2” NPTF	D852541
1/2” Socket Weld	1/4” NPTF	D852542
	1/2” NPTF	D852543
3/4” NPTF	1/4” NPTF	D852544
	1/2” NPTF	D852545
3/4” Socket Weld	1/4” NPTF	D852546
	1/2” NPTF	D852547
1” NPTF	1/4” NPTF	D852690
	1/2” NPTF	D852691
1” Socket Weld	1/4” NPTF	D852692
	1/2” NPTF	D852693

A (NPT)	B	C
1/4”	1.25”	1.625”
1/2”	1.5”	2.125”
3/4”	1.625”	2.375”
1”	1.75”	2.625”

Option suffix for above order code only:
SF-D = Silicone fill (seal only)
FL-D = Fluorolube fill (seal only)
Other fill fluids (seal only) available upon request

Larger displacement diaphragms and other materials available upon request.

D90 Saddle Weld Seal

30 to 600 psi (207 to 4,140 kPa)

Description & Features:

- Finished with a cleanout design
- Various pipe sizes 1” (25mm) to 4” (100mm) and housing materials available
- ASME B40.100 compliant
- 5 year warranty

Applications:

- Used in industrial applications such as oil refineries, pulp and paper mills and chemical plants

Specifications	
Housing	316 SS standard. Steel, nickel, 304 SS, acetal, Hastelloy® B available upon request
Diaphragm	316 SS, Monel®, Hastelloy® C, FKM standard. Nickel, PTFE, tantalum, 304 SS, acetal, Hastelloy® B available upon request
Construction	Two piece construction
Connection	1/4”, 1/2” NPTF gauge connections standard (Other NPTF gauges connections available). 1” (25mm), 1.5” (40mm), 2” (50mm), 3” (75mm), 4” (100mm) pipe size standard
Maximum Temperature Limit	450°F (232°C) FKM: 350°F (176°C) (Higher temperature limits available)
Other	Cleanout type for easy cleaning and calibrating

Order Codes

Pipe Size	Diaphragm	Instrument Conn.	Code
1” (25mm)	316 SS	1/4”	D902564
		1/2”	D902560
	Hastelloy® C	1/4”	D902565
		1/2”	D902561
	Monel®	1/4”	D902566
		1/2”	D902562
	FKM	1/4”	D902570
		1/2”	D902563
1.5” (40mm)	316 SS	1/4”	D902575
		1/2”	D902571
	Hastelloy® C	1/4”	D902576
		1/2”	D902572
	Monel®	1/4”	D902577
		1/2”	D902573
	FKM	1/4”	D902578
		1/2”	D902574
2” (50mm)	316 SS	1/4”	D902583
		1/2”	D902579
	Hastelloy® C	1/4”	D902584
		1/2”	D902580
	Monel®	1/4”	D902585
		1/2”	D902581
	FKM	1/4”	D902586
		1/2”	D902582

Hastelloy® is a registered trademark of Haynes International, Inc.
Monel® is a registered trademark of Inco Alloys International

Order Codes

Pipe Size	Diaphragm	Instrument Conn.	Code
3" (75mm)	316 SS	1/4"	D902595
		1/2"	D902587
	Hastelloy® C	1/4"	D902596
		1/2"	D902592
	Monel®	1/4"	D902597
		1/2"	D902593
	FKM	1/4"	D902598
		1/2"	D902594
4" (100mm)	316 SS	1/4"	D902695
		1/2"	D902599
	Hastelloy® C	1/4"	D902696
		1/2"	D902608
	Monel®	1/4"	D902697
		1/2"	D902609
	FKM	1/4"	D902698
		1/2"	D902694

Larger displacement diaphragms and pipe sizes more than 4" available upon request.

Diaphragm Type	Instrument Connection A	Pipe Size B	C	D	U	Hole Diameter
Welded, std.	1/4", 1/2" NPT	1"	2.13" (55mm)	3.5" (89mm)	0.88" (22mm)	1" (25mm)
		1.5"	2.38" (60mm)			1.5" (38mm)
		2"	2.63" (67mm)			
		3"	3.25" (83mm)			
		4"	3.81" (97mm)			
Welded, large		1"	2.13" (55mm)	4.25" (108mm)		1" (25mm)
		1.5"	2.38" (60mm)			1.5" (38mm)
		2"	2.63" (67mm)			
		3"	3.25" (83mm)			
		4"	3.81" (97mm)			
FKM		1"	2.13" (55mm)	3.5" (89mm)	1" (25mm)	1" (25mm)
		1.5"	2.38" (60mm)			1.5" (38mm)
		2"	2.63" (67mm)			
		3"	3.25" (83mm)			

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MVA 2 - Handle Manifolds

Description & Features:

- Rugged and designed for use with differential pressure transmitters and impuse lines
- 2-handle - 1 isolation valve, 1 vent valve
- An isolation valve is located on the top, and the block and bleed are located on the side (90-degree orientation)
- Available in pipe-to-pipe, pipe-to-flange and flange-to-flange configurations
- Many variants of construction available to handle all media requirements
- Soft and Hard seat options; 6,000 psi and 10,000 psi pressure rated
- PTFE packing standard with Graphoil optional
- CRN available upon request
- 5 year warranty

Applications:

- Manifolds are critical in process and industrial environments for the enabling of shut-downs for the testing, repair and upgrading of instruments

Pressure vs Temperature Graph

Manifolds 10000 (689 bar) Material SS 316

Manifolds 6000 psi (414 bar) Material SS 316

Flow Pattern

2-handle - 1 isolation valve, 1 vent valve

Order Codes

*Other material variants available upon request, including Stainless Steel NACE for Sour Gas and Monel

Connection	Material	Seat	Packing Material	Pressure Rating	Code
1/2" NPT Female x 1/2" NPT Female	Stainless Steel	Soft	PTFE	6,000 psi	MVA2SS2P
1/2" NPT Female x Flange	Stainless Steel	Soft	PTFE	6,000 psi	MVA2SS2T
Flange x Flange	Stainless Steel	Soft	PTFE	6,000 psi	MVA2SS2F
1/2" NPT Female x 1/2" NPT Female	Stainless Steel	Hard	PTFE	10,000 psi	MVA2SH2P
1/2" NPT Female x Flange	Stainless Steel	Hard	PTFE	10,000 psi	MVA2SH2T
Flange x Flange	Stainless Steel	Hard	PTFE	10,000 psi	MVA2SH2F

Option suffix: G = Graphoil Packing for High Temperature
N = NACE Compliant

Dimensions (mm)

* 2-Handle Pipe-to-Pipe

Material

Part NO.	Description	Material
1	Body	316SS
2	Gland Body	316SS
3	Stem	316SS
4	Retainer	316SS
5	Bottom Washer	316SS
6	Packing	PTFE
7	Vee Tip	316SS
8	Top Washer	316SS
9	Handle	316SS
10	Thurst Ring	316SS
11	Check Nut	316SS
12	Allen Bolt	B8M

Description & Features:

- Rugged and designed for use with differential pressure transmitters and impuse lines
- 3-handle - 2 isolation valves, 1 equalizing valve
- Available in pipe-to-pipe, pipe-to-flange and flange-to-flange configurations
- Many variants of construction available to handle all media requirements
- Soft and Hard seat options; 6,000 psi and 10,000 psi pressure rated
- PTFE packing standard with Graphoil optional
- CRN available upon request
- 5 year warranty

Applications:

- Designed to be perfectly installed with Winters LY36 Series (with M10x45 bolts) and other differential transmitters
- Manifolds are critical in process and industrial environments for the enabling of shut-downs for the testing, repair and upgrading of instruments

Pressure vs Temperature Graph

Flow Pattern

3-handle - 2 isolation valves, 1 equalizing valve

Order Codes

*Other material variants available upon request, including Stainless Steel NACE for Sour Gas and Monel

Connection	Material	Seat	Packing Material	Pressure Rating	Code
1/2" NPT Female x 1/2" NPT Female	Stainless Steel	Soft	PTFE	6,000 psi	MVA3SS2P
1/2" NPT Female x Flange	Stainless Steel	Soft	PTFE	6,000 psi	MVA3SS2T
Flange x Flange	Stainless Steel	Soft	PTFE	6,000 psi	MVA3SS2F
1/2" NPT Female x 1/2" NPT Female	Stainless Steel	Hard	PTFE	10,000 psi	MVA3SH2P
1/2" NPT Female x Flange	Stainless Steel	Hard	PTFE	10,000 psi	MVA3SH2T
Flange x Flange	Stainless Steel	Hard	PTFE	10,000 psi	MVA3SH2F

Option suffix: G = Graphoil Packing for High Temperature
N = NACE Compliant

Dimensions (mm)

3-Handle Pipe-to-Pipe

Material

Part NO.	Description	Material
1	Body	316SS
2	Gland Body	316SS
3	Stem	316SS
4	Retainer	316SS
5	Bottom Washer	316SS
6	Packing	PTFE
7	Vee Tip	316SS
8	Top Washer	316SS
9	Handle	316SS
10	Thurst Ring	316SS
11	Check Nut	316SS
12	Allen Bolt	B8M

MVA 3 - Handle Direct Mount Manifolds

Description & Features:

- Compact, wafer design for direct mounting
- Rugged and designed for use with differential pressure transmitters and impuse lines
- 3-handle - 2 isolation valves, 1 equalizing valve
- Straight and angled pattern to suit all installation requirements Many variants of construction available to handle all media requirements
- Soft and Hard seat options; 6,000 psi and 10,000 psi pressure rated
- PTFE packing standard with Graphoil optional
- CRN available upon request
- 5 year warranty

Applications:

- Designed to be perfectly installed with Winters LY36 Series (with M10x45 bolts) and other differential transmitters
- Manifolds are critical in process and industrial environments for the enabling of shut-downs for the testing, repair and upgrading of instruments

Pressure vs Temperature Graph

Flow Pattern

3-handle - 2 isolation valves, 1 equalizing valve

Order Codes

*Other material variants available upon request, including Stainless Steel NACE for Sour Gas and Monel

Connection	Handles	Material	Seat	Packing Material	Pressure Rating	Code
Direct Mount x 1/2" NPT Female	Straight	Stainless Steel	Soft	PTFE	6,000 psi	MVA3SS2D
Direct Mount x 1/2" NPT Female		Stainless Steel	Hard	PTFE	10,000 psi	MVA3SH2D
Direct Mount x 1/2" NPT Female		Stainless Steel	Soft	Graphoil	6,000 psi	MVA3SS2DG
Direct Mount x 1/2" NPT Female		Stainless Steel	Hard	Graphoil	10,000 psi	MVA3SH2DG
Direct Mount x 1/2" NPT Female	Angled	Stainless Steel	Soft	PTFE	6,000 psi	MVA3ASS2D
Direct Mount x 1/2" NPT Female		Stainless Steel	Hard	PTFE	10,000 psi	MVA3ASH2D
Direct Mount x 1/2" NPT Female		Stainless Steel	Soft	Graphoil	6,000 psi	MVA3ASS2DG
Direct Mount x 1/2" NPT Female		Stainless Steel	Hard	Graphoil	10,000 psi	MVA3ASH2DG

Option suffix: N = NACE Compliant

Dimensions (mm)

3-Handle Direct Mount

Material

S.NO.	Description	Material
14	Non-rotating Vee tip	630SS
13	Washer	316SS
12	Dust Cap	Plastic Lid
11	Lock Pin	316SS
10	Handle	316SS
9	Grub Screw	Steel
8	Lock Nut	316SS
7	Spindle	316SS
6	Packing Washer	316SS
5	Packing	PTFE
4	Washer	316SS
3	Gland Retainer	316SS
2	Bonnet	316SS
1	Body	316SS

Description & Features:

- Rugged 3 or 5 -handle manifolds are designed for use with differential pressure transmitters and impuse lines
- 1-piece 316 stainless steel body
- 3-handle - 2 isolation valves, 1 equalizing valve
- 5 - handle - 2 isolation valves, 1 equalizing valve and 2 vent valves
- PTFE packing to prevent against corrosion and seized up
- CRN Pending
- 5 year warranty

Applications:

- Designed to be perfectly installed with Winters LY36 Series differential transmitter. Manifolds are critical in process and industrial environments for the enabling of shut-downs for the testing, repair and upgrading of instruments.

Order Codes

	NPT Connection	Material	Seat	Max. Pressure	Code
3 - Handle	1/2" Female x 1/2" Female	Stainless Steel	Hard Set	6,000 psi	MVA32021
5 - Handle	1/2" Female x 1/2" Female	Stainless Steel	Hard Set	6,000 psi	MVA52021

Dimensions (mm)

3 - Handle Manifold

5 - Handle Manifold

MVA 5 - Handle Manifolds

Description & Features:

- Compact, wafer design for direct mounting
- Rugged and designed for use with differential pressure transmitters and impuse lines
- 5-handle - 2 isolation valves, 1 equalizing valve and 2 vent valves
- Available in pipe-to-pipe, pipe-to-flange and flange-to-flange configurations
- Many variants of construction available to handle all media requirements
- Soft and Hard seat options; 6,000 psi and 10,000 psi pressure rated
- PTFE packing standard with Graphoil optional
- CRN available upon request
- 5 year warranty

Applications:

- Designed to be perfectly installed with Winters LY36 Series (with M10x45 bolts) and other differential transmitters
- Manifolds are critical in process and industrial environments for the enabling of shut-downs for the testing, repair and upgrading of instruments

Pressure vs Temperature Graph

Manifolds 10000 (689 bar) Material SS 316

Manifolds 6000 psi (414 bar) Material SS 316

Flow Pattern

5-handle - 2 isolation valves, 1 equalizing valve and 2 vent valves

Order Codes

*Other material variants available upon request, including Stainless Steel NACE for Sour Gas and Monel

Connection	Material	Seat	Packing Material	Pressure Rating	Code
1/2" NPT Female x 1/2" NPT Female	Stainless Steel	Soft	PTFE	6,000 psi	MVA5SS2P
1/2" NPT Female x Flange	Stainless Steel	Soft	PTFE	6,000 psi	MVA5SS2T
Flange x Flange	Stainless Steel	Soft	PTFE	6,000 psi	MVA5SS2F
1/2" NPT Female x 1/2" NPT Female	Stainless Steel	Hard	PTFE	10,000 psi	MVA5SH2P
1/2" NPT Female x Flange	Stainless Steel	Hard	PTFE	10,000 psi	MVA5SH2T
Flange x Flange	Stainless Steel	Hard	PTFE	10,000 psi	MVA5SH2F

Option suffix: G = Graphoil Packing for High Temperature
N - NACE Compliant

Material

Part NO.	Description	Material
1	Body	316F
2	Gland Body	316SS
3	Stem	316SS
4	Retainer	316SS
5	Bottom Washer	316SS
6	Packing	PTFE
7	Vee Tip	174SS
8	Top Washer	316SS
9	Thrust Ring	316SS
10	Check Nut	316SS
11	Gland Body	316SS
12	Stem	316SS
13	Ball	SS440C
14	Set Screw	45H
15	Male Plug	316SS
22	Handle	316SS
23	Allen Bolt	B8M
24	Handle	316SS
25	Allen Bolt	B8M

Dimensions (mm)

5-Handle Pipe-to-Pipe

Description & Features:

- Compact, wafer design for direct mounting
- Rugged and designed for use with differential pressure transmitters and impuse lines
- 5-handle - 2 isolation valves, 1 equalizing valve and 2 vent valves
- Straight and angled pattern to suit all installation requirements
- Many variants of construction available to handle all media requirements
- Soft and Hard seat options; 6,000 psi and 10,000 psi pressure rated
- PTFE packing standard with Graphoil optional
- CRN available upon request
- 5 year warranty

Applications:

- Designed to be perfectly installed with Winters LY36 Series (with M10x45 bolts) and other differential transmitters
- Manifolds are critical in process and industrial environments for the enabling of shut-downs for the testing, repair and upgrading of instruments

Pressure vs Temperature Graph

Manifolds 10000 (689 bar) Material SS 316

Manifolds 6000 psi (414 bar) Material SS 316

Flow Pattern

5-handle - 2 isolation valves, 1 equalizing valve and 2 vent valves

Order Codes

*Other material variants available upon request, including Stainless Steel NACE for Sour Gas and Monel

Connection	Handles	Material	Seat	Packing Material	Pressure Rating	Code
Direct Mount x 1/2" NPT Female	Straight	Stainless Steel	Soft	PTFE	6,000 psi	MVA5SS2D
Direct Mount x 1/2" NPT Female		Stainless Steel	Hard	PTFE	10,000 psi	MVA5SH2D
Direct Mount x 1/2" NPT Female		Stainless Steel	Soft	Graphoil	6,000 psi	MVA5SS2DG
Direct Mount x 1/2" NPT Female		Stainless Steel	Hard	Graphoil	10,000 psi	MVA5SH2DG
Direct Mount x 1/2" NPT Female	Angled	Stainless Steel	Soft	PTFE	6,000 psi	MVA5ASS2D
Direct Mount x 1/2" NPT Female		Stainless Steel	Hard	PTFE	10,000 psi	MVA5ASH2D
Direct Mount x 1/2" NPT Female		Stainless Steel	Soft	Graphoil	6,000 psi	MVA5ASS2DG
1/2" NPT Female		Stainless Steel	Hard	Graphoil	10,000 psi	MVA5ASH2DG

Option suffix: N = NACE Compliant

Material

S.NO.	Description	Material
14	Non-rotating Vee tip	630SS
13	Washer	316SS
12	Dust Cap	Plastic Lid
11	Lock Pin	316SS
10	Handle	316SS
9	Grub Screw	Steel
8	Lock Nut	316SS
7	Spindle	316SS
6	Packing Washer	316SS
5	Packing	PTFE
4	Washer	316SS
3	Gland Retainer	316SS
2	Bonnet	316SS
1	Body	316SS

Dimensions (mm)

5-Handle Direct Mount

NVA Needle Valve (Straight Body, Hard Seat)

Description & Features:

- Excellent flow regulation and leak tight
- The one-piece body construction (no welding) provides strength, safety and corrosion resistance
- "Slow opening" prevents sudden pressure surge and instrument damage
- Materials include carbon steel, carbon steel NACE, stainless steel, stainless steel NACE
- Available in Hard Seat (6,000 and 10,000 psi)
- ASME B1.20.1 compliant
- CRN registered
- 5 year warranty

Applications:

- Highly reliable throttle and block valve for gas or liquid service in severe duty oil and gas installations including refineries and processing plants as well as water treatment plants, power plants and hydraulic applications

Order Codes (products in bold are normally stock in North America)

NPT Connection	Material	Max. Pressure	Code
1/4" Female x 1/4" Female	Carbon Steel	6,000 psi	NVA5020
		10,000 psi	**NVA6020**
1/4" Male x 1/4" Female		6,000 psi	NVA5000
		10,000 psi	NVA6000
3/8" Female x 3/8" Female		6,000 psi	NVA5024
		10,000 psi	NVA6024
3/8" Male x 3/8" Female		6,000 psi	NVA5004
		10,000 psi	NVA6004
1/2" Female x 1/2" Female		6,000 psi	NVA5021
		10,000 psi	**NVA6021**
1/2" Male x 1/2" Female		6,000 psi	NVA5001
		10,000 psi	NVA6001
3/4" Female x 1/2" Female		6,000 psi	NVA5022
		10,000 psi	NVA6022
3/4" Male x 1/2" Female		6,000 psi	NVA5002
		10,000 psi	NVA6002
3/4" Female x 3/4" Female		6,000 psi	NVA5025
		10,000 psi	NVA6025
3/4" Male x 3/4" Female		6,000 psi	NVA5005
		10,000 psi	NVA6005
1" Female x 1" Female		6,000 psi	NVA5023
		10,000 psi	NVA6023
1" Male x 1" Female		6,000 psi	NVA5003
		10,000 psi	NVA6003
1/4" Female x 1/4" Female	Stainless Steel	6,000 psi	**NVA2020**
		10,000 psi	**NVA3020**
1/4" Male x 1/4" Female		6,000 psi	NVA2000
		10,000 psi	NVA3000
3/8" Female x 3/8" Female		6,000 psi	NVA2024
		10,000 psi	NVA3024
3/8" Male x 3/8" Female		6,000 psi	NVA2004
		10,000 psi	NVA3004
1/2" Female x 1/2" Female		6,000 psi	**NVA2021**
		10,000 psi	NVA3021
1/2" Male x 1/2" Female		6,000 psi	NVA2001
		10,000 psi	**NVA3001**
3/4" Female x 1/2" Female		6,000 psi	NVA2022
		10,000 psi	NVA3022
3/4" Male x 1/2" Female		6,000 psi	NVA2002
		10,000 psi	NVA3002
3/4" Female x 3/4" Female		6,000 psi	NVA2025
		10,000 psi	NVA3025
3/4" Male x 3/4" Female		6,000 psi	NVA2005
		10,000 psi	NVA3005
1" Female x 1" Female		6,000 psi	NVA2023
		10,000 psi	NVA3023
1" Male x 1" Female		6,000 psi	NVA2003
		10,000 psi	NVA3003

NPT Connection	Material	Max. Pressure	Code
1/4" Female x 1/4" Female	Carbon Steel (NACE Tip)	6,000 psi	NVA5020N
		10,000 psi	NVA6020N
1/4" Male x 1/4" Female		6,000 psi	NVA5000N
		10,000 psi	NVA6000N
3/8" Female x 3/8" Female		6,000 psi	NVA5024N
		10,000 psi	NVA6024N
3/8" Male x 3/8" Female		6,000 psi	NVA5004N
		10,000 psi	NVA6004N
1/2" Female x 1/2" Female		6,000 psi	NVA5021N
		10,000 psi	NVA6021N
1/2" Male x 1/2" Female		6,000 psi	NVA5001N
		10,000 psi	NVA6001N
3/4" Female x 1/2" Female		6,000 psi	NVA5022N
		10,000 psi	NVA6022N
3/4" Male x 1/2" Female		6,000 psi	NVA5002N
		10,000 psi	NVA6002N
3/4" Female x 3/4" Female		6,000 psi	NVA5025N
		10,000 psi	NVA6025N
3/4" Male x 3/4" Female		6,000 psi	NVA5005N
		10,000 psi	NVA6005N
1" Female x 1" Female		6,000 psi	NVA5023N
		10,000 psi	NVA6023N
1" Male x 1" Female		6,000 psi	NVA5003N
		10,000 psi	NVA6003N
1/4" Female x 1/4" Female	Stainless Steel NACE	6,000 psi	NVA2020N
		10,000 psi	NVA3020N
1/4" Male x 1/4" Female		6,000 psi	NVA2000N
		10,000 psi	NVA3000N
3/8" Female x 3/8" Female		6,000 psi	NVA2024N
		10,000 psi	NVA3024N
3/8" Male x 3/8" Female		6,000 psi	NVA2004N
		10,000 psi	NVA3004N
1/2" Female x 1/2" Female		6,000 psi	NVA2021N
		10,000 psi	NVA3021N
1/2" Male x 1/2" Female		6,000 psi	NVA2001N
		10,000 psi	NVA3001N
3/4" Female x 1/2" Female		6,000 psi	NVA2022N
		10,000 psi	NVA3022N
3/4" Male x 1/2" Female		6,000 psi	NVA2002N
		10,000 psi	NVA3002N
3/4" Female x 3/4" Female		6,000 psi	NVA2025N
		10,000 psi	NVA3025N
3/4" Male x 3/4" Female		6,000 psi	NVA2005N
		10,000 psi	NVA3005N
1" Female x 1" Female		6,000 psi	NVA2023N
		10,000 psi	NVA3023N
1" Male x 1" Female		6,000 psi	NVA2003N
		10,000 psi	NVA3003N

Option suffix:

CPM = Carbon steel panel mount kit SPM = Stainless steel panel mount kit

Material

Description	Component Number	Carbon Steel	Carbon Steel NACE	Stainless Steel	Stainless Steel NACE
Body	1	Carbon Steel	Carbon Steel	316 SS	316 SS NACE
Bonnet	2	Carbon Steel	Carbon Steel	316 SS	316 SS NACE
Adapter Locknut	3	Carbon Steel	Carbon Steel	304 SS	304 SS
Adapter	4	316 SS	316 SS NACE	316 SS	316 SS NACE
Dustcap	5	Nylon	Nylon	Nylon	Nylon
Handle	6	Carbon Steel	Carbon Steel	304 SS	304 SS
Screw	7	304 SS	304 SS	304 SS	304 SS
Fastening Screw	8	304 SS	304 SS	304 SS	304 SS
Needle / Needle Tip	9	316 SS	316 SS NACE	316 SS	316 SS NACE
Gland Washer	10	Carbon Steel	Carbon Steel	304 SS	304 SS
Gland Packing	11	PTFE/Graphite	PTFE/Graphite	PTFE/Graphite	PTFE/Graphite
Dwell Pin	12	Carbon Steel	Carbon Steel	304 SS	304 SS
Gland Packing	13	PTFE/Graphite	PTFE/Graphite	PTFE/Graphite	PTFE/Graphite

Female x Female

Male x Female

Dimensions

Size	H	L	SQ
1/4" Female x 1/4" Female	2.56" (65mm)	3.50" (89mm)	1.10" (28mm)
1/4" Male x 1/4" Female	2.56" (65mm)	3.50" (89mm)	1.10" (28mm)
3/8" Female x 3/8" Female	2.56" (65mm)	3.50" (89mm)	1.10" (28mm)
3/8" Male x 3/8" Female	2.56" (65mm)	3.50" (89mm)	1.10" (28mm)
1/2" Female x 1/2" Female	2.76" (70mm)	3.50" (89mm)	1.10" (28mm)
1/2" Male x 1/2" Female	2.76" (70mm)	3.50" (89mm)	1.10" (28mm)
3/4" Female x 1/2" Female	2.83" (72mm)	3.66" (93mm)	1.26" (32mm)
3/4" Male x 1/2" Female	2.83" (72mm)	3.50" (89mm)	1.10" (28mm)
3/4" Female x 3/4" Female	2.83" (72mm)	3.66" (93mm)	1.26" (32mm)
3/4" Male x 3/4" Female	2.83" (72mm)	3.66" (93mm)	1.26" (32mm)
1" Female x 1" Female	3.23" (82mm)	3.98" (101mm)	1.58" (40mm)
1" Male x 1" Female	3.23" (82mm)	3.98" (101mm)	1.58" (40mm)

Panel Mont Kit (CPM/SPM)

NVA Needle Valve (Angle Body, Hard Seat)

Description & Features:

- Excellent flow regulation and leak tight
- The one-piece body construction (no welding) provides strength, safety and corrosion resistance
- “Slow opening” prevents sudden pressure surge and instrument damage
- Material includes carbon steel, stainless steel and stainless steel NACE
- Available in Hard Seat (6,000 and 10,000 psi)
- ASME B1.20.1 compliant
- CRN registered
- 5 year warranty

Applications:

- Ideally suited for severe duty oil and gas installations including refineries and processing plants as well as water treatment plants, power plants and hydraulic applications

Angle Body Order Codes (products in bold are normally stock in North America)

NPT Connection	Material	Max. Pressure	Code
1/4” Female x 1/4” Female	Carbon Steel	6,000 psi	NVA9030
		10,000 psi	NVA9040
1/4” Male x 1/4” Female		6,000 psi	NVA8030
		10,000 psi	NVA8040
3/8” Female x 3/8” Female		6,000 psi	NVA9034
		10,000 psi	NVA9044
3/8” Male x 3/8” Female		6,000 psi	NVA8034
		10,000 psi	NVA8044
1/2” Female x 1/2” Female		6,000 psi	NVA9031
		10,000 psi	NVA9041
1/2” Male x 1/2” Female		6,000 psi	NVA8031
		10,000 psi	NVA8041
3/4” Female x 1/2” Female		6,000 psi	NVA9032
		10,000 psi	NVA9042
3/4” Male x 1/2” Female		6,000 psi	NVA8032
		10,000 psi	NVA8042
3/4” Female x 3/4” Female		6,000 psi	NVA9035
		10,000 psi	NVA9045
3/4” Male x 3/4” Female		6,000 psi	NVA8035
		10,000 psi	NVA8045
1” Female x 1” Female		6,000 psi	NVA9033
		10,000 psi	NVA9043
1” Male x 1” Female		6,000 psi	NVA8033
		10,000 psi	NVA8043
1/4” Female x 1/4” Female	Stainless Steel	6,000 psi	NVA8020
		10,000 psi	NVA9020
1/4” Male x 1/4” Female		6,000 psi	NVA8000
		10,000 psi	NVA9000
3/8” Female x 3/8” Female		6,000 psi	NVA8024
		10,000 psi	NVA9024
3/8” Male x 3/8” Female		6,000 psi	NVA8004
		10,000 psi	NVA9004
1/2” Female x 1/2” Female		6,000 psi	NVA8021
		10,000 psi	NVA9021
1/2” Male x 1/2” Female		6,000 psi	NVA8001
		10,000 psi	NVA9001
3/4” Female x 1/2” Female		6,000 psi	NVA8022
		10,000 psi	NVA9022
3/4” Male x 1/2” Female		6,000 psi	NVA8002
		10,000 psi	NVA9002
3/4” Female x 3/4” Female		6,000 psi	NVA8025
		10,000 psi	NVA9025
3/4” Male x 3/4” Female		6,000 psi	NVA8005
		10,000 psi	NVA9005
1” Female x 1” Female		6,000 psi	NVA8023
		10,000 psi	NVA9023
1” Male x 1” Female		6,000 psi	NVA8003
		10,000 psi	NVA9003

Angle Body NACE Order Codes

NPT Connection	Material	Max. Pressure	Code
1/4” Female x 1/4” Female	Carbon Steel NACE	6,000 psi	NVA9030N
		10,000 psi	NVA9040N
1/4” Male x 1/4” Female		6,000 psi	NVA8030N
		10,000 psi	NVA8040N
3/8” Female x 3/8” Female		6,000 psi	NVA9034N
		10,000 psi	NVA9044N
3/8” Male x 3/8” Female		6,000 psi	NVA8034N
		10,000 psi	NVA8044N
1/2” Female x 1/2” Female		6,000 psi	NVA9031N
		10,000 psi	NVA9041N
1/2” Male x 1/2” Female		6,000 psi	NVA8031N
		10,000 psi	NVA8041N
3/4” Female x 1/2” Female		6,000 psi	NVA9032N
		10,000 psi	NVA9042N
3/4” Male x 1/2” Female		6,000 psi	NVA8032N
		10,000 psi	NVA8042N
3/4” Female x 3/4” Female		6,000 psi	NVA9035N
		10,000 psi	NVA9045N
3/4” Male x 3/4” Female		6,000 psi	NVA8035N
		10,000 psi	NVA8045N
1” Female x 1” Female		6,000 psi	NVA9033N
		10,000 psi	NVA9043N
1” Male x 1” Female		6,000 psi	NVA8033N
		10,000 psi	NVA8043N
1/4” Female x 1/4” Female	Stainless Steel NACE	6,000 psi	NVA8020N
		10,000 psi	NVA9020N
1/4” Male x 1/4” Female		6,000 psi	NVA8000N
		10,000 psi	NVA9000N
3/8” Female x 3/8” Female		6,000 psi	NVA8024N
		10,000 psi	NVA9024N
3/8” Male x 3/8” Female		6,000 psi	NVA8004N
		10,000 psi	NVA9004N
1/2” Female x 1/2” Female		6,000 psi	NVA8021N
		10,000 psi	NVA9021N
1/2” Male x 1/2” Female		6,000 psi	NVA8001N
		10,000 psi	NVA9001N
3/4” Female x 1/2” Female		6,000 psi	NVA8022N
		10,000 psi	NVA9022N
3/4” Male x 1/2” Female		6,000 psi	NVA8002N
		10,000 psi	NVA9002N
3/4” Female x 3/4” Female		6,000 psi	NVA8025N
		10,000 psi	NVA9025N
3/4” Male x 3/4” Female		6,000 psi	NVA8005N
		10,000 psi	NVA9005N
1” Female x 1” Female		6,000 psi	NVA8023N
		10,000 psi	NVA9023N
1” Male x 1” Female		6,000 psi	NVA8003N
		10,000 psi	NVA9003N

Option suffix:

CPM = Carbon steel panel mount kit SPM = Stainless steel panel mount kit

Material

Description	Component Number	Stainless Steel	Stainless Steel NACE
Body	1	316 SS	316 SS NACE
Bonnet	2	316 SS	316 SS NACE
Dustcap	3	Nylon	Nylon
Needle / Needle Tip	4	316 SS	316 SS NACE
Handle	5	304 SS	304 SS
Screw	6	304 SS	304 SS
Fastening Screws	7	304 SS	304 SS
O-ring	8	FKM	FKM
Dwell Pin	9	304 SS	304 SS

Female x Female

Panel Mont Kit (CPM/SPM)

Male x Female

Panel Mont Kit (CPM/SPM)

Dimensions

Size	H	L	SQ
1/4" Female x 1/4" Female	1.81" (46mm)	3.66" (93mm)	1.10" (28mm)
1/4" Male x 1/4" Female	1.77" (45mm)	3.58" (91mm)	1.10" (28mm)
3/8" Female x 3/8" Female	1.81" (46mm)	3.66" (93mm)	1.10" (28mm)
3/8" Male x 3/8" Female	1.77" (45mm)	3.82" (97mm)	1.10" (28mm)
1/2" Female x 1/2" Female	1.97" (50mm)	3.82" (97mm)	1.10" (28mm)
1/2" Male x 1/2" Female	1.97" (50mm)	3.82" (97mm)	1.10" (28mm)
3/4" Female x 1/2" Female	1.97" (50mm)	3.82" (97mm)	1.26" (32mm)
3/4" Male x 1/2" Female	1.97" (50mm)	3.86" (98mm)	1.10" (28mm)
3/4" Female x 3/4" Female	1.97" (50mm)	3.82" (97mm)	1.26" (32mm)
3/4" Male x 3/4" Female	1.97" (50mm)	3.86" (98mm)	1.26" (32mm)
1" Female x 1" Female	2.48" (63mm)	4.41" (112mm)	1.58" (40mm)
1" Male x 1" Female	2.48" (63mm)	4.41" (112mm)	1.58" (40mm)

NVA Needle Valve (Straight Body, Soft Seat)

Description & Features:

- Excellent flow regulation and leak tight
- The one-piece body construction (no welding) provides strength, safety and corrosion resistance
- "Slow opening" prevents sudden pressure surge and instrument damage
- Materials include carbon steel and stainless steel
- Available in Soft Seat (6,000 psi, Delrin seat)
- ASME B1.20.1 compliant
- CRN registered
- 5 year warranty

Applications:

- Ideally suited for severe duty oil and gas installations including refineries and processing plants, water treatment plants, power plants and hydraulic applications

Order Codes (products in bold are normally stock in North America)

NPT Connection	Material	Code
1/4" Female x 1/4" Female	Carbon Steel	NVA4020
1/4" Male x 1/4" Female		NVA4000
3/8" Female x 3/8" Female		NVA4024
3/8" Male x 3/8" Female		NVA4004
1/2" Female x 1/2" Female		NVA4021
1/2" Male x 1/2" Female		NVA4001
3/4" Female x 1/2" Female		NVA4022
3/4" Male x 1/2" Female		NVA4002
3/4" Female x 3/4" Female		NVA4025
3/4" Male x 3/4" Female		NVA4005
1" Female x 1" Female		NVA4023
1" Male x 1" Female		NVA4003
1/4" Female x 1/4" Female	Stainless Steel	**NVA1020**
1/4" Male x 1/4" Female		NVA1000
3/8" Female x 3/8" Female		NVA1024
3/8" Male x 3/8" Female		NVA1004
1/2" Female x 1/2" Female		**NVA1021**
1/2" Male x 1/2" Female		NVA1001
3/4" Female x 1/2" Female		NVA1022
3/4" Male x 1/2" Female		NVA1002
3/4" Female x 3/4" Female		NVA1025
3/4" Male x 3/4" Female		NVA1005
1" Female x 1" Female		NVA1023
1" Male x 1" Female		NVA1003

Material

Description	Component Number	Carbon Steel	Stainless Steel
Body	1	Carbon Steel	316 SS
Bonnet	2	Carbon Steel	316 SS
Dustcap	3	Nylon	Nylon
Needle / Needle Tip	4	316 SS	316 SS
Handle	5	Carbon Steel	304 SS
Screw	6	304 SS	304 SS
Fastening Screw	7	304 SS	304 SS
O-ring	8	FKM	FKM
Seat	9	Delrin	Delrin
Slotted Spring Pin	10	304 SS	304 SS

Dimensions

Size	H	L	SQ
1/4" Female x 1/4" Female	2.56" (65mm)	2.65" (67mm)	1.10" (28mm)
1/4" Male x 1/4" Female	2.56" (65mm)	2.65" (67mm)	1.10" (28mm)
3/8" Female x 3/8" Female	2.56" (65mm)	2.65" (67mm)	1.10" (28mm)
3/8" Male x 3/8" Female	2.56" (65mm)	2.65" (67mm)	1.10" (28mm)
1/2" Female x 1/2" Female	2.76" (70mm)	2.65" (67mm)	1.10" (28mm)
1/2" Male x 1/2" Female	2.76" (70mm)	2.65" (67mm)	1.10" (28mm)
3/4" Female x 1/2" Female	2.84" (72mm)	2.80" (71mm)	1.26" (32mm)
3/4" Male x 1/2" Female	2.84" (72mm)	2.65" (67mm)	1.10" (28mm)
3/4" Female x 3/4" Female	2.84" (72mm)	2.80" (71mm)	1.26" (32mm)
3/4" Male x 3/4" Female	2.84" (72mm)	2.80" (71mm)	1.26" (32mm)
1" Female x 1" Female	3.23" (82mm)	3.12" (79mm)	1.58" (40mm)
1" Male x 1" Female	3.23" (82mm)	3.12" (79mm)	1.58" (40mm)

Option suffix:
CPM = Carbon steel panel mount kit SPM = Stainless steel panel mount kit

Female x Female

Male x Female

Panel Mont Kit (CPM/SPM)

Description & Features:

- Multiport design reduces the number of gauge and other instrument connections to permanent piping installations, decreasing possible leak paths
- Optional bleed plugs further allow pressure to be bled off without disturbing the permanent piping installation
- 10,000 psi pressure rating @ 200°F
- All stems are 316 stainless steel
- CRN registered
- 5 year warranty

Applications:

- Ideally suited for severe duty oil and gas installations including refineries and processing plants as well as water treatment plants, power plants and hydraulic applications

Multiport Order Codes

NPT Connection	Material	Seat	Max. Pressure	Code
1/2" Male x 1/2" Female	Carbon Steel	Soft Seat	6,000 psi	NVA4201
3/4" Male x 1/2" Female				NVA4202
1/2" Male x 1/2" Female	Stainless Steel			NVA1201
3/4" Male x 1/2" Female				NVA1202
1/2" Male x 1/2" Female	Carbon Steel	Hard Seat	10,000 psi	NVA6201
3/4" Male x 1/2" Female				NVA6202
1/2" Male x 1/2" Female	Stainless Steel			NVA3201
3/4" Male x 1/2" Female				NVA3202

Multiport NACE Order Codes

NPT Connection	Material	Seat	Max. Pressure	Code
1/2" Male x 1/2" Female	Stainless Steel NACE	Hard Seat	10,000 psi	NVA3201N
3/4" Male x 1/2" Female				NVA3202N

Multiport Optional Bleed Screw and Plug Order Codes

Plug or Screw	Carbon Steel	Stainless Steel	Stainless Steel NACE
M8 Bleed Screw	NVAPLUG02	NVAPLUG01	NVAPLUG01N
1/2" NPT Plug	NVAPLUG06	NVAPLUG05	NVAPLUG05N
1/2" NPT Plug w/Bleed Screw	NVAPLUG08	NVAPLUG07	NVAPLUG07N

Note: Bleed screw and plugs not included

Needle Valve (Multiport)

Hard Seat Material

Description	Component Number	Carbon Steel Hard Seat	Stainless Steel Hard Seat	Stainless Steel NACE Hard Seat
Body	1	Carbon Steel	316 SS	316 SS NACE
Bonnet	2	Carbon Steel	316 SS	316 SS NACE
Dustcap	3	Nylon	Nylon	Nylon
Needle / Needle Tip	4	316 SS	316 SS	316 SS NACE
Handle	5	Carbon Steel	304 SS	304 SS
Screw	6	304 SS	304 SS	304 SS
Fastening Screw	7	304 SS	304 SS	304 SS
O-ring	8	FKM	FKM	FKM
Dwell Pin	9	304 SS	304 SS	304 SS
Vent Plug	10	Carbon Steel	316 SS	316 SS NACE
Bleed Screw	11	Carbon Steel	316 SS	316 SS NACE
Vent Plug	12	Carbon Steel	316 SS	316 SS NACE

Hard Seat Dimensions

Size	H	L	SQ1	SQ2
1/2" Male x 1/2" Female	4.13 (105mm)	3.2 (81mm)	1.42 (36mm)	1.10 (28mm)
3/4" Male x 1/2" Female	4.29 (109mm)	3.2 (81mm)	1.42 (36mm)	1.10 (28mm)

Male x Female

Soft Seat Material

Description	Component Number	Carbon Steel Soft Seat	Stainless Steel Soft Seat
Body	1	Carbon Steel	316 SS
Bonnet	2	Carbon Steel	316 SS
Dustcap	3	Nylon	Nylon
Needle / Needle Tip	4	316 SS	316 SS
Handle	5	Carbon Steel	304 SS
Screw	6	304 SS	304 SS
Fastening Screw	7	304 SS	304 SS
O-ring	8	FKM	FKM
Seat	9	Delrin	Delrin
Dwell Pin	10	304 SS	304 SS
Vent Plug	11	Carbon Steel	316 SS
Bleed Screw	12	Carbon Steel	316 SS
Vent Plug	13	Carbon Steel	316 SS

Soft Seat Dimensions

Size	H	L	SQ1	SQ2
1/2" Male x 1/2" Female	4.13 (105mm)	3.20" (81mm)	1.42 (36mm)	1.10 (28mm)
3/4" Male x 1/2" Female	4.29 (109mm)	3.20" (81mm)	1.42 (36mm)	1.10 (28mm)

Male x Female

Description & Features:

- Block & bleed design allows pressure to be bled off without disturbing the permanent piping installation, allowing quick and easy removal or replacement of instruments
- Available in Soft Seat (6,000 psi) and Hard Seat (10,000 psi)
- All stems are 316 stainless steel
- CRN registered
- 5 year warranty

Applications:

- Ideally suited for severe duty oil and gas installations including refineries and processing plants as well as water treatment plants, power plants and hydraulic applications where venting of media is required

Single Handle Order Codes (products in bold are normally stock in North America)

NPT Connection	Material	Seat	Max. Pressure	Code
1/4" Female x 1/4" Female	Carbon Steel	Soft Seat	6,000 psi	BBV4020
1/4" Male x 1/4" Female				BBV4000
1/2" Female x 1/2" Female				BBV4021
1/2" Male x 1/2" Female				BBV4001
1/4" Female x 1/4" Female	Stainless Steel			BBV1020
1/4" Male x 1/4" Female				BBV1000
1/2" Female x 1/2" Female				BBV1021
1/2" Male x 1/2" Female				**BBV1001**
1/4" Female x 1/4" Female	Carbon Steel	Hard Seat	10,000 psi	BBV6020
1/4" Male x 1/4" Female				BBV6000
1/2" Female x 1/2" Female				BBV6021
1/2" Male x 1/2" Female				BBV6001
1/4" Female x 1/4" Female	Stainless Steel			BBV3020
1/4" Male x 1/4" Female				BBV3000
1/2" Female x 1/2" Female				BBV3021
1/2" Male x 1/2" Female				BBV3001

Single Handle NACE Order Codes

NPT Connection	Material	Seat	Max. Pressure	Code
1/4" Female x 1/4" Female	Stainless Steel NACE	Hard Seat	10,000 psi	BBV3020N
1/4" Male x 1/4" Female				BBV3000N
1/2" Female x 1/2" Female				BBV3021N
1/2" Male x 1/2" Female				BBV3001N

Replacement Bleed Screw Order Codes

Plug or Screw	Carbon Steel	Stainless Steel	Stainless Steel NACE
M8 Bleed Screw	NVAPLUG02	NVAPLUG01	NVAPLUG01N

Hard Seat Material

Description	Component Number	Carbon Steel Hard Seat	Stainless Steel Hard Seat	Stainless Steel NACE Hard Seat
Body	1	Carbon Steel	316 SS	316 SS NACE
Bonnet	2	Carbon Steel	316 SS	316 SS NACE
Dustcap	3	Nylon	Nylon	Nylon
Needle / Needle Tip	4	316 SS	316 SS	316 SS NACE
Handle	5	Carbon Steel	304 SS	304 SS
Screw	6	304 SS	304 SS	304 SS
Fastening Screw	7	304 SS	304 SS	304 SS
O-ring	8	FKM	FKM	FKM
Dwell Pin	9	304 SS	304 SS	304 SS
Bleed Screw	10	Carbon Steel	316 SS	316 SS NACE

Female x Female

Male x Female

Hard Seat Dimensions

Size	H	L	SQ
1/4" Female x 1/4" Female	2.91" (74mm)	3.25" (83mm)	1.10" (28mm)
1/4" Male x 1/4" Female	2.91" (74mm)	3.25" (83mm)	1.10" (28mm)
1/2" Female x 1/2" Female	2.91" (74mm)	3.25" (83mm)	1.10" (28mm)
1/2" Male x 1/2" Female	2.91" (74mm)	3.25" (83mm)	1.10" (28mm)

Soft Seat Material

Description	Component Number	Carbon Steel Soft Seat	Stainless Steel Soft Seat
Body	1	Carbon Steel	316 SS
Bonnet	2	Carbon Steel	316 SS
Dustcap	3	Nylon	Nylon
Needle / Needle Tip	4	316 SS	316 SS
Handle	5	Carbon Steel	304 SS
Screw	6	304 SS	304 SS
Fastening Screw	7	304 SS	304 SS
O-ring	8	FKM	FKM
Seat	9	Delrin	Delrin
Dwell Pin	10	304 SS	304 SS
Bleed Screw	11	Carbon Steel	316 SS

Female x Female

Male x Female

Soft Seat Dimensions

Size	H	L	SQ
1/4" Female x 1/4" Female	2.91" (74mm)	3.20" (81mm)	1.10" (28mm)
1/4" Male x 1/4" Female	2.91" (74mm)	3.20" (81mm)	1.10" (28mm)
1/2" Female x 1/2" Female	2.91" (74mm)	3.20" (81mm)	1.10" (28mm)
1/2" Male x 1/2" Female	2.91" (74mm)	3.20" (81mm)	1.10" (28mm)

Description & Features:

- The one-piece body construction (no welding) provides strength and corrosion resistance
- Block & bleed design allows pressure to be bled off without disturbing the permanent piping installation, allowing quick and easy removal or replacement of instruments
- Available in Soft Seat (6,000 psi) and Hard Seat (10,000 psi)
- All stems are 316 stainless steel
- CRN registered
- 5 year warranty

Applications:

- Ideally suited for severe duty oil and gas installations including refineries and processing plants as well as water treatment plants, power plants and hydraulic applications where controlled venting of media is required

Block & Bleed Two Handle Order Codes (products in bold are normally stock in North America)

NPT Connection	Material	Seat	Max. Pressure	Code
1/4" Female x 1/4" Female	Carbon Steel	Soft Seat	6,000 psi	BBV4220
1/4" Male x 1/4" Female				BBV4200
1/2" Female x 1/2" Female				BBV4221
1/2" Male x 1/2" Female				BBV4201
3/4" Female x 1/2" Female				BBV4251
3/4" Male x 1/2" Female				BBV4241
1/4" Female x 1/4" Female	Stainless Steel			BBV1220
1/4" Male x 1/4" Female				BBV1200
1/2" Female x 1/2" Female				**BBV1221**
1/2" Male x 1/2" Female				BBV1201
3/4" Female x 1/2" Female				BBV1251
3/4" Male x 1/2" Female				BBV1241
1/4" Female x 1/4" Female	Carbon Steel	Hard Seat	10,000 psi	BBV6220
1/4" Male x 1/4" Female				BBV6200
1/2" Female x 1/2" Female				BBV6221
1/2" Male x 1/2" Female				BBV6201
3/4" Female x 1/2" Female				BBV6251
3/4" Male x 1/2" Female				BBV6241
3/4" Female x 3/4" Female				BBV6261
3/4" Male x 3/4" Female				BBV6271
1/4" Female x 1/4" Female	Stainless Steel			BBV3220
1/4" Male x 1/4" Female				BBV3200
1/2" Female x 1/2" Female				BBV3221
1/2" Male x 1/2" Female				**BBV3201**
3/4" Female x 1/2" Female				BBV3251
3/4" Male x 1/2" Female				BBV3241
3/4" Female x 3/4" Female				BBV3261
3/4" Male x 3/4" Female				BBV3271

Block & Bleed Two Handle NACE Order Codes

NPT Connection	Material	Seat	Max. Pressure	Code
1/4" Female x 1/4" Female	Stainless Steel NACE	Hard Seat	10,000 psi	BBV3220N
1/4" Male x 1/4" Female				BBV3200N
1/2" Female x 1/2" Female				BBV3221N
1/2" Male x 1/2" Female				BBV3201N
3/4" Female x 1/2" Female				BBV3251N
3/4" Male x 1/2" Female				BBV3241N

Replacement Plug Order Codes

Plug or Screw	Carbon Steel	Stainless Steel	Stainless Steel NACE
1/4" NPT Plug	NVAPLUG04	NVAPLUG03	NVAPLUG03N

Block & Bleed Valve Two Handles

Hard Seat Material

Description	Component Number	Carbon Steel Hard Seat	Stainless Steel Hard Seat	Stainless Steel NACE Hard Seat
Body	1	Carbon Steel	316 SS	316 SS NACE
Bonnet	2	Carbon Steel	316 SS	316 SS NACE
Dustcap	3	Nylon	Nylon	Nylon
Needle / Needle Tip	4	316 SS	316 SS	316 SS NACE
Handle	5	Carbon Steel	304 SS	304 SS
Screw	6	304 SS	304 SS	304 SS
Fastening Screw	7	304 SS	304 SS	304 SS
O-rings	8	FKM	FKM	FKM
Dwell Pin	9	304 SS	304 SS	304 SS
Vent Plug	10	Carbon Steel	316 SS	316 SS NACE

Female x Female

Male x Female

Hard Seat Dimensions

Size	H	L	SQ
1/4" Female x 1/4" Female	4.13" (105mm)	4.83" (123mm)	1.10" (28mm)
1/4" Male x 1/4" Female	4.13" (105mm)	4.83" (123mm)	1.10" (28mm)
1/2" Female x 1/2" Female	4.13" (105mm)	4.83" (123mm)	1.10" (28mm)
1/2" Male x 1/2" Female	4.13" (105mm)	4.83" (123mm)	1.10" (28mm)
3/4" Female x 1/2" Female	4.13" (105mm)	4.99" (127mm)	1.26" (32mm)
3/4" Male x 1/2" Female	4.29" (109mm)	4.83" (123mm)	1.10" (28mm)

Soft Seat Material

Description	Component Number	Carbon Steel Soft Seat	Stainless Steel Soft Seat
Body	1	Carbon Steel	316 SS
Bonnet	2	Carbon Steel	316 SS
Dustcap	3	Nylon	Nylon
Needle / Needle Tip	4	316 SS	316 SS
Handle	5	Carbon Steel	304 SS
Screw	6	304 SS	304 SS
Fastening Screw	7	304 SS	304 SS
O-rings	8	FKM	FKM
Seat	9	Delrin	Delrin
Dwell Pin	10	304 SS	304 SS
Vent Plug	11	Carbon Steel	316 SS

Female x Female

Male x Female

Soft Seat Dimensions

Size	H	L	SQ
1/4" Female x 1/4" Female	4.13" (105mm)	4.72" (120mm)	1.10" (28mm)
1/4" Male x 1/4" Female	4.13" (105mm)	4.72" (120mm)	1.10" (28mm)
1/2" Female x 1/2" Female	4.13" (105mm)	4.72" (120mm)	1.10" (28mm)
1/2" Male x 1/2" Female	4.13" (105mm)	4.72" (120mm)	1.10" (28mm)
3/4" Female x 1/2" Female	4.29" (109mm)	4.88" (124mm)	1.26" (32mm)
3/4" Male x 1/2" Female	4.29" (109mm)	4.68" (119mm)	1.10" (28mm)

Description & Features:

- Combines isolating and venting in a single valve, eliminating the need for tubing and fittings
- Block valve isolates the downstream process fluids, and the bleed valve exhausts upstream fluids enabling instruments to be removed without disturbing the permanent piping installation on the bottom
- The 1/4" NPT vent plug is located 90° to the left and may be removed and replaced with exhaust piping to direct the fluids to a safe location
- Available in Hard Seat (10,000 psi)
- All stems are 316 stainless steel
- CRN registered
- 5 year warranty

Applications:

- Ideally suited for severe duty oil and gas installations including refineries and processing plants as well as water treatment plants, power plants and hydraulic applications where additional safety for shut-down and media venting is required

Double Block & Bleed Order Codes

NPT Connection	Material	Seat	Max. Pressure	Code
1/4" Female x 1/4" Female	Stainless Steel	Hard Seat	10,000 psi	BBV3420
1/4" Male x 1/4" Female				BBV3400
1/2" Female x 1/2" Female				BBV3421
1/2" Male x 1/2" Female				BBV3401
3/4" Female x 1/2" Female				BBV3422
3/4" Male x 1/2" Female				BBV3402

Double Block & Bleed NACE Order Codes

NPT Connection	Material	Seat	Max. Pressure	Code
1/4" Female x 1/4" Female	Stainless Steel NACE	Hard Seat	10,000 psi	BBV3420N
1/4" Male x 1/4" Female				BBV3400N
1/2" Female x 1/2" Female				BBV3421N
1/2" Male x 1/2" Female				BBV3401N
3/4" Female x 1/2" Female				BBV3422N
3/4" Male x 1/2" Female				BBV3402N

Replacement Plug Order Codes

Plug or Screw	Stainless Steel	Stainless Steel NACE
1/4" NPT Plug	NVAPLUG03	NVAPLUG03N

BBV Double Block & Bleed Valve

Material

Description	Component Number	Stainless Steel	Stainless Steel NACE
Body	1	316 SS	316 SS NACE
Bonnet	2	316 SS	316 SS NACE
Dust Cap	3	Nylon	Nylon
Needle / Needle Tip	4	316 SS	316 SS NACE
Handle	5	304 SS	304 SS
Screw	6	304 SS	304 SS
Fastening Screw	7	304 SS	304 SS
O-Rings	8	FKM	FKM
Dwell Pin	9	304 SS	304 SS
Plug	10	316 SS	316 SS NACE

Dimensions

Size	H	L	SQ	SQ1	M	N	P
1/4” Female x 1/4” Female	3.70” (94mm)	3.72” (95mm)	1.57” (40mm)	1.75” (44.5mm)	5.50” (140mm)	2.15” (55mm)	1.62” (41mm)
1/4” Male x 1/4” Female	4.00” (102mm)	3.72” (95mm)	1.57” (40mm)	1.75” (44.5mm)	6.10” (155mm)	2.15” (55mm)	1.60” (41mm)
1/2” Female x 1/2” Female	3.70” (94mm)	3.72” (95mm)	1.57” (40mm)	1.75” (44.5mm)	5.50” (140mm)	2.15” (55mm)	1.62” (41mm)
1/2” Male x 1/2” Female	4.00” (102mm)	3.72” (95mm)	1.57” (40mm)	1.75” (44.5mm)	6.10” (155mm)	2.15” (55mm)	1.60” (41mm)
3/4” Female x 1/2” Female	3.70 (94mm)	3.72” (95mm)	1.57” (40mm)	1.75” (44.5mm)	5.50” (140mm)	2.15” (55mm)	1.62” (41mm)
3/4” Male x 1/2” Female	4.00” (102mm)	3.72” (95mm)	1.57” (40mm)	1.75” (44.5mm)	6.10” (155mm)	2.15” (55mm)	1.60” (41mm)

Female x Female

Male x Female

1. T-Handle Mini Ball Valve (FxM)
2. T-Handle Mini Ball Valve (FxF)
3. Lever Handle Mini Ball Valve (MXF)

LEAD FREE

Description & Features:

- An economical isolation valve for pressure gauges and transmitters
- Brass or lead free brass wetted parts
- ASME B1.20.1 compliant
- CRN registered
- 5 year warranty

Applications:

- Provides flow control for non-corrosive applications
- Lead free version for potable water systems

Specifications	
Body	SMV: #59-1 forged brass SMV-LF: Lead free forged brass
Ball	SS
Gaskets	PTFE
Handle	Steel, plated, plastic covered
Process Temperature	-9°F to 212°F (-23°C to 100°C)
Maximum Operating Pressure	400 psi (2,758 kPa)
Connection	1/4" NPTF x 1/4" NPTM 1/4" NPTF x 1/4" NPTF
Warning	**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SMV Order Codes (products in bold are normally stock in North America)

Connection	T-Handle	Lever Handle
F x M	**SMV532**	**SMV500**
F x F	**SMV533**	-

SMV-LF Order Codes (products in bold are normally stock in North America)

Connection	T-Handle	Lever Handle
F x M	**SMV532LF**	SMV500LF
F x F	**SMV533LF**	-

Other sizes and materials available upon request.

T-Handle Mini Ball Valve (M x F)

T-Handle Mini Ball Valve (F x F)

Lever Handle Mini Ball Valve (M x F)

SNV, SNV-LF

Needle Valve, Lead Free Needle Valve

Description & Features:

- An isolation valve for pressure gauges and transmitters
- For mild applications, this valve can be used to throttle pulsation. Please see NVA Stainless Steel Needle Valve for more demanding applications
- Brass or lead free brass wetted parts
- ASME B1.20.1 compliant
- CRN registered
- 5 year warranty

Applications:

- Provides precision flow control for any non-corrosive application up to 400 psi (2,758 kPa)
- Lead free version for potable water systems

Specifications	
Body	SNV: #59-1 forged brass SNV-LF: Lead free forged brass
Handle	ABS plastic, dyed red
O-ring	Rubber
Shaft	SNV: #59-1 brass SNV-LF: Lead free brass
Nut	SNV: #59-1 brass SNV-LF: Lead free brass
Ambient/Process Temperature	-9°F to 212°F (-23°C to 100°C)
Maximum Operating Pressure	400 psi (2,758 kPa)
Connection	1/4" NPTF
Warning	**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.
CV Rating	0.32

SNV Order Codes (products in bold are normally stock in North America)

Code
SNV510

SNV-LF Order Codes (products in bold are normally stock in North America)

Code
SNV510LF

Other sizes and materials available upon request.

ELECTRONIC

PEC

Premium Stainless Steel Gauge with Electrical Contacts

Description & Features:

- 4" dial
- Silicone fillable stainless steel gauge
- Independently adjustable electrical contacts
- Bottom connection
- Restricted orifice standard
- ±1% accuracy
- Electrical contacts rated up to 1 amp at 220-380 Vac
- Contact settings adjustable with fitted key (included)
- ASME B40.100 compliant (EN837-1 available)
- CRN registered
- 5 year warranty

Applications:

- Commercial and industrial applications where electrical switching is required with local indication
- Pump and compressor controls
- Hydraulic and pneumatic industries

Specifications	
Case Size	4" (100mm)
Case	304 SS
Lens	Polycarbonate
Socket	316 SS
Connection	1/2" NPT (other connection sizes available)
Bourdon Tube	316 SS
Movement	304 SS
Pointer	Aluminum, painted black, n.o contact pointer (painted orange) n.c contact pointer (painted blue)
Welding	Laser welded case to socket
Over-pressure Limit	25% for pressures up to 1,450 psi (9,998 kPa), 15% for pressures over 1,450 psi (9,998 kPa)
Fill Plug	Buna N (silicone rubber option)
Lens Ring Gasket	Silicone rubber
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%
Enclosure Rating	IP65
Electrical Connection	Plastic connection box with terminal block (Hirschmann-type)
Contact Rating	0.7 - 1 amp; 220 - 380 Vac (snap action contact)
No. of Contacts	1 or 2 SPST, independently adjustable 2 - contact of high (upper limit) and/or low (lower limit)

Order Codes

Dial Size	4” (100mm)
Connection	1/2” Bottom
30” Hg Vac/kPa	PEC0200
0/15 psi/kPa	PEC0201
0/30 psi/kPa	PEC0202
0/60 psi/kPa	PEC0203
0/100 psi/kPa	PEC0204
0/160 psi/kPa	PEC0205
0/200 psi/kPa	PEC0206
0/300 psi/kPa	PEC0207
0/400 psi/kPa	PEC0208
0/600 psi/kPa	PEC0209
0/1,000 psi/kPa	PEC0210
0/1,500 psi/kPa	PEC0211
0/2,000 psi/kPa	PEC0212
0/3,000 psi/kPa	PEC0213
0/5,000 psi/kPa	PEC0214
0/6,000 psi/kPa	PEC0215
0/10,000 psi/kPa	PEC0216
30”/0/30 psi/kPa	PEC0230
30”/0/60 psi/kPa	PEC0231
30”/0/100 psi/kPa	PEC0232
30”/0/160 psi/kPa	PEC0233
30”/0/200 psi/kPa	PEC0234
30”/0/300 psi/kPa	PEC0235

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes.

For options, attach suffix to end of order code: i.e. PEC0210-SG-4 for SAFETY GLASS LENS

Option suffix:

EN = EN837-1 compliant
SF4 = 4” (100mm) Silicone filled
SG-4 = 4” (100mm) Safety glass lens

Wiring Diagram

WPS Commercial Differential Pressure Switch

Dimensions (mm)

Specifications	
Housing Material	Grey colour Polyamide 6.6 plastic
Window Cover Material	Frosted Polystyrene resin
Deadband Accuracy	+/- 15% of upper and lower pressure ratings
Pressure Connection	2 x plastic pipe connection, 6.0mm (1/4") external diameter, labelled P1 & P2
Electrical Connection	Flat plug 6.3mm x 0.8mm or push-on screw terminals with PG-11 or M20x1.5 cable strain relief
Wetted Parts	Silicone based diaphragm, tempered at 392°F (200°C)
Set Point Adjustment	Field adjustable knob
Contact Rating	1.0A 250VAC output, 0.1A 24VDC (low voltage version)
Number of Contacts	Single-pole double-throw (SPDT)
Maximum Operating Pressure	1.45 psi (10 kPa)
Ambient/Process Temperature	-4°F to 185°F (-20°C to 85°C)
Storage Temperature	-40°F to 185°F (-40°C to 85°C)
Enclosure Rating	IP54
Approvals	CE, RoHS & REACH compliant
Typical Life	Over 10^6 switching operations
Weight	150g with cover, 110g without cover
Mounting Position	Vertical installation with pressure connections pointing downwards

Order Codes

Set Point Range				Average Deadband
Pa		inH_2O		
20-200	WPS0200	0.08-1.20	WPS0200R8	+/- 15%
30-300	WPS0300	0.12-1.60	WPS0300R8	+/- 15%
50-500	WPS0500	0.20-2.00	WPS0500R8	+/- 15%
200-1,000	WPS1000	0.80-4.00	WPS1000R8	+/- 15%
500-2,500	WPS2500	2.00-10.00	WPS2500R8	+/- 15%
1,000-4,000	WPS4000	4.00-16.00	WPS4000R8	+/- 15%

Optional Order Codes

Static Pressure tip with Flange	PVC Tubing, 20m (65')	WPS Installation Kit With Tips and Tubing
WPS1010	WPS1020	WPS1015

Dimensions (mm)

Wiring Diagram

1 Break contact
2 Operating contact
3 Power supply line

1WPS Compact Pressure Switch

Description & Features:

- Compact all purpose pressure switch
- All stainless steel housing with diaphragm or piston actuated sensor
- Wide range of electrical switching outputs
- 1 x SPDT
- IP65 standard, IP67 optional
- Built in restrictor screw to safeguard against pulsations
- 5 year warranty

Applications:

- Suitable for all machinery in commercial and industrial sectors

Specifications	
Housing Material	304L Stainless Steel
Accuracy	2% of full scale
Pressure Connection	1/4" NPT, G1/4", M14x1.5, M20x1.5
Electrical Connection	DIN ISO, cable outlet optional
Wetted Parts	Diahpragm sensor - NBR Piston sensor - 304L SS with NBR o-ring
Set Point Adjustment	Factory set or Field selectable
Deadband	10-20% of setpoint (fixed)
Contact Rating	2A 30VDC; 1A 42VDC; 0.15A 115VDC; 3A 42VAC; 5A 125VAC; 3A 250VAC
Sensor Type	Diaphragm (low pressure) or Piston (high pressure)
Number of Contacts	1 X SPDT
Ambient / Process Temperature	-4 deg F to 185°F (-20 to 85°C)
Enclosure Rating	IP65 standard (DIN), IP67 optional (cable leads)
Vibration	10g 10-500 Hz, MIL-STD-202F
Shock	50g 11 ms, MIL-S-901C
Operating Life	1 million cycles
Weight	0.22 LBS (0.1 kg)

OrderCodes:

Adjustable Range psi (bar)		Proof Pressure	DIN Connector
Min	Max	psi (bar)	1/4" NPT
3	10	4,350 (300)	1WPSL104N
3	15	4,350 (300)	1WPSL114N
3	30	4,350 (300)	1WPSL124N
7	70	4,350 (300)	1WPSL134N
7	120	4,350 (300)	1WPSL144N
15	200	4,350 (300)	1WPSL154N
15	250	4,350 (300)	1WPSL164N
30	300	4,350 (300)	1WPSL174N
50	500	14,500 (1,000)	1WPSH184N
100	1,000	14,500 (1,000)	1WPSH194N
200	2,000	14,500 (1,000)	1WPSH204N
300	3,000	14,500 (1,000)	1WPSH214N
450	4,000	14,500 (1,000)	1WPSH224N
500	5,000	14,500 (1,000)	1WPSH234N

Dimensions (mm)

Wiring Schematic:

Series Number (how to order):

1 W P S - [ ] [ ] [ ] - [ ] [ ] [ ] - [ ] [ ] - [ ] - [ ] [ ] - [ ] - [ ] - [ ] [ ] [ ] [ ]

SERIES			
PRESSURE RANGE			
(ADJUSTABLE RANGE, PSI)	Diaphragm Sensor	3-10	L 1 0
	Diaphragm Sensor	3-15	L 1 1
	Diaphragm Sensor	3-30	L 1 2
	Diaphragm Sensor	7-70	L 1 3
	Diaphragm Sensor	7-120	L 1 4
	Diaphragm Sensor	14-175	L 1 8
	Diaphragm Sensor	15-200	L 1 5
	Diaphragm Sensor	15-250	L 1 6
	Diaphragm Sensor	30-300	L 1 7
	Other PSI, Specify range		L X X
	Piston Sensor	50-500	H 1 8
	Piston Sensor	100-1,000	H 1 9
	Piston Sensor	200-2,000	H 2 0
	Piston Sensor	300-3,000	H 2 1
	Piston Sensor	450-4,000	H 2 2
	Piston Sensor	500-5,000	H 2 2
	Other PSI, Specify range		H X X
(ADJUSTABLE RANGE, BAR)	Diaphragm Sensor	0.2-2.5	0 0 2
	Diaphragm Sensor	0.8-5.0	0 0 5
	Diaphragm Sensor	1-12	0 1 2
	Piston Sensor	5-50	0 5 0
	Piston Sensor	10-100	1 0 0
	Piston Sensor	20-200	2 0 0
	Piston Sensor	50-400	4 0 0
	Other BAR, Specify range		X X X
SWITCH			
	SPDT Switch, standard		1 C C
ELECTRICAL CONNECTION			
	DIN ISO, IP65		S 1
	Cable Outlet (flying leads), IP65		C 1
	Cable Outlet (flying leads), IP67 factory set-point only		C 2
WETTED PARTS			
	Diahpragm sensor - NBR		3
	Piston sensor - 304L SS with NBR o-ring		4
MECHANICAL CONNECTION			
	1/4" NPT		4 N
	G 1/4"		4 G
	M14 * 1.5		1 4
	M20 * 1.5		Z M
PROCESS CONNECTION			
	304L SS		4
HOUSING			
	304L SS		4
OPTIONS			
	Extra Wire (# in mm)		# # # #
	Special (Z001 -Z999)		Z # # #

2WPS & 2WPSA

General Purpose and Adjustable Deadband Pressure Switch

Switches with UL & CSA Recognized and File No. E12252.

Description & Features:

- General Purpose, watertight pressure switch
- Low pressure to 4,000 psi
- High current ratings for 1 x SPDT or 2 x SPDT switches
- Fixed or adjustable deadband options
- Die cast aluminum construction with welded seal
- 1% accuracy
- NEMA 4, 4X & IP66 rated
- RU recognized (switch only)
- CRN registration pending
- 5 year warranty

Applications:

- Suitable for pump and compressor monitoring, HVAC systems and general industrial applications.

Specifications	
Housing	Heavy-duty die-cast aluminum, blue colour
Accuracy	+/- 1% of the adjustable set-point range
Pressure Connection	Female 1/4” or 1/2” NPT, BSP and M20xP1.5
Electrical Connection	Female 1/2” or 3/4” NPT, M20xP1.5
Wetted Parts	316 Stainless Steel welded
Set Point Adjustment	Field selectable
Deadband	Fixed or Adjustable, see Order Codes below
Contact Rating	Fixed Deadband: 15A @ 125/250VAC, 0.4A @ 125VDC, 3A @ 30VDC Gold contact microswitch 1A @ 125/250VAC Adjustable Deadband: 20A @ 125/250/480VAC, 5A @ 125VDC
No. of Contacts	1 x SPDT or 2 x SPDT (only 1 x SPDT available for Adjustable Deadband range)
Ambient/Process Temperature	-30 to 205 deg C (-22 to 400 deg F)
Enclosure Rating	NEMA 4 & 4X, IP66 Protection against liquid and solid ingress, suitable for indoor or outdoor use and resistant to corrosion
Approvals	RU recognized (switch only) file #E12252, CRN registration pending
Weight	3.4 lbs (1.54 kg)

Order Codes

Adjustable Range PSI	Fixed Dead Band PSI	Proof Pressure PSI	1/2" NPT Electrical	
			1/4" NPT Process	1/2" NPT Process
10-100	2.8-6.4	3,000	2WPS0106F4F201	2WPS0106F2F201
35-200	4.3-7.0	3,000	2WPS0206F4F201	2WPS0206F2F201
50-300	4.3-7.0	3,000	2WPS0306F4F201	2WPS0306F2F201
100-600	5.0-15	3,000	2WPS0606F4F201	2WPS0606F2F201
100-1,300	14.2-56.8	3,000	2WPS1306F4F201	2WPS1306F2F201
300-2,400	14.2-71	4,000	2WPS2406F4F201	2WPS2406F2F201
400-4,000	23.6-117.9	5,000	2WPS4006F4F201	2WPS4006F2F201

Adjustable Range PSI	Adjustable Dead Band E-position PSI	Proof Pressure PSI	1/2" NPT Electrical	
			1/4" NPT Process	1/2" NPT Process
10-100	10-25	3,000	2WPSA0106F4F201	2WPSA0106F2F201
35-200	12-30	3,000	2WPSA0206F4F201	2WPSA0206F2F201
50-300	28-50	3,000	2WPSA0306F4F201	2WPSA0306F2F201
100-600	28-60	3,000	2WPSA0606F4F201	2WPSA0606F2F201
200-1,300	42-100	3,000	2WPSA1306F4F201	2WPSA1306F2F201

Dimensions

FIXED DEADBAND

ADJUSTABLE DEADBAND

Wiring Schematic

1 x SPDT

2 x SPDT

General Purpose and Adjustable Deadband Pressure Switch

Engineering Code (how to order)

2 W P S - ☐☐☐ - ☐ - ☐☐ - ☐☐ - ☐☐ - ☐ - ☐☐☐☐

SERIES

PRESSURE RANGES (PSI)

	Pressure Range Min	Pressure Range Max	Deadband	Proof Pressure PSI	Code
Fixed Deadband	10	100	2.8-6.4	3,000	0 1 0
	35	200	4.3-7.0	3,000	0 2 0
	50	300	4.3-7.0	3,000	0 3 0
	100	600	5.0-15	3,000	0 6 0
	100	1,300	14.2-56.8	3,000	1 3 0
	300	2,400	14.2-71	4,000	2 4 0
	400	4,000	23.6-117.9	5,000	4 0 0
Adjustable Deadband	10	100	10-25	3,000	2 W P S A - 0 1 0
	35	200	12-30	3,000	0 2 0
	50	300	28-50	3,000	0 3 0
	100	600	28-60	3,000	0 6 0
	200	1,300	42-100	3,000	1 3 0

WETTED PARTS

316 Stainless Steel, diaphragm welded (standard) — 6

PROCESS CONNECTION

1/2" NPT Female	F 2
1/4" NPT Female	F 4
1/2" BSP Female	B 2
1/4" BSP Female	B 4
1/2" PT Female	P 2
1/4" PT Female	P 4
M20 X P1.5	M 2

CONDUIT CONNECTION

3/4" NPT Female	F 3
1/2" NPT Female (standard)	F 2
M20 X P1.5	M 2

SWITCH TYPE

Micro Switch, 1 x SPDT	0 1
Micro Switch, 2 x SPDT (one setpoint), *not available for Adjustable Deadband*	0 2
Gold Contact, 1 x SPDT, *not available for Adjustable Deadband*	3 A
Gold Contact, 2 x SPDT (one setpoint), *not available for Adjustable Deadband*	3 B

OPTIONS

Custom Pressure Scale (R1=psi, R2=kPa, R3=kg/cm2, R4=cmH2O, R5=ftH2O, R6=inHg, R7=mmHg, R8=inH2O, R9=ozIN2, R10=ATM, R11=bar, R12=mbar, R13=MPa, R14=mH2O, R15=mmH2O, R16=Pa)	R X X X
Customer Specific (Numbers from Z01 to Z999)	Z # # #

Switches with UL & CSA Recognized and File No. E12252.

Description & Features:

- General Purpose, watertight pressure switch
- Vacuum pressure to 10 psi
- High current ratings for 1 x SPDT or 2 x SPDT switches
- Fixed deadband
- Die cast aluminum construction with welded seal
- 1% accuracy
- NEMA 4 & 4X, IP66 rated
- RU recognized (switch only), file no E12252
- CRN registration pending
- 5 year warranty

Applications:

- Suitable for pump and compressor monitoring, HVAC systems and general industrial applications

Specifications	
Housing	Heavy-duty die-cast aluminum, blue colour
Accuracy	+/- 1% of the adjustable set-point range
Pressure Connection	1/2” NPT, BSP and M20xP1.5
Electrical Connection	Female 1/2” or 3/4” NPT, M20xP1.5
Wetted Parts	316 Stainless Steel welded (except for Vacuum range, Viton o-ring)
Set Point Adjustment	Field selectable
Deadband	Fixed, see Order Codes
Contact Rating	15A @ 125/250VAC, 0.4A @ 125VDC, 3A @ 30VDC Gold contact microswitch 1A @ 125/250VAC
No. of Contacts	1 x SPDT or 2 x SPDT
Ambient Temperature	-30 to 205 deg C (-22 to 400 deg F), Vacuum range only -5 to 150 deg C (23 to 300 deg F)
Enclosure Rating	NEMA 4 & 4X, IP66 Protection against liquid and solid ingress, suitable for indoor or outdoor use and resistant to corrosion
Approvals	RU recognized, file #E12252 (switch only) CRN registration pending
Weight	3.35 lbs (1.52 kg)

Order Codes

Adjustable Range PSI	Dead Band PSI	Proof Pressure PSI	1/2” NPT Electrical	
			1/4” NPT Process	1/2” NPT Process
-25 to -760 mmHg (-1.0 to -30” Hg)	10-20 mmHg (0.39 to 0.79” Hg)	1,000	3WPSV1306F4F201	3WPSV1306F2F201
0.05-1.8	0.015-0.3	500	3WPS0016F4F201	3WPS0016F2F201
0.4-2.8	0.2-0.5	500	3WPS0106F4F201	3WPS0106F2F201
0.4-5.0	0.3-0.6	500	3WPS0206F4F201	3WPS0206F2F201
1.6-9.8	0.3-0.8	500	3WPS0306F4F201	3WPS0306F2F201

Vacuum and Low Pressure Switch

Dimensions

Engineering Code (how to order)

3 W P S - ☐☐☐ - ☐ - ☐☐ - ☐☐ - ☐☐ - ☐ - ☐☐☐☐

		Pressure Range Min	Pressure Range Max	Deadband	Proof Pressure PSI		
SERIES							
PRESSURE RANGES							
Low Pressure, PSI	0.05	1.8	0.015-0.3	500		0 0 1	
	0.4	2.8	0.2-0.5	500		0 1 0	
	0.4	5.0	0.3-0.6	500		0 2 0	
	1.6	9.8	0.3-0.8	500		0 3 0	
Vacuum, mmHg	-25	-760	10-20	1,000	3 W P S V	- 1 3 0	
WETTED PARTS	316 Stainless Steel, diaphragm welded (low pressure, standard)						6
	316 Stainless Steel, Viton o-ring (vacuum, standard)						
PROCESS CONNECTION	1/2" NPT Female						F 2
	1/4" NPT Female						F 4
	1/2" BSP Female						B 2
	1/4" BSP Female						B 4
	1/2" PT Female						P 2
	1/4" PT Female						P 4
	M20 X P1.5						M 2
CONDUIT CONNECTION	3/4" NPT Female						
	1/2" NPT Female (standard)						
	M20 X P1.5						
SWITCH TYPE	Micro Switch, 1 x SPDT						
	Micro Switch, 2 x SPDT (one setpoint)						
	Gold Contact, 1 x SPDT						
	Gold Contact, 2 x SPDT (one setpoint)						
OPTIONS	Custom Pressure Scale (R1=psi, R2=kPa, R3=kg/cm2, R4=cmH2O, R5=ftH2O, R6=inHg, R7=mmHg, R8=inH2O, R9=ozIN2, R10=ATM, R11=bar, R12=mbar, R13=MPa, R14=mH2O, R15=mmH2O, R16=Pa)						
	Customer Specific (Numbers from Z01 to Z999)						

		F 3	
		F 2	
		M 2	
	0 1		
	0 2		
	3 A		
	3 B		
			R X X X
			Z # # #

Wiring Diagram

1 x SPDT

2 x SPDT

Medium Pressure and Adjustable Deadband Pressure Switch

4WPS & 4WPSA

Switches with UL & CSA Recognized and File No. E12252.

Description & Features:

- General Purpose, watertight pressure switch
- Low pressure to 100 psi
- High current ratings for 1 x SPDT or 2 x SPDT switches
- Fixed or adjustable deadband options
- Die cast aluminum construction with welded seal
- 1% accuracy
- NEMA 4, 4X & IP66 rated
- RU recognized (switch only), file no E12252
- CRN registration pending
- 5 year warranty

Applications:

- Suitable for pump & compressor monitoring in HVAC and general industrial applications

Specifications	
Housing	Heavy-duty die-cast aluminum, blue colour
Accuracy	+/- 1% of the adjustable set-point range
Pressure Connection	Female 1/4” or 1/2” NPT, BSP and M20xP1.5
Electrical Connection	Female 1/2” or 3/4” NPT, M20xP1.5
Wetted Parts	316 Stainless Steel welded
Set Point Adjustment	Field selectable
Deadband	Fixed or Adjustable, see Order Codes
Contact Rating	Fixed Deadband: 15A @ 125/250VAC, 0.4A @ 125VDC, 3A @ 30VDC Gold contact microswitch 1A @ 125/250VAC Adjustable Deadband: 20A @ 125/250/480VAC, 5A @ 125VDC
No. of Contacts	1 x SPDT or 2 x SPDT (only 1 x SPDT available for Adjustable Deadband range)
Ambient/Process Temperature	-30 to 205 deg C (-22 to 400 deg F)
Enclosure Rating	NEMA 4 & 4X, IP66 Protection against liquid and solid ingress, suitable for indoor or outdoor use and resistant to corrosion
Approvals	RU recognized, file no E12252 (switch only) CRN registration pending
Weight	3.35 lbs (1.52 kg)

Medium Pressure and Adjustable Deadband Pressure Switch

Adjustable Range PSI	Fixed Dead Band PSI	Proof Pressure PSI	1/2" NPT Electrical	
			1/4" NPT Process	1/2" NPT Process
2-12	0.2-0.4	1,000	4WPS0016F4F201	4WPS0016F2F201
2-16	0.2-0.5	1,000	4WPS0106F4F201	4WPS0106F2F201
2-20	0.3-0.6	1,000	4WPS0206F4F201	4WPS0206F2F201
3-28	0.3-0.8	1,000	4WPS0306F4F201	4WPS0306F2F201
7-100	0.7-2.0	1,000	4WPS0406F4F201	4WPS0406F2F201

Adjustable Range PSI	Adjustable Dead Band E-Position PSI	Proof Pressure PSI	1/2" NPT Electrical	
			1/4" NPT Process	1/2" NPT Process
2-12	1.2-3	1,000	4WPSA0016F4F201	4WPSA0016F2F201
2-16	1.6-4	1,000	4WPSA0106F4F201	4WPSA0106F2F201
2-20	2-5	1,000	4WPSA0206F4F201	4WPSA0206F2F201
3-28	2.8-7	1,000	4WPSA0306F4F201	4WPSA0306F2F201
7-100	9.9-28.4	1,000	4WPSA0406F4F201	4WPSA0406F2F201

Dimensions

Wiring Diagram

1 x SPDT

2 x SPDT

Adjustable Range PSI
2-12
2-16
2-20
3-28
7-100

Engineering Code (how to order)

SERIES

4 W P S - ☐☐☐ - ☐ - ☐☐ - ☐☐ - ☐☐ - ☐ - ☐☐☐☐

PRESSURE RANGES (PSI)

	Pressure Range Min	Pressure Range Max	Deadband	Proof Pressure PSI		
Fixed Deadband	2	12	0.2-0.4	1,000		0 0 1
	2	16	0.2-0.5	1,000		0 1 0
	2	20	0.3-0.6	1,000		0 2 0
	3	28	0.3-0.8	1,000		0 3 0
	7	100	0.7-2.0	1,000		0 4 0
Adjustable Deadband	2	12	1.2-3	1,000	4 W P S A -	0 0 1
	2	16	1.6-4	1,000		0 1 0
	2	20	2-5	1,000		0 2 0
	3	28	2.8-7	1,000		0 3 0
	7	100	9.9-28.4	1000		0 4 0

WETTED PARTS

316 Stainless Steel, diaphragm welded (standard) — 6

PROCESS CONNECTION

1/2" NPT Female	F 2
1/4" NPT Female	F 4
1/2" BSP Female	B 2
1/4" BSP Female	B 4
1/2" PT Female	P 2
1/4" PT Female	P 4
M20 X P1.5	M 2

CONDUIT CONNECTION

3/4" NPT Female	F 3
1/2" NPT Female (standard)	F 2
M20 X P1.5	M 2

SWITCH TYPE

Micro Switch, 1 x SPDT	0 1
Micro Switch, 2 x SPDT (one setpoint), *not available for Adjustable Deadband*	0 2
Gold Contact, 1 x SPDT, *not available for Adjustable Deadband*	3 A
Gold Contact, 2 x SPDT (one setpoint), *not available for Adjustable Deadband*	3 B

OPTIONS

Custom Pressure Scale (R1=psi, R2=kPa, R3=kg/cm2, R4=cmH2O, R5=ftH2O, R6=inHg, R7=mmHg, R8=inH2O, R9=ozIN2, R10=ATM, R11=bar, R12=mbar, R13=MPa, R14=mH2O, R15=mmH2O, R16=Pa)	R X X X
Customer Specific (Numbers from Z01 to Z999)	Z # # #

Fixed Dead Band Per Switch Type, PSI		Proof Pressure PSI	Micro Switch Option with 3/4" NPT Electrical	
Micro	Hermetically Sealed		1/4" NPT Process	1/2" NPT Process
0.2-0.4	5.4-12	3,000	6WPS0106F4F301U	6WPS0106F2F301U
0.2-0.5	5.4-18.5	3,000	6WPS0206F4F301U	6WPS0206F2F301U
0.3-0.6	5.4-45.5	3,000	6WPS0306F4F301U	6WPS0306F2F301U
0.3-0.8	5.7-66.7	3,000	6WPS0606F4F301U	6WPS0606F2F301U
0.7-2.0	5.7-126.4	3,000	6WPS1306F4F301U	6WPS1306F2F301U

Differential Pressure Switch

Switches with UL & CSA Recognized and File No. E12252.

Description & Features:

- General Purpose, watertight differential pressure switch
- Low pressure to 300 psi
- High current ratings for 1 x SPDT or 2 x SPDT switches
- Fixed deadband
- Die cast aluminum construction with welded seal
- 1% accuracy
- NEMA 4 & 4X, IP66 rated
- RU recognized (switch only), file no E12252
- CRN registration pending
- 5 year warranty

Applications:

- Suitable for differential pressure applications including filter monitoring and control

Specifications	
Housing	Heavy-duty die-cast aluminum, blue colour
Accuracy	+/- 1% of the adjustable set-point range
Pressure Connection	Female 1/4" NPT or BSP
Electrical Connection	Female 1/2" or 3/4" NPT, M20xP1.5
Wetted Parts	Low pressure ranges - 316 Stainless Steel welded & Titanium High pressure ranges - 316 Stainless Steel welded
Set Point Adjustment	Field selectable
Deadband	Fixed, see Order Codes
Contact Rating	15A @ 125/250VAC, 0.4A @ 125VDC, 3A @ 30VDC Gold contact microswitch 1A @ 125/250VAC
No. of Contacts	1 x SPDT or 2 x SPDT
Ambient/Process Temperature	-30 to 205 deg C (-22 to 400 deg F)
Enclosure Rating	NEMA 4 & 4X, IP66 Protection against liquid and solid ingress, suitable for indoor or outdoor use and resistant to corrosion
Approvals	RU recognized, file no E12252 (switch only), CRN registration pending
Weight	4.95 lbs (2.25 kg)

Order Codes

Adjustable Range PSI	Dead Band PSI	Proof Pressure PSI	1/2" NPT Electrical 1/4" NPT Process
400-1,900 mmH2O (15.7-74.8" H2O)	30-80 mmH2O (1.2-3.1" H2O)	500	5WPSL240AF4F201
1,000-10,000 mmH2O (39.4-393.7" H2O)	70-200 mmH2O (2.8-7.9" H2O)	500	5WPSL400AF4F201
3-28	0.15-1.4	1,000	5WPS0106F4F201
7-100	0.35-5	1,000	5WPS0206F4F201
35-200	1.75-10	1,000	5WPS0306F4F201
50-300	2.5-25	1,000	5WPS0406F4F201

Dimensions

STANDARD PRESSURE RANGE

LOW PRESSURE RANGE

Wiring Diagram

1 x SPDT

2 x SPDT

Engineering Code (how to order)

5 W P S - □□□ - □ - □□ - □□ - □□ - □ - □□□□

5 W P S L - 2 4 0

		Pressure Range Min	Pressure Range Max	Deadband	Proof Pressure PSI	Code
SERIES						
PRESSURE RANGES PSI		3	28	0.15-1.4	1,000	0 1 0
		7	100	0.35-5	1,000	0 2 0
		35	200	1.75-10	1,000	0 3 0
		50	300	2.5-25	1,000	0 4 0
Low Pressure Ranges, mmH2O		400	1,900	30-80	750	2 4 0
		1,000	10,000	70-200	750	4 0 0
WETTED PARTS	316 Stainless Steel, diaphragm welded (standard)					6
	316 Stainless Steel & Tatanium (low pressure, standard)					A
PROCESS CONNECTION	1/2" NPT Female					F 2
	1/4" NPT Female					F 4
	1/2" BSP Female					B 2
	1/4" BSP Female					B 4
	1/2" PT Female					P 2
	1/4" PT Female					P 4
	M20 X P1.5					M 2
CONDUIT CONNECTION	3/4" NPT Female					F 3
	1/2" NPT Female (standard)					F 2
	M20 X P1.5					M 2
SWITCH TYPE	Micro Switch, 1 x SPDT					0 1
	Micro Switch, 2 x SPDT (one setpoint)					0 2
	Gold Contact, 1 x SPDT					3 A
	Gold Contact, 2 x SPDT (one setpoint)					3 B
OPTIONS	Custom Pressure Scale (R1=psi, R2=kPa, R3=kg/cm2, R4=cmH2O, R5=ftH2O, R6=inHg, R7=mmHg, R8=inH2O, R9=ozIN2, R10=ATM, R11=bar, R12=mbar, R13=MPa, R14=mH2O, R15=mmH2O, R16=Pa)					R X X X
	Customer Specific (Numbers from Z01 to Z999)					Z # # #

6WPS & 6WPSA

Explosion Proof and Adjustable Deadband Pressure Switch

Switches with UL & CSA Recognized and File No. E12252.

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Description & Features:

- Heavy-duty Explosion-proof pressure switch
- Low pressure to 4,000 psi
- High current ratings for 1 x SPDT or 2 x SPDT switches
- Fixed or adjustable deadband options
- Die cast aluminum construction with welded seal
- 1% accuracy
- IP68 rated including Hermetically sealed option
- cULus listed and RU recognized
- CRN registration pending

Applications:

- Designed for hazardous areas including Oil & Gas, Petrochemical,Power Generation, Waste Water and others

Specifications	
Housing	Heavy-duty explosion-proof die-cast aluminum, blue colour
Accuracy	+/- 1% of the adjustable set-point range
Pressure Connection	Female 1/4" or 1/2" NPT, BSP and M20xP1.5
Electrical Connection	Female 1/2" or 3/4" NPT, M20xP1.5
Wetted Parts	316 Stainless Steel welded
Set Point Adjustment	Field selectable
Deadband	Fixed or Adjustable, see Order Codes
Contact Rating	Fixed Deadband: 15A @ 125/250VAC, 0.4A @ 125VDC, 3A @ 30VDC Hermetically sealed switch 5A @ 250VAC Gold contact microswitch 1A @ 125/250VAC Adjustable Deadband: 20A @ 125/250/480VAC, 5A @ 125VDC
No. of Contacts	1 x SPDT or 2 x SPDT (only 1 x SPDT available for Adjustable Deadband range)
Ambient/Process Temperature	-30 to 205 deg C (-22 to 400 deg F)
Enclosure Rating	IP68, Protection from dust ingress and submersion in fresh water to a maximum depth of 1.5 metres for up to 30 minutes
Approvals	cULus listed, Class I Divison 1 Groups A, B, C & D; Class II Divison 1 Groups E, F & G (housing) RU recognized, file no E12252 (switch only) CRN registration pending
Weight	3.95 lbs (1.79 kg)

Order Codes

Adjustable Range PSI	Fixed Dead Band Per Switch Type, PSI			Proof Pressure PSI	Micro Switch Option with 3/4" NPT Electrical	
	Micro	Hermetically Sealed	Gold Contact		1/4" NPT Process	1/2" NPT Process
10-100	0.9-2.1	5.4-12	4.7-9.2	3,000	6WPS0106F4F301U	6WPS0106F2F301U
35-200	1.4-5.4	5.4-18.5	4.7-11.4	3,000	6WPS0206F4F301U	6WPS0206F2F301U
50-300	1.4-6.9	5.4-45.5	5.3-37	3,000	6WPS0306F4F301U	6WPS0306F2F301U
100-600	1.7-15.1	5.7-66.7	5.3-78	3,000	6WPS0606F4F301U	6WPS0606F2F301U
100-1,300	5.5-15	5.7-126.4	5.3-106.5	3,000	6WPS1306F4F301U	6WPS1306F2F301U
300-2,400	19.6-39.5	19.9-227.2	16.9-165	4,000	6WPS2406F4F301U	6WPS2406F2F301U
400-4,000	32.5-65.6	19.9-326.6	16.9-213	5,000	6WPS4006F4F301U	6WPS4006F2F301U

Adjustable Range PSI	Adjustable Dead Band E-position PSI	Proof Pressure PSI	Micro Switch Option with 3/4" NPT Electrical	
			1/4" NPT Process	1/2" NPT Process
10-100	10-25	3,000	6WPSA0106F4F301U	6WPSA0106F2F301U
35-200	12-30	3,000	6WPSA0206F4F301U	6WPSA0206F2F301U
50-300	28-50	3,000	6WPSA0306F4F301U	6WPSA0306F2F301U
100-600	28-60	3,000	6WPSA0606F4F301U	6WPSA0606F2F301U
200-1,300	42-100	3,000	6WPSA1306F4F301U	6WPSA1306F2F301U

Dimensions

Wiring Schematic

1 x SPDT

2 x SPDT

Explosion Proof and Adjustable Deadband Pressure Switch

Engineering Code

SERIES

PRESSURE RANGES (PSI)

	Pressure Range Min	Pressure Range Max	Deadband	Proof Pressure PSI	Code
Fixed Deadband	10	100	0.9-2.1	3,000	6WPS-010
	35	200	1.4-5.4	3,000	6WPS-020
	50	300	1.4-6.9	3,000	6WPS-030
	100	600	1.7-15.1	3,000	6WPS-060
	100	1,300	5.5-15	3,000	6WPS-130
	300	2,400	19.6-39.5	4,000	6WPS-240
	400	4,000	32.5-65.6	5,000	6WPS-400
Adjustable Deadband	10	100	10-25	3,000	6WPSA-010
	35	200	12-30	3,000	6WPSA-020
	50	300	28-50	3,000	6WPSA-030
	100	600	28-60	3,000	6WPSA-060
	200	1,300	42-100	3,000	6WPSA-130

WETTED PARTS

316 Stainless Steel, diaphragm welded (standard) — 6

PROCESS CONNECTION

1/2" NPT Female	F2
1/4" NPT Female	F4
1/2" BSP Female	B2
1/4" BSP Female	B4
1/2" PT Female	P2
1/4" PT Female	P4
M20 X P1.5	M2

CONDUIT CONNECTION

3/4" NPT Female (standard)	F3
1/2" NPT Female	F2
M20 X P1.5	M2

SWITCH TYPE

Micro Switch, 1 x SPDT	01
Micro Switch, 2 x SPDT (one setpoint), *not available for Adjustable Deadband*	02
Gold Contact, 1 x SPDT, *not available for Adjustable Deadband*	3A
Gold Contact, 2 x SPDT (one setpoint), *not available for Adjustable Deadband*	3B
Hermetically Sealed Switch, 1 x SPDT, *not available for Adjustable Deadband*	4A
Hermetically Sealed Switch, 2 x SPDT (one setpoint), *not available for Adjustable Deadband*	4B

HOUSING MATERIAL

cULus Listed, Hazardous locations — U

OPTIONS

Custom Pressure Scale (R1=psi, R2=kPa, R3=kg/cm2, R4=cmH2O, R5=ftH2O, R6=inHg, R7=mmHg, R8=inH2O, R9=ozIN2, R10=ATM, R11=bar, R12=mbar, R13=MPa, R14=mH2O, R15=mmH2O, R16=Pa) — RXXX

Customer Specific (Numbers from Z01 to Z999) — Z###

Medium Pressure, Explosion Proof And Adjustable Deadband Pressure Switch

7WPS & 7WPSA

Description & Features:

- Heavy-duty Explosion-proof pressure switch
- Low pressure to 100 psi
- High current ratings for 1 x SPDT or 2 x SPDT switches
- Fixed or adjustable deadband options
- Die cast aluminum construction with welded seal
- 1% accuracy
- IP68 rated including Hermetically sealed option
- cULus listed and RU recognized
- CRN registration pending
- 5 year warranty

Applications:

- Designed for hazardous areas including Oil & Gas, Petrochemical, Power Generation, Waste Water and others

Switches with UL & CSA Recognized and File No. E12252.

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Specifications	
Housing	Heavy-duty explosion-proof die-cast aluminum, blue colour
Accuracy	+/- 1% of the adjustable set-point range
Pressure Connection	Female 1/4" or 1/2" NPT, BSP and M20xP1.5
Electrical Connection	Female 1/2" or 3/4" NPT, M20xP1.5
Wetted Parts	316 Stainless Steel welded
Set Point Adjustment	Field selectable
Deadband	Fixed or Adjustable, see Order Codes
Contact Rating	Fixed Deadband: 15A @ 125/250VAC, 0.4A @ 125VDC, 3A @ 30VDC Hermetically sealed switch 5A @ 250VAC Gold contact microswitch 1A @ 125/250VAC Adjustable Deadband: 20A @ 125/250/480VAC, 5A @ 125VDC
No. of Contacts	1 x SPDT or 2 x SPDT (only 1 x SPDT available for Adjustable Deadband range)
Ambient/Process Temperature	-30 to 205 deg C (-22 to 400 deg F)
Enclosure Rating	IP68, Protection from dust ingress and submersion in fresh water to a maximum depth of 1.5 metres for up to 30 minutes
Approvals	cULus listed, Class I Divison 1 Groups A, B, C & D; Class II Divison 1 Groups E, F & G (housing) RU recognized, file no E12252 (switch only) CRN registration pending
Weight	3.95 lbs (1.79 kg)

Medium Pressure, Explosion Proof And Adjustable Deadband Pressure Switch

Order Codes

Adjustable Range PSI	Fixed Dead Band Per Switch Type, PSI		Proof Pressure PSI	Micro Switch Option with 3/4" NPT Electrical	
	Micro	Hermetically Sealed		1/4" NPT Process	1/2" NPT Process
2-12	0.2-0.4	0.7-1.4	1,000	7WPS0016F4F301U	7WPS0016F2F301U
2-16	0.2-0.5	0.7-1.8	1,000	7WPS0106F4F301U	7WPS0106F2F301U
2-20	0.3-0.6	1.1-2.1	1,000	7WPS0206F4F301U	7WPS0206F2F301U
3-28	0.3-0.8	1.1-2.8	1,000	7WPS0306F4F301U	7WPS0306F2F301U
7-100	0.7-2.0	2.5-7.0	1,000	7WPS0406F4F301U	7WPS0406F2F301U

Adjustable Range PSI	Adjustable Dead Band E-position PSI	Proof Pressure PSI	3/4" NPT Electrical	
			1/4" NPT Process	1/2" NPT Process
2-12	1.2-3	1,000	7WPSA0016F4F301U	7WPSA0016F2F301U
2-16	1.6-4	1,000	7WPSA0106F4F301U	7WPSA0106F2F301U
2-20	2-5	1,000	7WPSA0206F4F301U	7WPSA0206F2F301U
3-28	2.8-7	1,000	7WPSA0306F4F301U	7WPSA0306F2F301U
7-100	9.9-28.4	1,000	7WPSA0406F4F301U	7WPSA0406F2F301U

Dimensions

Wiring Schematic

1 x SPDT

2 x SPDT

Engineering Code

7WPS - ___ - ___ - ___ - ___ - ___ - ___ - ___

7WPSA - ___ - ___ - ___ - ___ - ___ - ___ - ___

	Pressure Range Min	Pressure Range Max	Deadband	Proof Pressure PSI	Code
SERIES					
PRESSURE RANGES (PSI)					
Fixed Deadband	2	12	0.2-0.4	1,000	001
	2	16	0.2-0.5	1,000	010
	2	20	0.3-0.6	1,000	020
	3	28	0.3-0.8	1,000	030
	7	100	0.7-2.0	1,000	040
Adjustable Deadband	2	12	1.2-3	1,000	001
	2	16	1.6-4	1,000	010
	2	20	2-5	1,000	020
	3	28	2.8-7	1,000	030
	7	100	9.9-28.4	1,000	040

		Code
WETTED PARTS	316 Stainless Steel, diaphragm welded (standard)	6
PROCESS CONNECTION	1/2" NPT Female	F2
	1/4" NPT Female	F4
	1/2" BSP Female	B2
	1/4" BSP Female	B4
	1/2" PT Female	P2
	1/4" PT Female	P4
	M20 X P1.5	M2
CONDUIT CONNECTION	3/4" NPT Female (standard)	F3
	1/2" NPT Female	F2
	M20 X P1.5	M2
SWITCH TYPE	Micro Switch, 1 x SPDT	01
	Micro Switch, 2 x SPDT (one setpoint), *not available for Adjustable Deadband*	02
	Gold Contact, 1 x SPDT, *not available for Adjustable Deadband*	3A
	Gold Contact, 2 x SPDT (one setpoint), *not available for Adjustable Deadband*	3B
	Hermetically Sealed Switch, 1 x SPDT, *not available for Adjustable Deadband*	4A
	Hermetically Sealed Switch, 2 x SPDT (one setpoint), *not available for Adjustable Deadband*	4B
HOUSING MATERIAL	cULus Listed, Hazardous locations	U
OPTIONS	Custom Pressure Scale (R1=psi, R2=kPa, R3=kg/cm2, R4=cmH2O, R5=ftH2O, R6=inHg, R7=mmHg, R8=inH2O, R9=ozIN2, R10=ATM, R11=bar, R12=mbar, R13=MPa, R14=mH2O, R15=mmH2O, R16=Pa)	RXXX
	Customer Specific (Numbers from Z01 to Z999)	Z##

8WPS & 8WPSV

Vacuum and Low Pressure Explosion Proof Pressure Switch

Switches with UL & CSA Recognized and File No. E12252.

c UL us LISTED

Description & Features:

- Heavy-duty Explosion-proof pressure switch
- Vacuum pressure to 10 psi
- High current ratings for 1 x SPDT or 2 x SPDT switches
- Fixed deadband
- Die cast aluminum construction with welded seal
- 1% accuracy
- IP68 rated including Hermetically sealed option
- cULus listed and RU recognized
- CRN registration pending
- 5 year warranty

Applications:

- Suitable for vacuum and low pressure applications in hazardous areas including natural gas monitoring and control

Specifications	
Housing	Heavy-duty explosion-proof die-cast aluminum, blue colour
Accuracy	+/- 1% of the adjustable set-point range
Pressure Connection	1/4" or 1/2" NPT, BSP and M20xP1.5
Electrical Connection	Female 1/2" or 3/4" NPT, M20xP1.5
Wetted Parts	316 Stainless Steel welded (except for Vacuum range, Viton o-ring)
Set Point Adjustment	Field selectable
Deadband	Fixed, see Order Codes
Contact Ratings	Fixed Deadband: 15A @ 125/250VAC, 0.4A @ 125VDC, 3A @ 30VDC Hermetically sealed switch 5A @ 250VAC Gold contact microswitch 1A @ 125/250VAC Adjustable Deadband: 20A @ 125/250/480VAC, 5A @ 125VDC
No. of Contacts	1 x SPDT or 2 x SPDT (only 1 x SPDT available for Adjustable Deadband range)
Ambient/Process Temperature	-30 to 205 deg C (-22 to 400 deg F), Vacuum range only -5 to 150 deg C (23 to 300 deg F)
Enclosure Rating	IP68 Protection from dust ingress and submersion in fresh water to a maximum depth of 1.5 metres for up to 30 minutes
Approvals	cULus listed, Class I Divison 1 Groups A, B, C & D; Class II Divison 1 Groups E, F & G (housing) RU recognized, file no E12252 (switch) CRN registration pending
Weight	3.95 lbs (1.79 kg)

Order Codes

Adjustable Range PSI	Fixed Dead Band PSI	Proof Pressure PSI	3/4" NPT Electrical	
			1/4" NPT Process	1/2" NPT Process
-25 to -760 mmHg (-1.0 to -30" Hg)	10-20 mmHg (0.39 to 0.79" Hg)	1,000	8WPSV1306F4F301U	8WPSV1306F2F301U
0.05-1.8	0.015-0.3	500	8WPS0016F4F301U	8WPS0016F2F301U
0.4-2.8	0.2-0.5	500	8WPS0106F4F301U	8WPS0106F2F301U
0.4-5.0	0.3-0.6	500	8WPS0206F4F301U	8WPS0206F2F301U
1.6-9.8	42-100	500	8WPS0306F4F301U	8WPS0306F2F301U

Dimensions

STANDARD PRESSURE RANGE

LOW PRESSURE RANGE

Wiring Schematic

1 x SPDT

2 x SPDT

Vacuum and Low Pressure Explosion Proof Pressure Switch

Engineering Code

SERIES

8 W P S - ☐☐☐ - ☐ - ☐☐ - ☐☐ - ☐☐ - ☐ - ☐☐☐☐

PRESSURE RANGES

	Pressure Range Min	Pressure Range Max	Deadband	Proof Pressure PSI	
Low Pressure, PSI	0.05	1.8	0.015-0.3	500	0 0 1
	0.4	2.8	0.2-0.5	500	0 1 0
	0.4	5.0	0.3-0.6	500	0 2 0
	1.6	9.8	0.3-0.8	500	0 3 0
Vacuum, mmHg	-25	-760	10-20	1,000	8 W P S W - 1 3 0

WETTED PARTS

316 Stainless Steel, diaphragm welded (low pressure, standard) — 6

316 Stainless Steel, Viton o-ring (vacuum, standard)

PROCESS CONNECTION

1/2" NPT Female	F 2
1/4" NPT Female	F 4
1/2" BSP Female	B 2
1/4" BSP Female	B 4
1/2" PT Female	P 2
1/4" PT Female	P 4
M20 X P1.5	M 2

CONDUIT CONNECTION

3/4" NPT Female (standard)	F 3
1/2" NPT Female	F 2
M20 X P1.5	M 2

SWITCH TYPE

Micro Switch, 1 x SPDT	0 1
Micro Switch, 2 x SPDT (one setpoint)	0 2
Gold Contact, 1 x SPDT	3 A
Gold Contact, 2 x SPDT (one setpoint)	3 B
Hermetically Sealed Switch, 1 x SPDT	4 A
Hermetically Sealed Switch, 2 x SPDT (one setpoint)	4 B

HOUSING MATERIAL

cULus Listed, Hazardous locations — U

OPTIONS

Custom Pressure Scale (R1=psi, R2=kPa, R3=kg/cm2, R4=cmH2O, R5=ftH2O, R6=inHg, R7=mmHg, R8=inH2O, R9=ozIN2, R10=ATM, R11=bar, R12=mbar, R13=MPa, R14=mH2O, R15=mmH2O, R16=Pa) — R X X X

Customer Specific (Numbers from Z01 to Z999) — Z # # #

Explosion Proof Compact Pressure Switch

9WPS

Description & Features:

- Vac to 10,000 psi pressure range
- Explosion proof SPDT or DPDT switch
- Stainless steel with FKM and PTFE wetted parts
- ANSI dual seal design
- Diaphragm seal/piston sensor
- Safe to adjust during operation
- Lockable setpoint wheel to avoid shifting during operation
- ±2% of full scale accuracy
- NEMA 4X, 7 & 9 enclosure rating
- CSA approved for hazardous locations
- Designed for sour gas applications requiring NACE standards MR0175-2009
- CRN registered (up to 3,000 psi models)
- 5 year warranty

Applications:

- Suitable for hazardous locations including safety panels and with pump and gas compressors, turbines and other oil & gas applications
- Appropriate for oil & gas, power plants, chemical facilities and water treatment
- Designed for hazardous locations where an explosion proof switch is required

Specifications	
Housing Material	316 SS
Port Material	316 SS
Accuracy	±2% of full scale
Pressure Connection	1/4” NPTF (1/2” NPTF optional)
Electrical Connection	1/2” NPTM, 18 AWG, 18” (457 mm) free leads
Wetted Parts	Vacuum and low pressure - seals: FKM diaphragm High pressure - piston: SS with PTFE backup ring and FKM o-ring
Set Point Adjustment	Internal adjustment wheel with built in locking set-screws (#6)[1]
Deadband	Fixed
Contact Rating	11 amps @ 125/250 Vac 5 amps @ 30 Vdc
No. of Contacts	1 x SPDT, DPDT optional
Vibration	10 g 10-500 Hz, MIL-STD-202F
Shock	50 g 11 ms, MIL-S-901C
EMI/RFI Protection	EN55011
Ambient Temperature	-40°F to 149°F (-40°C to 65°C)
Enclosure Rating	NEMA 4X, 7 & 9
Approvals	CSA approved (Canada and USA) for use in hazardous locations Class I, Div. 1, Groups B, C & D; Class II, Div. 1, Groups E, F & G CRN registered (up to 3,000 psi model) ANSI Dual Seal Compliant NACE MR0175-2009
Typical Life	2.5 million cycles
Weight	1.85 lbs (839 grams)

[1] Need to loosen set screw (#6) at all times when resetting adjustment.

Explosion Proof Compact Pressure Switch

Order Codes

Adjustable Range psi (bar)		Approximate Deadband (Actuation value) psi (bar)	Proof Pressure psi (bar)	SPDT 1/4" NPT	SPDT 1/2" NPT	DPDT 1/4" NPT	DPDT 1/2" NPT
Min	Max						
1" Hg	30" Hg	4-9" Hg	30" Hg	9WPSV01N4	9WPSV01N2	9WPSV012CCVN4S	9WPSV012CCVN2S
2 (0.1)	15 (1)	1-3 (.07-.2)	1,000 (69)	9WPSL02N4	9WPSL02N2	9WPSL022CCVN4S	9WPSL022CCVN2S
1 (0.07)	30 (2)	1-4 (.07-.27)	1,000 (69)	9WPSL06N4	9WPSL06N2	9WPSL062CCVN4S	9WPSL062CCVN2S
5 (0.3)	150 (10.3)	2-25 (0.1-1.7)	1,000 (69)	9WPSL03N4	9WPSL03N2	9WPSL032CCVN4S	9WPSL032CCVN2S
25 (1.7)	300 (20.6)	7-40 (0.5-2.8)	1,000 (69)	9WPSL04N4	9WPSL04N2	9WPSL042CCVN4S	9WPSL042CCVN2S
50 (3.4)	500 (34.5)	15-60 (1-4.1)	1,000 (69)	9WPSL05N4	9WPSL05N2	9WPSL052CCVN4S	9WPSL052CCVN2S
100 (6.9)	750 (51.7)	50-150 (3.4-10.3)	15,000 (1,034)	9WPSH06N4	9WPSH06N2	9WPSH062CCVN4S	9WPSH062CCVN2S
150 (10.3)	1,000 (69)	70-200 (4.7-13.8)	15,000 (1,034)	9WPSH07N4	9WPSH07N2	9WPSH072CCVN4S	9WPSH072CCVN2S
150 (10.3)	3,000 (207)	50-1,000 (3.4-68.9)	15,000 (1,034)	9WPSH11N4	9WPSH11N2	9WPSH112CCVN4S	9WPSH112CCVN2S
400 (27.6)	3,000 (207)	100-400 (6.9-27.6)	15,000 (1,034)	9WPSH08N4	9WPSH08N2	9WPSH082CCVN4S	9WPSH082CCVN2S
700 (48.2)	5,000 (345)	140-600 (9.6-41.4)	15,000 (1,034)	9WPSH09N4	9WPSH09N2	9WPSH092CCVN4S	9WPSH092CCVN2S
1,000 (69)	7,500 (517)	140-800 (9.6-55.2)	15,000 (1,034)	9WPSH10N4	9WPSH10N2	9WPSH102CCVN4S	9WPSH102CCVN2S
5,000 (344.8)	10,000 (689.7)	200-2,000 (13.8-137.9)	15,000 (1,034)	9WPSH12N4	9WPSH12N2	9WPSH122CCVN4S	9WPSH122CCVN2S

Vacuum

Low Pressure

High Pressure

Top View

Bottom View

Wiring Code

Lead	Pressure		Vacuum	
	Circuit #1	Circuit #2	Circuit #1	Circuit #2
Normally Open	Red	Yellow	Red	Yellow
Common	Purple	Brown	Purple	Brown
Normally Closed	Blue	Orange	Blue	Orange
Ground	Green		Green	

Wiring Diagram

Series Number (how to order)

9 W P S - ___ - ___ - ___ - ___ - ___ - ___ - ___

SERIES

PRESSURE RANGES PSI (BAR)

	Adjustable Range psi (bar) Min	Adjustable Range psi (bar) Max	Deadband (*Actuation Value based on closed contact*)	
Vacuum Pressure Switch (*1"-30" Hg*)	1" Hg	30" Hg	4-9" Hg	V 0 1
Low Presssure Switch (*2-500 psi*)	2 (0.1)	15 (1)	1-3 (0.07-0.2)	L 0 2
	5 (0.3)	150 (10.3)	2-25 (0.1-1.7)	L 0 3
	25 (1.7)	300 (20.6)	7-40 (0.5-2.8)	L 0 4
	50 (3.4)	500 (34.5)	15-60 (1-4.1)	L 0 5
High Pressure Switch (*100-10,000 psi*)	100 (6.9)	750 (51.7)	50-150 (3.4-10.3)	H 0 6
	150 (10.3)	1,000 (69)	70-200 (4.7-13.8)	H 0 7
	400 (27.6)	3,000 (207)	100-400 (6.7-27.6)	H 0 8
	700 (48.2)	5,000 (345)	140-600 (9.6-41.4)	H 0 9
	1,000 (69)	7,500 (517)	140-800 (9.6-55.2)	H 1 0
	150 (10.3)	3,000 (207)	50-1,000 (3.4-68.9)	H 1 1
	5,000 (344.8)	10,000 (689.7)	200-2,000 (13.8-137.9)	H 1 2
	Special Range			? ? ?

SWITCH

SPDT Switch, 11 amps @ 125 / 250 VAC; 5 amps @ 30 VDC (standard)	1 C C
DPDT Switch, 11 amps @ 125 / 250 VAC; 5 amps @ 30 VDC	2 C C
SPDT gold contact switch, 1 amp @ 125 VAC	1 G H
DPDT gold contact switch, 1 amp @ 125 VAC	2 G H

WETTED PARTS

Viton Diaphragm & O-Rings (standard)	V
Buna-N Diaphragm & O-Rings	B
EPR Diaphragm & O-Rings (no UL or CSA)	E

MECHANICAL CONNECTION

1/4" NPT Female (standard)	N 4
1/2" NPT Female	N 2
7/16-20 SAE Female	U 1

HOUSING

316 Stainless Steel (standard)	S

OPTIONS

Extra Wire Length (*in Inches*)	C ? ? ?
Special	S ? ? ?

Explosion Proof Differential Pressure Switch

Switches with UL & CSA Recognized and File No. E12252.

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Description & Features:

- Heavy-duty, explosion-proof, differential pressure switch
- Low pressure to 300 psi
- High current ratings for 1 x SPDT or 2 x SPDT switches
- Fixed deadband
- Die cast aluminum construction with welded seal
- 1% accuracy
- IP68 rated including Hermetically sealed option
- cULus listed and RU recognized
- CRN registration pending
- 5 year warranty

Applications:

- Suitable for differential pressure applications in hazardous areas including filter monitoring and control

Specifications	
Housing	Heavy-duty die-cast aluminum, blue colour
Accuracy	+/- 1% of the adjustable set-point range
Pressure Connection	Female 1/4" NPT, BSP
Electrical Connection	Female 1/2" or 3/4" NPT, M20xP1.5
Wetted Parts	Low pressure ranges - 316 Stainless Steel welded & Titanium High pressure ranges - 316 Stainless Steel welded
Set Point Adjustment	Field selectable
Deadband	Fixed, see Order Codes
Contact Ratings	Fixed Deadband: 15A @ 125/250VAC, 0.4A @ 125VDC, 3A @ 30VDC Hermetically sealed switch 5A @ 250VAC Gold contact microswitch 1A @ 125/250VAC
No. of Contacts	1 x SPDT or 2 x SPDT
Ambient/Process Temperature	-30 to 205 deg C (-22 to 400 deg F)
Enclosure Rating	IP68 Protection from dust ingress and submersion in fresh water to a maximum depth of 1.5 metres for up to 30 minutes
Approvals	cULus listed, Class I Divison 1 Groups A, B, C & D; Class II Divison 1 Groups E, F & G (housing) RU recognized, file no E12252 (switch) CRN registration pending
Weight	7.5 lbs (3.4 kg)

Order Codes

Adjustable Range PSI	Dead Band PSI	Proof Pressure PSI	3/4" NPT Electrical 1/4" NPT Process
400-1,900 mmH20 (15.7-74.8" H2O)	30-80 mmH2O (1.2-3.1" H2O)	500	10WPSL240AF4F301U
1,000-10,000 (39.4-393.7" H2O)	70-200 mmH2O (2.8-7.9" H2O)	500	10WPSL4006AF4F301U
3-28	0.015-0.3	1,000	10WPS0106F4F301U
7-100	0.2-0.5	1,000	10WPS0206F4F301U
35-200	0.3-0.6	1,000	10WPS0306F4F301U
50-300	0.3-0.8	1,000	10WPS0406F4F301U

Dimensions

Wiring Schematic

1 x SPDT

2 x SPDT

Explosion Proof Differential Pressure Switch

Engineering Codes

SERIES

PRESSURE RANGES PSI

	Pressure Range Min	Pressure Range Max	Deadband	Proof Pressure PSI	
	3	28	0.15-1.4	1,000	0 1 0
	7	100	0.35-5	1,000	0 2 0
	35	200	1.75-10	1,000	0 3 0
	50	300	2.5-25	1,000	0 4 0
Low Pressure Ranges, mmH2O	400	1,900	30-80	750	2 4 0
	1,000	10,000	70-200	750	4 0 0

WETTED PARTS

316 Stainless Steel, diaphragm welded (standard)	6
316 Stainless Steel & Tatanium (low pressure, standard)	A

PROCESS CONNECTION

1/2" NPT Female	F 2
1/4" NPT Female	F 4
1/2" BSP Female	B 2
1/4" BSP Female	B 4
1/2" PT Female	P 2
1/4" PT Female	P 4
M20 X P1.5	M 2

CONDUIT CONNECTION

3/4" NPT Female (standard)	F 3
1/2" NPT Female	F 2
M20 X P1.5	M 2

SWITCH TYPE

Micro Switch, 1 x SPDT	0 1
Micro Switch, 2 x SPDT (one setpoint)	0 2
Gold Contact, 1 x SPDT	3 A
Gold Contact, 2 x SPDT (one setpoint)	3 B
Hermetically Sealed Switch, 1 x SPDT	4 A
Hermetically Sealed Switch, 2 x SPDT (one setpoint)	4 B

HOUSING MATERIAL

cULus Listed, Hazardous locations	U

OPTIONS

Custom Pressure Scale (R1=psi, R2=kPa, R3=kg/cm2, R4=cmH2O, R5=ftH2O, R6=inHg, R7=mmHg, R8=inH2O, R9=ozIN2, R10=ATM, R11=bar, R12=mbar, R13=MPa, R14=mH2O, R15=mmH2O, R16=Pa)	R X X X
Customer Specific (Numbers from Z01 to Z999)	Z # # #

10 W P S - [ ][ ][ ] - [ ] - [ ][ ] - [ ][ ] - [ ][ ] - [ ] - [ ][ ][ ][ ]

10 W P S L - 2 4 0

Description & Features:

- Simple 2 button operation
- Reset to zero feature
- Backlight turns on when on/off button is pressed
- Option for display to remain continuously on
- Continuous peak pressure indication option
- 316L welded diaphragm seal
- Rubber boot is standard
- ASME B40.100 compliant
- ±1% accuracy (±0.5% optional for gauges up to 10,000 psi)
- 5 year warranty

Applications:

- Ideal for commercial and industrial application in both test measurement and general purpose installations

Specifications	
Case Size	2.5” (63mm)
Case Material	ABS
Rubber Boot	Silicone rubber
LCD Display	2” x 3/4” (48mm x 16mm)
Connection	1/4” NPT 304SS
Sensor	316L welded, Piezo
Operating Life	1 million cycles
Power Supply	2 x AAA battery (1.5V)
Battery Life	2 yrs (auto shut-off mode)
Power Mode	Auto or manual shut-off
Display Digits	4 digits to 5,000 psi 5 digits for 10,000 psi and 15,000 psi
Pressure Unit Selection	psi, mH_2O, mmHg, mbar, kPa ranges ≤ 100 psi psi, bar, kgf/cm^2, MPa, atm ranges ≥ 160 psi
Response Time	≤ 3 Hz display refresh rate
Proof / Burst Pressure	200% / 300% FS
Operating / Storage Temperature	14ºF to 122ºF (-10ºC to 50ºC) -4ºF to 167ºF (-20ºC to 75ºC)
Accuracy	±1% (±0.5% optional for gauges up to 10,000 psi)
Enclosure Rating	IP60

Order Codes (products in bold are normally stock in North America)

Dial Size	2.5” (63mm)
Connection	1/4” Bottom
Socket	SS
-15 psi	DPG210
-15/0/15 psi	DPG203
-15/0/30 psi	DPG204
-15/0/60 psi	DPG205
-15/0/100 psi	DPG206
-15/0/150 psi	DPG207
-15/0/200 psi	DPG208
-15/0/300 psi	DPG209
0/15 psi	DPG211
0/30 psi	DPG212
0/60 psi	DPG213
0/100 psi	**DPG214**
0/160 psi	DPG215
0/200 psi	DPG216
0/300 psi	**DPG217**
0/600 psi	DPG218
0/1,000 psi	**DPG219**
0/1,500 psi	DPG220
0/2,000 psi	DPG221
0/3,000 psi	**DPG222**
0/5,000 psi	**DPG223**
0/10,000 psi	**DPG224**
0/15,000 psi	**DPG225**

Other ranges and connection sizes available upon request. For scale change, refer to How to Order Guide for scale codes. **For options, attach suffix to end of order code: i.e. DPG2245 for ±0.5% Accuracy.**

Option suffix:
5 = ±0.5% Accuracy (available on gauges up to 10,000 psi)

Without Rubber Boot

With Rubber Boot

DPG+ High Precision Digital Pressure Gauge with Bluetooth

Description & Features:

- Sophisticated, highly accurate, digital pressure gauge
- Bluetooth function for datalogging, including exporting function
- Available ranges from very low pressure up to 15,000 psi (1,000) Bar)
- Temperature sensor included to record ambient temperature
- ±0.05%, 0.1% and 0.5% accuracies available
- IP65 for complete protection against dust and water
- Complete visual orientation with 330 degree dial rotation
- Powered by 3 x AAA batteries, with more than 1 year of operating life
- 5 year warranty

Applications:

- Designed to be used for calibration and testing of pressure instruments in workshops, repair facilites, labratories or in the field

Specifications	
Case	3.3” (85mm) with 330 degreee rotation
Case Material	Cast Zinc with protective silicone rubber boot
Accuracy	0.05%, 0.1%, 0.5% full scale
Long Term Stability	Better than 0.05% FS per year
LCD Display	Large 2" x 1 3/8" (51mm x 36mm) with integrated backlight
Communication	Integrated Bluetooth for pairing between DPG Plus and mobile App
Mobile Application (iOS & Android)	App functionality includes monitoring, recording (data logging) and exporting of data
Connection	1/4" NPT, 1/2" NPT, G1/4, G1/2, M12x1.5, bottom (lower mount) connection only
Power Supply	3 x AAA Batteries or USB powered
Battery Life	The 3 x AAA Batteries, with ultra-low power consumption design, will provide a maximum battery life of more than 1 year
Power Mode	Automatic or manual shut-off (Automatic = if the unit is not sensing continuous pressure or being programmed)
Electrical Protection	Electromagnetic interference design
Display Units	6 digits plus Percentage Bar, Number of Recordings, Pressure Unit, Pressure Value, Battery Power, Bluetooth Symbol, Temperature Value, Maximum Pressure Reading
Key Functions	Power ON/OFF, Backlight, Clear / Re-zero, Unit Switching, Maximum Pressure Reading, Temperature Display, Data Recording, Expert / Factory Mode
Operating Temperature	-5ºC to 40ºC / 23ºF to 104ºF
Pressure Unit Selection	12 engineered units available: PSI, inHG, inH2O, inWC, atm, torr, BAR, mBAR, mH2O, Mpa, kgf, Pa
Response Time	1 to 10 times per second
Overload Pressure	200% ≤ 1,450 psi and 150% > 1,450 psi
Wetted Parts	304SS
Enclosure Rating	IP65
Product Accessories	Durable case with insulation, USB cable

Order Codes (products in bold are normally stock in North America)

Dial Size 85mm (3.4”)		
Accuracy 0.1% Full Scale		
Process Connection, Bottom	1/4” NPT	1/2” NPT
-15 psi	DPG3P01N4	DPG3P01N2
-15/0/15 psi	DPG3P02N4	DPG3P02N2
-15/0/30 psi	DPG3P03N4	DPG3P03N2
-15/0/60 psi	DPG3P04N4	DPG3P04N2
-15/0/100 psi	DPG3P05N4	DPG3P05N2
-15/0/150 psi	DPG3P06N4	DPG3P06N2
-15/0/200 psi	DPG3P07N4	DPG3P07N2
0/1 psi	DPG3P08N4	DPG3P08N2
0/5 psi	DPG3P09N4	DPG3P09N2
0/15 psi	DPG3P10N4	DPG3P10N2
0/30 psi	DPG3P11N4	DPG3P11N2
0/60 psi	DPG3P12N4	DPG3P12N2
0/100 psi	DPG3P13N4	DPG3P13N2
0/160 psi	DPG3P14N4	DPG3P14N2
0/200 psi	DPG3P15N4	DPG3P15N2
0/300 psi	DPG3P16N4	DPG3P16N2
0/600 psi	DPG3P17N4	DPG3P17N2
0/800 psi	DPG3P18N4	DPG3P18N2
0/1,000 psi	DPG3P19N4	DPG3P19N2
0/1,500 psi	DPG3P20N4	DPG3P20N2
0/2,000 psi	DPG3P21N4	DPG3P21N2
0/3,000 psi	DPG3P22N4	DPG3P22N2
0/4,000 psi	DPG3P23N4	DPG3P23N2
0/5,000 psi	DPG3P24N4	DPG3P24N2
0/6,000 psi	DPG3P25N4	DPG3P25N2
0/7,500 psi	DPG3P26N4	DPG3P26N2
0/10,000 psi	DPG3P27N4	DPG3P27N2

Dimensions

Engineering Codes

| DPG+ OPTIONS | | |

LE1 OEM Transmitter

Description & Features:

- Developed for OEM applications
- Compact stainless steel construction with ceramic sensor
- Available ranges include Vac up to 8,700 psi (600 bar)
- Wide range of mechanical and electrical connections
- ±0.5% accuracy (±1% for pressures ≤ 45 psi)
- IP65 and IP67 enclosure ratings
- CE approved
- 5 year warranty

Applications:

- Suitable for all process and automation control, hydraulics and pneumatic sensing, pump and compressor monitoring, refrigeration and HVAC

Specifications	
Output Signal	Standard 2-wire: 4-20 mA / Vs = 12-30 Vdc Optional 3-wire: 0.5-4.5 Vdc / Vs = 10-30 Vdc / Vac
Accuracy	±0.5% FSO (±1% FSO for pressures ≤ 45 psi (3 bar))
Response Time	<10 ms
Insulation	>100 MΩ @ 50V
Permissible Temperatures	Operating: -40°F to 212°F (-40°C to 100°C) Compensating: 14°F to 176°F (-10°C to 80°C)
Pressure Port / Housing	304 SS
Wetted Parts	Seals: NBR Diaphragm: Ceramic
Current Consumption	2-wire: 25 mA max 3-wire voltage: 5 mA (short-circuit current 20 mA)
EMC	EMI: EN50081-1/-2 EMS: EN50082-2
Stability	Vibration: 10 g / 5 Hz to 200 Hz Shock: 20 g / 11 ms
Operation Life	2 M cycles
Approval	CE, RoHS

Order Codes (products in bold are normally stock in North America)

Range	Over-pressure	Burst Pressure	Code
30"/0/60 psi	75 psi	150 psi	LE10060
30"/0/100 psi	150 psi	300 psi	LE10100
30"/0/150 psi	225 psi	450 psi	LE10150
0/15 psi	23 psi	45 psi	LE115
0/25 psi	38 psi	75 psi	LE125
0/50 psi	75 psi	150 psi	LE150
0/60 psi	90 psi	180 psi	LE160
0/100 psi	150 psi	300 psi	LE1100
0/150 psi	225 psi	450 psi	LE1150
0/200 psi	300 psi	600 psi	LE1200
0/300 psi	450 psi	900 psi	LE1300
0/500 psi	750 psi	1,500 psi	LE1500
0/1,000 psi	1,500 psi	3,000 psi	LE11000
0/2,000 psi	3,000 psi	6,000 psi	LE12000

Range	Over-pressure	Burst Pressure	Code
-1/4 bar	6 bar	12 bar	LE10060R11
-1/6 bar	9 bar	18 bar	LE10100R11
-1/10 bar	15 bar	30 bar	LE10150R11
0/1 bar	2 bar	3 bar	LE115R11
0/1.6 bar	2 bar	5 bar	LE125R11
0/2.5 bar	4 bar	8 bar	LE150R11
0/4 bar	6 bar	12 bar	LE160R11
0/6 bar	9 bar	18 bar	LE1100R11
0/10 bar	15 bar	30 bar	LE1150R11
0/16 bar	24 bar	48 bar	LE1200R11
0/25 bar	38 bar	75 bar	LE1300R11
0/40 bar	60 bar	120 bar	LE1500R11
0/60 bar	90 bar	180 bar	LE11000R11
0/100 bar	150 bar	300 bar	LE12000R11
0/160 bar	240 bar	480 bar	LE13000R11

Electrical Connection

Wiring Diagram

Micro

Packard

Cable Leads

M12

Micro			Packard			Cable Leads			M12		
Pin#:	2-wire (current):	3-wire (voltage):	Pin #:	2-wire (current):	3-wire (voltage):	Cable Colours:	2-wire (current):	3-wire (voltage):	Pin #:	2-wire (current)	3-wire (voltage)
1	Vcc	Vcc	A	No Connection	Ground	Red	Vcc	Vcc	1	Supply+	Supply+
2	Iout	Ground	B	Vcc	Vcc	Green/Blue	Iout	Vout	2	Signal-	Supply-
3	No Connection	Vout	C	Iout	Vout	Black	No Connection	Ground	3	-	Signal+
4	Shield	Shield	-	-	-	Yellow	Shield	Shield	4	-	-

LE3 General Purpose Transmitter

Description & Features:

- Developed for use in general industry and OEM applications, where versatility and low cost are requirements
- Compact stainless steel construction with ceramic sensor
- Available ranges include 25-7,500 psi
- Wide range of mechanical and electrical connections
- ±0.5% accuracy
- IP65 and IP67
- Built-in restrictor screw on ranges >1,500 psi
- UL listed or UL recognized for USA and Canada
- 5 year warranty

Applications:

- Suitable for all process and automation control, hydraulics and pneumatic sensing, pump and compressor monitoring, refrigeration and HVAC

Specifications	
Output Signal	4…20 mA, 2-wire / Vs = 8-33 Vdc 0…10 Vdc, 3-wire / Vs = 12-33 Vdc 1...5 Vdc, 3-wire / Vs = 7-33 Vdc 0.5...4.5 Vdc, 3-wire, ratiometric output / Vs = 4.5-5.5 Vdc (UL listing not included)
Response Time	4…20 mA = 3 ms, all others = 5 ms
Current Consumption	4…20 mA = 22 mA maximum, all others = 15 mA maximum
Accuracy	±0.5% Full Scale Output, ±0.6% FSO for ranges greater and equal to 4,000 psi0+
Long-Term Stability	±0.2% FSO (typically per year)
Wetted Parts	316SS Pressure port, Ceramic sensor with Viton O-ring
Shock	50 g's 11 ms, MIL-STD 202 Method 213 G
Vibration	15 g's 10 to 2,000 Hz, MIL-STD 202
Storage Temperature	-40 to 100 deg C (-40 to 212 deg F)
Media Temperature	-40 to 120 deg C (-40 to 248 deg F)
Reverse Polarity Protection	Yes
EMI-EMC Compliance	IEC 61000 4-2 to 4-6, IEC 61326-1 Class A
Enclosure Rating	NEMA 4X; IP65 or IP67
Approvals	UL listed or UL recognized for USA and Canada, see pressure ranges
Compliance	RoHS, REACH, CE
Operation Life	1 million cycles, minimum
Weight	120 g (4.23 oz)

ELECTRICAL CONNECTIONS								
ELECTRICAL SIGNAL	ELECTRICAL TERMINATION							
	Cable Outlet		Metripack 3-Pin Deutsch		M12 DIN 43650 A & C		4-Pin Deutsch	
	VOLTAGE	CURRENT	VOLTAGE	CURRENT	VOLTAGE	CURRENT	VOLTAGE	CURRENT
+EXCITATION	RED	RED	PIN 1	PIN 1	PIN 1	PIN 1	PIN 2	PIN 2
-EXCITATION (COMMON)	BLACK	BLACK	PIN 2	PIN 2	PIN 2	PIN 2	PIN 1	PIN 1
VOLTAGE OUTPUT	WHITE	-	PIN 3		PIN 3	-	PIN 4	
CASE GROUND/DRAIN/EARTH	DRAIN	DRAIN		PIN 3	PIN 4	PIN 4	PIN 3	PIN 3

Process Connections

1/4" NPT, Male	7/16-20 UNF male(JIC 37°)	G1/4 male (gasket seal)	7/16-20 SAE #4 ORB	1/8" NPT Male

Order Codes (products in bold are normally stock in North America)

Range	Proof-Pressure (psi)	4/20mA, Ceramic w/O-ring,1/4" NPT Process, 0.5% Acc*	
		DIN 43650 A	Cable Outlet (1M /3')
0-25 PSI (0-1.6 BAR), UL	50 psi	LE31105P5GN4CVU	LE31TR5P5GN4CVU
0-30 PSI (0-2 BAR), UL	60 psi	LE31106P5GN4CVU	LE31TR6P5GN4CVU
0-36 PSI (0-2.5 BAR), UL	72 psi	LE31107P5GN4CVU	LE31TR7P5GN4CVU
0-50 PSI (0-3 BAR), UL	100 psi	LE31108P5GN4CVU	LE31TR8P5GN4CVU
0-60 PSI (0-4 BAR), UL	120 psi	LE31109P5GN4CVU	LE31TR9P5GN4CVU
0-87 PSI (0-6 BAR), UL	174 psi	LE31101S5GN4CVU	LE31TR1S5GN4CVU
0-100 PSI (0-7 BAR), UL	200 psi	LE31102S5GN4CVU	LE31TR2S5GN4CVU
0-150 PSI (0-10 BAR), UL	300 psi	LE31103S5GN4CVU	LE31TR3S5GN4CVU
0-200 PSI (0-15 BAR), UL	400 psi	LE31104S5GN4CVU	LE31TR4S5GN4CVU
0-230 PSI (0-16 BAR), UL	460 psi	LE31105S5GN4CVU	LE31TR5S5GN4CVU
0-300 PSI (0-20 BAR), UL	600 psi	LE31106S5GN4CVU	LE31TR6S5GN4CVU
0-360 PSI (0-25 BAR), UL	720 psi	LE31107S5GN4CVU	LE31TR7S5GN4CVU
0-500 PSI (0-35 BAR), UL	1,000 psi	LE31108S5GN4CVU	LE31TR8S5GN4CVU
0-580 PSI (0-40 BAR), UL	1,160 psi	LE31109S5GN4CVU	LE31TR9S5GN4CVU
0-725 PSI (0-50 BAR), UL	1,450 psi	LE31101T5GN4CVU	LE31TR1T5GN4CVU
0-870 PSI (0-60 BAR), UL	1,740 psi	LE31102T5GN4CVU	LE31TR2T5GN4CVU
0-1,000 PSI (0-70 BAR), UL	2,000 psi	LE31103T5GN4CVU	LE31TR3T5GN4CVU
0-1,500 PSI (0-100 BAR), UL	3,000 psi	LE31104T5GN4CVU	LE31TR4T5GN4CVU
0-2,000 PSI (0-150 BAR), UL	4,000 psi	LE31105T5GN4CVU	LE31TR5T5GN4CVU
0-2300 PSI (0-160 BAR), UL	4,600 psi	LE31106T5GN4CVU	LE31TR6T5GN4CVU
0-3,000 PSI (0-200 BAR), UL	6,000 psi	LE31107T5GN4CVU	LE31TR7T5GN4CVU
0-3,600 PSI (0-250 BAR), UL	7,200 psi	LE31108T5GN4CVU	LE31TR8T5GN4CVU
0-4000 PSI (0-300 BAR), UL	8,000 psi	LE31109T5GN4CVU	LE31TR9T5GN4CVU
0-5,000 PSI (0-350 BAR), UL	10,000 psi	LE31101U5GN4CVU	LE31TR1U5GN4CVU
0-6,000 PSI (0-400 BAR), UL	12,000 psi	LE31102U5GN4CVU	LE31TR2U5GN4CVU
0-7500 PSI (0-520 BAR), UL	15,000 psi	LE31103U5GN4CVU	LE31TR3U5GN4CVU

Series Number (how to order)

L E 3 - □ - □□ - □□ - □□ - □□ - □□ - □ - □□□

LE3 Engineering Codes		
OUTPUT	4…20 mA, 2-wire	1
	0…10 Vdc, 3-wire	3
	1...5 Vdc, 3-wire	5
	0.5...4.5 Vdc, 3-wire, ratiometric output (UL listing not included)	R
ELECTRICAL CONNECTION	Cable Outlet, PVC Shielded & jacketed #24 AWG (1 meter), IP67, UL Listed	T R
	Mini-DIN 43650 Type C, IP65, UL Recognized	C 1
	M12 circular male connector, IP67, UL Listed	M 0
	DIN 43650 Type A, IP65, UL Recognized	1 0
	Aptiv/Delphi Metripack 150 Series , IP65, UL Recognized	M 1
	Deutsch Connector 3-Pin, IP65, UL Recognized	D 3
	Deutsch Connector 4-pin, IP65, UL Recognized	D 4
SERIES PRESSURE RANGE (PSI)	0-25 PSI (0-1.6 BAR), UL	5 P
	0-30 PSI (0-2 BAR), UL	6 P
	0-36 PSI (0-2.5 BAR), UL	7 P
	0-50 PSI (0-3 BAR), UL	8 P
	0-60 PSI (0-4 BAR), UL	9 P
	0-87 PSI (0-6 BAR), UL	1 S
	0-100 PSI (0-7 BAR), UL	2 S
	0-150 PSI (0-10 BAR), UL	3 S
	0-200 PSI (0-15 BAR), UL	4 S
	0-230 PSI (0-16 BAR), UL	5 S
	0-300 PSI (0-20 BAR), UL	6 S
	0-360 PSI (0-25 BAR), UL	7 S
	0-500 PSI (0-35 BAR), UL	8 S
	0-580 PSI (0-40 BAR), UL	9 S
	0-725 PSI (0-50 BAR), UL	1 T
	0-870 PSI (0-60 BAR), UL	2 T
	0-1,000 PSI (0-70 BAR), UL	3 T
	0-1,500 PSI (0-100 BAR), UL	4 T
	0-2,000 PSI (0-150 BAR), UL	5 T
	0-2300 PSI (0-160 BAR), UL	6 T
	0-3,000 PSI (0-200 BAR), UL	7 T
	0-3600 PSI (0-250 BAR), UL	8 T
	0-4000 PSI (0-300 BAR)	9 T
	0-5,000 PSI (0-350 BAR)	1 U
	0-6,000 PSI (0-400 BAR)	2 U
	0-7500 PSI (0-520 BAR)	3 U
ACCURACY	0.5% Gauge pressure (±0.6% FSO for ranges >/= 4,000 psi)	5 G
PROCESS CONNECTION	1/8" NPT male	N 8
	1/4" NPT male	N 4
	G 1/4" male, gasket seal	G 4
	7/16-20 UNF male (JIC 37")	U 7
	7/16-20 SAE #4 ORB	S 7
SEAL	Ceramic with Viton o-ring	C V
APPROVALS	UL Approval	U
SPECIAL	PSI pressure range (standard scale, do not need to include in p/n)	R 1
	BAR pressure range	R 1 1
	Additional 6 ft (2m) PVC cable	C L 1
	Additional 10 ft (3m) PVC cable	C L 2
	Additional 15 ft (4.5m) PVC cable	C L 3
	Restrictor Screw (included >1,500 psi)	Z 1 0
	Larger pressure port opening (0.125" / 3.2mm)	Z 1 2
	Special	Z # #

Description & Features:

- Heavy-duty pressure transmitter with advanced digital electronics and high over-pressure protection
- Compact construction with 316 and 17-4 stainless steel
- Available ranges include Vacuum up to 10,000 psi
- Wide range of mechanical and electrical connections
- ±0.25% accuracy
- IP65 and IP67
- Built-in restrictor screw on ranges >1,500 psi
- UL listed or UL recognized for USA and Canada
- 5 year warranty

Applications:

- Appropriate for pumps & compressors, hydraulic equipment, environmental monitoring, machine tool and presses, test equipment and much more

Specifications	
Output Signal	4…20 mA, 2-wire / Vs = 8-33 Vdc 0…10 Vdc, 3-wire / Vs = 12-33 Vdc 1...5 Vdc, 3-wire / Vs = 7-33 Vdc 0.5...4.5 Vdc, 3-wire, ratiometric output / Vs = 4.5-5.5 Vdc (UL listing not-included)
Response Time	4…20 mA = 3 ms, all others = 5 ms
Current Consumption	4…20 mA = 22 mA maximum, all others = 15 mA maximum
Accuracy	±0.25% Full Scale Output
Long-Term Stability	±0.2% FSO (typically per year)
Wetted Parts	316SS all welded or 17-4 PH SS with NBR O-ring
Shock	50 g's 11 ms, MIL-STD 202 Method 213 G
Vibration	15 g's 10 to 2,000 Hz, MIL-STD 202
Storage Temperature	-40 to 100 deg C (-40 to 212 deg F)
Media Temperature	-40 to 120 deg C (-40 to 248 deg F)
Reverse Polarity Protection	Yes
EMI-EMC Compliance	IEC 61000 4-2 to 4-6, IEC 61326-1 Class A
Enclosure Rating	NEMA 4X; IP65 or IP67
Approvals	UL listed or UL recognized for USA and Canada, see pressure ranges
Compliance	RoHS, REACH, CE
Operation Life	1 million cycles, minimum
Weight	120 g (4.23 oz)

ELECTRICAL CONNECTIONS								
ELECTRICAL SIGNAL	ELECTRICAL TERMINATION							
	Cable Outlet		Metripack 3-Pin Deutsch		M12 DIN 43650 A & C		4-Pin Deutsch	
	VOLTAGE	CURRENT	VOLTAGE	CURRENT	VOLTAGE	CURRENT	VOLTAGE	CURRENT
+EXCITATION	RED	RED	PIN 1	PIN 1	PIN 1	PIN 1	PIN 2	PIN 2
-EXCITATION (COMMON)	BLACK	BLACK	PIN 2	PIN 2	PIN 2	PIN 2	PIN 1	PIN 1
VOLTAGE OUTPUT	WHITE	-	PIN 3		PIN 3	-	PIN 4	
CASE GROUND/DRAIN/EARTH	DRAIN	DRAIN		PIN 3	PIN 4	PIN 4	PIN 3	PIN 3

PVC Shielded & jacketed #24 AWG cable (1 meter)

IP67

Subminature DIN connector (DIN 43650/EN 175301 803, TYPE C)

IP65

M12 (4 Pin) connector

IP67

Standard DIN connector (DIN 43650/EN 175301 803, TYPE A)

IP65

Aptiv/Delphi Metripack 150 Series Connector

IP65

3 Pin Deutsch Connector - DT04-3P

IP65

4 Pin Deutsch Connector - DT04-4P

IP65

IP65

Process Connections

PVC Shielded & jacketed #24 AWG cable (1 meter)

IP67

Subminature DIN connector (DIN 43650/EN 175301 803, TYPE C)

IP65

M12 (4 Pin) connector

IP67

Standard DIN connector (DIN 43650/EN 175301 803, TYPE A)

IP65

Aptiv/Delphi Metripack 150 Series Connector

IP65

3 Pin Deutsch Connector - DT04-3P

IP65

4 Pin Deutsch Connector - DT04-4P

IP65

Process Connections

1/4" NPT, Male	7/16-20 UNF male(JIC 37°)	G1/4 male (gasket seal)	7/16-20 SAE #4 ORB	1/8" NPT Male

Order Codes (products in bold are normally stock in North America)

Range	Proof-Pressure (psi)	4/20mA, 17-4 PH SS w/O-ring, 1/4" NPT Process, 0.25% Acc*		4/20mA, all 316SS welded, 1/4" NPT Process, 0.25% Acc	
		DIN 43650 A	Cable Outlet (1M /3')	DIN 43650 A	Cable Outlet (1M /3')
30" Hg(-1-0 BAR), UL	2 psi	LIM1104P2AN44PU	LIM1TR4P2AN44PU	LIM1104P2AN46SU	LIM1TR4P2AN46SU
0-1 PSI (0-0.1 BAR), UL	2 psi	LIM1101P2GN44PU	LIM1TR1P2GN44PU	LIM1101P2GN46SU	LIM1TR1P2GN46SU
0-5 PSI (0-0.35 BAR), UL	10 psi	LIM1102P2GN44PU	LIM1TR2P2GN44PU	LIM1102P2GN46SU	LIM1TR2P2GN46SU
0-7 PSI (0-0.5 BAR), UL	14 psi	LIM1103P2GN44PU	LIM1TR3P2GN44PU	LIM1103P2GN46SU	LIM1TR3P2GN46SU
0-15 PSI (0-1 BAR), UL	30 psi	LIM1104P2GN44PU	LIM1TR4P2GN44PU	LIM1104P2GN46SU	LIM1TR4P2GN46SU
0-25 PSI (0-1.6 BAR), UL	50 psi	LIM1105P2GN44PU	LIM1TR5P2GN44PU	LIM1105P2GN46SU	LIM1TR5P2GN46SU
0-30 PSI (0-2 BAR), UL	60 psi	LIM1106P2GN44PU	LIM1TR6P2GN44PU	LIM1106P2GN46SU	LIM1TR6P2GN46SU
0-36 PSI (0-2.5 BAR), UL	72 psi	LIM1107P2GN44PU	LIM1TR7P2GN44PU	LIM1107P2GN46SU	LIM1TR7P2GN46SU
0-50 PSI (0-3 BAR), UL	100 psi	LIM1108P2GN44PU	LIM1TR8P2GN44PU	LIM1108P2GN46SU	LIM1TR8P2GN46SU
0-60 PSI (0-4 BAR), UL	120 psi	LIM1109P2GN44PU	LIM1TR9P2GN44PU	LIM1109P2GN46SU	LIM1TR9P2GN46SU
0-87 PSI (0-6 BAR), UL	174 psi	LIM1101S2GN44PU	LIM1TR1S2GN44PU	LIM1101S2GN46SU	LIM1TR1S2GN46SU
0-100 PSI (0-7 BAR), UL	200 psi	LIM1102S2GN44PU	LIM1TR2S2GN44PU	LIM1102S2GN46SU	LIM1TR2S2GN46SU
0-150 PSI (0-10 BAR), UL	300 psi	LIM1103S2GN44PU	LIM1TR3S2GN44PU	LIM1103S2GN46SU	LIM1TR3S2GN46SU
0-200 PSI (0-15 BAR), UL	400 psi	LIM1104S2GN44PU	LIM1TR4S2GN44PU	LIM1106S2GN46SU	LIM1TR4S2GN46SU
0-230 PSI (0-16 BAR), UL	460 psi	LIM1105S2GN44PU	LIM1TR5S2GN44PU	LIM1105S2GN46SU	LIM1TR5S2GN46SU
0-300 PSI (0-20 BAR), UL	600 psi	LIM1106S2GN44PU	LIM1TR6S2GN44PU	LIM1106S2GN46SU	LIM1TR6S2GN46SU
0-360 PSI (0-25 BAR), UL	720 psi	LIM1107S2GN44PU	LIM1TR7S2GN44PU	LIM1107S2GN46SU	LIM1TR7S2GN46SU
0-500 PSI (0-35 BAR), UL	1,000 psi	LIM1108S2GN44PU	LIM1TR8S2GN44PU	LIM1108S2GN46SU	LIM1TR8S2GN46SU
0-580 PSI (0-40 BAR), UL	1,160 psi	LIM1109S2GN44PU	LIM1TR9S2GN44PU		
0-725 PSI (0-50 BAR), UL	1,450 psi	LIM1101T2GN44PU	LIM1TR1T2GN44PU		
0-870 PSI (0-60 BAR), UL	1,740 psi	LIM1102T2GN44PU	LIM1TR2T2GN44PU		
0-1,000 PSI (0-70 BAR), UL	2,000 psi	LIM1103T2GN44PU	LIM1TR3T2GN44PU		
0-1,500 PSI (0-100 BAR), UL	3,000 psi	LIM1104T2GN44PU	LIM1TR4T2GN44PU		
0-2,000 PSI (0-150 BAR), UL	4,000 psi	LIM1105T2GN44PU	LIM1TR5T2GN44PU		
0-2300 PSI (0-160 BAR), UL	4,600 psi	LIM1106T2GN44PU	LIM1TR6T2GN44PU		
0-3,000 PSI (0-200 BAR), UL	6,000 psi	LIM1107T2GN44PU	LIM1TR7T2GN44PU		
0-3,600 PSI (0-250 BAR), UL	7,200 psi	LIM1108T2GN44PU	LIM1TR8T2GN44PU		
0-4000 PSI (0-300 BAR), UL	8,000 psi	LIM1109T2GN44PU	LIM1TR9T2GN44PU		
0-5,000 PSI (0-350 BAR), UL	10,000 psi	LIM1101U2GN44PU	LIM1TR1U2GN44PU		
0-6,000 PSI (0-400 BAR), UL	12,000 psi	LIM1102U2GN44PU	LIM1TR2U2GN44PU		
0-7500 PSI (0-520 BAR), UL	15,000 psi	LIM1103U2GN44PU	LIM1TR3U2GN44PU		
0-9000 PSI (0-600 BAR), UL	18,000 psi	LIM1104U2GN44PU	LIM1TR4U2GN44PU		
0-10,000 PSI (0-700 BAR)	20,000 psi	LIM1105U2GN44PU	LIM1TR5U2GN44PU		

Series Number (how to order)

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LIM Engineering Codes											
OUTPUT	4…20 mA, 2-wire	1									
	0…10 Vdc, 3-wire	3									
	1...5 Vdc, 3-wire	5									
	0.5...4.5 Vdc, 3-wire, ratiometric output (UL listing not included)	R									
ELECTRICAL CONNECTION	Cable Outlet, PVC Shielded & jacketed #24 AWG (1 meter), IP67, UL Listed		T R								
	Mini-DIN 43650 Type C, IP65, UL Recognized		C 1								
	M12 circular male connector, IP67, UL Listed		M 0								
	DIN 43650 Type A, IP65, UL Recognized		1 0								
	Aptiv/Delphi Metripack 150 Series , IP65, UL Recognized		M 1								
	Deutsch Connector 3-Pin, IP65, UL Recognized		D 3								
	Deutsch Connector 4-pin, IP65, UL Recognized		D 4								
SERIES PRESSURE RANGE (PSI)	0-1 PSI (0-0.1 BAR), UL			1 P							
	0-5 PSI (0-0.35 BAR), UL			2 P							
	0-7 PSI (0-0.5 BAR), UL			3 P							
	0-15 PSI (0-1 BAR), UL			4 P							
	0-25 PSI (0-1.6 BAR), UL			5 P							
	0-30 PSI (0-2 BAR), UL			6 P							
	0-36 PSI (0-2.5 BAR), UL			7 P							
	0-50 PSI (0-3 BAR), UL			8 P							
	0-60 PSI (0-4 BAR), UL			9 P							
	0-87 PSI (0-6 BAR), UL			1 S							
	0-100 PSI (0-7 BAR), UL			2 S							
	0-150 PSI (0-10 BAR), UL			3 S							
	0-200 PSI (0-15 BAR), UL			4 S							
	0-230 PSI (0-16 BAR), UL			5 S							
	0-300 PSI (0-20 BAR), UL			6 S							
	0-360 PSI (0-25 BAR), UL			7 S							
	0-500 PSI (0-35 BAR), UL			8 S							
	0-580 PSI (0-40 BAR), UL			9 S							
	0-725 PSI (0-50 BAR), UL			1 T							
	0-870 PSI (0-60 BAR), UL			2 T							
	0-1,000 PSI (0-70 BAR), UL			3 T							
	0-1,500 PSI (0-100 BAR), UL			4 T							
	0-2,000 PSI (0-150 BAR), UL			5 T							
	0-2300 PSI (0-160 BAR), UL			6 T							
	0-3,000 PSI (0-200 BAR), UL			7 T							
	0-3600 PSI (0-250 BAR), UL			8 T							
	0-4000 PSI (0-300 BAR), UL			9 T							
	0-5,000 PSI (0-350 BAR), UL			1 U							
	0-6,000 PSI (0-400 BAR), UL			2 U							
	0-7500 PSI (0-520 BAR), UL			3 U							
	0-9000 PSI (0-600 BAR), UL			4 U							
	0-10,000 PSI (0-700 BAR)			5 U							
ACCURACY	0.25% Gauge pressure				2 G						
	0.25% Absolute pressure (available up to 360psi)				2 A						
PROCESS CONNECTION	1/8" NPT male					N 8					
	1/4" NPT male					N 4					
	G 1/4" male, gasket seal					G 4					
	7/16-20 UNF male (JIC 37")					U 7					
	7/16-20 SAE #4 ORB					S 7					
SEAL	17-4 PH Stainless Steel with NBR O-ring						4 P				
	316 Stainless Steel all welded (up to 500 psi)						6 S				
APPROVALS	UL Approval (up to 9K psi for 4P Seal or up to 500 psi for 6S Seal)							U			
SPECIAL	PSI pressure range								R 1		
	BAR pressure range								R 1 1		
	Additional 6 ft (2m) PVC cable								C L 1		
	Additional 10 ft (3m) PVC cable								C L 2		
	Additional 15 ft (4.5m) PVC cable								C L 3		
	Restrictor Screw (included >1,500 psi)								Z 1 0		
	Larger pressure port opening (0.125" / 3.2mm)								Z 1 2		
	Special								Z # #		

LM1 Anti-Clogging Submersible Transmitter

Description & Features:

- Heavy-duty submersible transmitter for level measurement in sludge and slurry installations
- 316L SS housing with anti-clogging sensor and reinforced diaphragm seal
- Standard ranges from 2 thru 50 psi, optional ranges from up to 140 psi
- ±0.25% accuracy
- 33' (10m) of vented cable standard, other lengths also available
- NEMA 6P / IP68 for full immersion
- 5 year warranty

Applications:

- Manufactured for level measurement in sludge and slurry installations including lifting stations

Specifications	
Output Signal	Standard 2-wire: 4-20 mA / Vs = 10-36 Vdc Optional 3-wire: 0-5 V / Vs = 10-36 Vdc 3-wire: 0-10 V / Vs = 10-36 Vdc
Accuracy	Standard: ±0.25% FSO Optional: ±0.5% FSO
Response Time	<10 ms
Permissible Temperature	Operating: -40°F to 185°F (-40°C to 85°C)
Reverse Polarity Protection	No damage. No function.
Electromagnetic Compatibility	EN50081-1/2
Housing	316L SS
Pressure Port	Flush mount
Diaphragm	316L SS w/1Cr18Ni9Ti
Electrical Connector	1/2" NPTM submersible conduit
Lightning Protection	Lifetime
Enclosure Rating	NEMA 6P/IP68

Order Codes

Range psi ("H_2O)	Over-pressure	Burst Pressure	Code
0/2 psi (0/55)	3 psi	6 psi	LM1002
0/5 psi (0/138)	7.5 psi	15 psi	LM1005
0/10 psi (0/277)	15 psi	30 psi	LM1010
0/15 psi (0/415)	22.5 psi	45 psi	LM1015
0/25 psi (0/692)	37.5 psi	75 psi	LM1025
0/30 psi (0/830)	45 psi	90 psi	LM1030
0/50 psi (0/1,384)	75 psi	150 psi	LM1050

Other scales available on request.

Note: Polyurethane cable standard, PTFE optional

Pin Configuration		
Electrical Connection		Cable Colours
2-wire system	Power V+ Signal Output Shield	Red Green/Blue Yellow
3-wire system	Power V+ Signal Output Ground Shield	Red Green/Blue Black Yellow

Wiring Diagram

Standard

2-wire-system (current)

Optional

3-wire-system (current / voltage)

All Stainless Steel Submersible Transmitter

LM6

Description & Features:

- Designed for continuous level measurement in clean water, reservoirs and treatment plants
- Rugged stainless steel housing and highly accurate stainless steel sensor
- PUR vented cable in various lengths
- Available ranges from Inches of Water up to 300 psi
- ±0.35% accuracy standard, ±0.25% optional
- IP68 rated for full submersion and continous measurement
- CE mark and RoHS compliant
- 5 year warranty

Applications:

- Appropriate for all level and depth measurement applications including open tanks, ground water, reservoirs and water treatment facilities

Specifications	
Output Signal	4…20 mA, 2-wire / Vs = 10-30 Vdc 5…4.5 Vdc, 3-wire / Vs = 10-30 Vdc 0...5 Vdc, 3-wire / Vs = 10-30 Vdc
Accuracy	±0.35% Full Scale Output, ±0.25% FSO optional
Load Resistance	RL = (U-10)/0.02(Ω) (4~20mA current output), >20KΩ (voltage output)
Long Term Stability	0.1% Full Scale per year
Response Time	1 ms
Storage Temperature	-40 to 85 deg C (-40 to 185 deg F)
Media Temperature	0 to 85 deg C (32 to 185 deg F)
Insulation Resistance	100 MΩ @ 250 VDC
Reverse Polarity Protection	Yes
Lightning Protection	Yes
Electromagnetic Protection	IEC 61000
Enclosure Rating	IP68 for full submersion and continuous measurement
Housing	1Cr18Ni9Ti
Wetted Parts	316L welded sensor
Long Term Stability	±0.1% FSO (typically per year)
Operation Life	1 million cycles, minimum

Wiring Diagram

2-wire-system (current)

3-wire-system (current / voltage)

Dimensions (mm)

27mm = 1.1"

91mm = 3.6"

145mm = 5.7"

LM6 All Stainless Steel Submersible Transmitter

Order Codes

Range (PSI)	Proof-Pressure (Inches of water or PSI)	4/20mA, 0.35% Accuracy PUR vented cable	
		20ft	40ft
0-50 "H2O (0-1,270 MM H2O)	75.0	LM61PR1W3GS16SCL4	LM61PR1W3GS16SCL6
0-100 "H2O (0-2,540 MM H2O)	150.0	LM61PR2W3GS16SCL4	LM61PR2W3GS16SCL6
0-150 "H2O (0-3,810 MM H2O)	225.0	LM61PR3W3GS16SCL4	LM61PR3W3GS16SCL6
0-200 "H2O (0-5,080 MM H2O)	300.0	LM61PR4W3GS16SCL4	LM61PR4W3GS16SCL6
0-300 "H2O (0-7,620 MM H2O)	450.0	LM61PR5W3GS16SCL4	LM61PR5W3GS16SCL6
0-400 "H2O (0-10,160 MM H2O)	600.0	LM61PR6W3GS16SCL4	LM61PR6W3GS16SCL6
0-500 "H2O (0-12,700 MM H2O)	750.0	LM61PR7W3GS16SCL4	LM61PR7W3GS16SCL6
0-5 PSI (0-0.35 BAR)	7.5	LM61PR2P3GS16SCL4	LM61PR2P3GS16SCL6
0-10 PSI (0-0.7 BAR)	15.0	LM61PR5L3GS16SCL4	LM61PR5L3GS16SCL6
0-15 PSI (0-1 BAR)	22.5	LM61PR4P3GS16SCL4	LM61PR4P3GS16SCL6
0-25 PSI (0-1.7 BAR)	37.5	LM61PR4L3GS16SCL4	LM61PR4L3GS16SCL6
0-50 PSI (0-3.4 BAR)	75.0	LM61PR3L3GS16SCL4	LM61PR3L3GS16SCL6
0-100 PSI (0-7 BAR)	150.0	LM61PR2S3GS16SCL4	LM61PR2S3GS16SCL6
0-150 PSI (0-10 BAR)	225.0	LM61PR3S3GS16SCL4	LM61PR3S3GS16SCL6
0-200 PSI (0-15 BAR)	300.0	LM61PR4S3GS16SCL4	LM61PR4S3GS16SCL6
0-230 PSI (0-16 BAR)	345.0	LM61PR5S3GS16SCL4	LM61PR5S3GS16SCL6
0-300 PSI (0-20 BAR)	450.0	LM61PR6S3GS16SCL4	LM61PR6S3GS16SCL6

Series Number (how to order)

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LM6 Engineering Codes		
OUTPUT	4...20 mA, 2-wire	1
	5...4.5 Vdc, 3-wire	4
	0...5 Vdc, 3-wire	6
	Other output type, specify	X
ELECTRICAL CONNECTION	PUR vented cable, see Cable Lengths below	P R
	Other material, specify	X X
SERIES PRESSURE RANGE (INCHES OF WATER)	0-50 "H2O (0-1,270 MM H2O)	1 W
	0-100 "H2O (0-2,540 MM H2O)	2 W
	0-150 "H2O (0-3,810 MM H2O)	3 W
	0-200 "H2O (0-5,080 MM H2O)	4 W
	0-300 "H2O (0-7,620 MM H2O)	5 W
	0-400 "H2O (0-10,160 MM H2O)	6 W
	0-500 "H2O (0-12,700 MM H2O)	7 W
SERIES PRESSURE RANGE (PSI)	0-5 PSI (0-0.35 BAR)	2 P
	0-10 PSI (0-0.7 BAR)	5 L
	0-15 PSI (0-1 BAR)	4 P
	0-25 PSI (0-1.7 BAR)	4 L
	0-50 PSI (0-3.4 BAR)	3 L
	0-100 PSI (0-7 BAR)	2 S
	0-150 PSI (0-10 BAR)	3 S
	0-200 PSI (0-15 BAR)	4 S
	0-230 PSI (0-16 BAR)	5 S
	0-300 PSI (0-20 BAR)	6 S
	Other pressure range, specify	X X
ACCURACY	0.35% Gauge pressure	3 G
	0.25% Absolute pressure	2 G
PROCESS CONNECTION	Submersible Type	S 1
SEAL	316L welded	6 S
SPECIAL	PSI pressure range (standard, no need to include)	R 1
	BAR pressure range	R 1 1
	Additional 6 ft (2m) PUR cable	C L 1
	Additional 10 ft (3m) PUR cable	C L 2
	Additional 15 ft (4.5m) PUR cable	C L 3
	Additional 20 ft (6.1m) PUR cable	C L 4
	Additional 30 ft (9.1m) PUR cable	C L 5
	Additional 40 ft (12.2m) PUR cable	C L 6
	Additional 50 ft (15.2m) PUR cable	C L 7
	Additional 60 ft (18.3m) PUR cable	C L 8
	Additional 75 ft (22.9m) PUR cable	C L 9
	Additional 100 ft (30.5m) PUR cable	C 1 0
	Special	Z # #

General Purpose Submersible Transmitter

LM7

Description & Features:

- Designed for continuous level measurement in clean water, reservoirs and treatment plants
- Rugged stainless steel housing and highly accurate ceramic sensor
- PUR vented cable in various lengths
- Available ranges from Low Pressure up to 300 psi
- ±0.5% accuracy standard, ±0.25% optional
- IP68 rated for full submersion and continous measurement
- CE mark and RoHS compliant
- 5 year warranty

Applications:

- Appropriate for all level and depth measurement applications including open tanks, ground water, reservoirs and water treatment facilities

Specifications	
Output Signal	4…20 mA, 2-wire / Vs = 10-30 Vdc 5…4.5 Vdc, 3-wire / Vs = 10-30 Vdc 0...5 Vdc, 3-wire / Vs = 10-30 Vdc
Accuracy	±0.5% Full Scale Output, ±0.25% FSO optional
Load Resistance	RL = (U-10)/0.02(Ω) (4~20mA current output), >20KΩ (voltage output)
Long Term Stability	0.1% Full Scale per year
Response Time	1 ms
Storage Temperature	-40 to 85 deg C (-40 to 185 deg F)
Media Temperature	0 to 85 deg C (32 to 185 deg F)
Insulation Resistance	100 MΩ @ 250 VDC
Reverse Polarity Protection	Yes
Lightning Protection	Yes
Electromagnetic Protection	IEC 61000
Enclosure Protection	IP68 for full submersion and continuous measurement
Housing	1Cr18Ni9Ti
Wetted Parts	Ceramic sensor with Viton O-ring
Long Term Stability	±0.1% FSO (typically per year)
Operation Life	1 million cycles, minimum

Wiring Diagram

2-wire-system (current)

3-wire-system (current / voltage)

Dimensions (mm)

27mm = 1.1"

91mm = 3.6"

145mm = 5.7"

LM7 General Purpose Submersible Transmitter

Order Codes

Range (PSI)	Proof-Pressure	4/20mA, 0.5% Accuracy PUR vented cable	
		20ft	40ft
0-8 PSI (0-0.6 BAR)	12.0	LM71PR7L5GS1CVCL4	LM71PR7L5GS1CVCL6
0-15 PSI (0-1 BAR)	22.5	LM71PR4P5GS1CVCL4	LM71PR4P5GS1CVCL6
0-20 PSI (0-1.4 BAR)	30.0	LM71PR8L5GS1CVCL4	LM71PR8L5GS1CVCL6
0-35 PSI (0-2.4 BAR)	52.5	LM71PR9L5GS1CVCL4	LM71PR9L5GS1CVCL6
0-60 PSI (0-4 BAR)	90.0	LM71PR9P5GS1CVCL4	LM71PR9P5GS1CVCL6
0-100 PSI (0-7 BAR)	150.0	LM71PR2S5GS1CVCL4	LM71PR2S5GS1CVCL6
0-150 PSI (0-10 BAR)	225.0	LM71PR3S5GS1CVCL4	LM71PR3S5GS1CVCL6
0-200 PSI (0-15 BAR)	300.0	LM71PR4S5GS1CVCL4	LM71PR4S5GS1CVCL6
0-230 PSI (0-16 BAR)	345.0	LM71PR5S5GS1CVCL4	LM71PR5S5GS1CVCL6
0-300 PSI (0-20 BAR)	450.0	LM71PR6S5GS1CVCL4	LM71PR6S5GS1CVCL6

Series Number (how to order)

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LM7 Engineering Codes		
OUTPUT	4...20 mA, 2-wire	1
	5...4.5 Vdc, 3-wire	4
	0...5 Vdc, 3-wire	6
	Other output type, specify	X
ELECTRICAL CONNECTION	PUR vented cable, see Cable Lengths below	P R
	Other material, specify	X X
SERIES PRESSURE RANGE (PSI)	0-8 PSI (0-0.6 BAR)	7 L
	0-15 PSI (0-1 BAR)	4 P
	0-20 PSI (0-1.4 BAR)	8 L
	0-35 PSI (0-2.4 BAR)	9 L
	0-60 PSI (0-4 BAR)	9 P
	0-100 PSI (0-7 BAR)	2 S
	0-150 PSI (0-10 BAR)	3 S
	0-200 PSI (0-15 BAR)	4 S
	0-230 PSI (0-16 BAR)	5 S
	0-300 PSI (0-20 BAR)	6 S
	Other pressure range, specify	X X
ACCURACY	0.5% Gauge pressure	5 G
	0.25% Absolute pressure	2 G
PROCESS CONNECTION	Submersible Type	S 1
SEAL	Ceramic with Viton o-ring	C V
SPECIAL	PSI pressure range (standard, no need to include)	R 1
	BAR pressure range	R 1 1
	Additional 6 ft (2m) PUR cable	C L 1
	Additional 10 ft (3m) PUR cable	C L 2
	Additional 15 ft (4.5m) PUR cable	C L 3
	Additional 20 ft (6.1m) PUR cable	C L 4
	Additional 30 ft (9.1m) PUR cable	C L 5
	Additional 40 ft (12.2m) PUR cable	C L 6
	Additional 50 ft (15.2m) PUR cable	C L 7
	Additional 60 ft (18.3m) PUR cable	C L 8
	Additional 75 ft (22.9m) PUR cable	C L 9
	Additional 100 ft (30.5m) PUR cable	C 1 0
	Special	Z # #

Description & Features:

- Ideal for all applications with vibration and pulsation
- Compact, all stainless steel construction
- Available ranges from low pressure up to 15,000 psi (1,000 Bar)
- Wide range of mechanical and electrical connections
- ±0.5% accuracy
- Fully protected against dusk and water, IP65 and IP67
- Built-in restrictor screw to safeguard electronics
- 5 year warranty

Applications:

- Suitable for commercial, industrial and process installations where vibration is prevalent

Specifications	
Output Signal	4…20 mA, 2-wire / Vs = 12-30 Vdc 0…10 Vdc, 3-wire / Vs = 12-30 Vdc 0...5 Vdc, 3-wire / Vs = 12-30 Vdc
Load Consumption	Current Output: RL≤ (Us-12)/20kΩ, Voltage Output: RL>10 kΩ
Repsonse Time	1 ms (10%...90%)
Accuracy	±0.5% Full Scale Output
Long-Term Stability	±0.02% FSO
Wetted Parts	All stainless steel with 17-4 PH welded sensor
Process Connection	NPT and G connections
Shock	100 g's 11 ms
Vibration	20 g's 20 to 5,000 Hz
Storage Temperature	-40 to 125 deg C (-40 to 257 deg F)
Media Temperature	-40 to 125 deg C (-40 to 257 deg F)
Reverse Polarity Protection	Yes
Electrical Connections	DIN 43650, M12, Packard, Cable Outlet and others on request
Enclosure Rating	DIN 43650 IP65, M12 & Cable Outlet IP67
Operation Life	10 million cycles
Proof and Burst Pressure Ratings	Maximum Working Pressure @ 2X, Burst Pressure @ 5X Full Scale

Dimension (Unit:mm)

DIN43650

M12*1(4 pin)

Compact Type（Only 0.5-4.5V Output)

Electrical Connection

DIN 43650

M12*1

Packard

Terminal	2-wire	3-wire
1	Power "+"	Power "+"
2	Signal	Signal
3		Power "-"

Terminal	2-wire	3-wire
1	Power "+"	Power "+"
2	Signal	Signal
3		
4		Power "-"

Terminal	3-wire
A	Power "-"
B	Power "+"
C	Signal

Process Connection (mm)

1/4" NPT

G1/4" DIN3852

G3/8" DIN3852

Order Codes

Range	Proof Pressure (psi)	4/20 mA 17-4 OG SS, 1/4" NPT Process, 0.5% Acc	
		DIN 43650 A	Cable Outlet (1M/3')
0-150 PSI (0-10 BAR), UL listed	300	LMH1103S5GN47P	LMH1TR3S5GN47P
0-200 PSI (0-15 BAR), UL listed	400	LMH1104S5GN47P	LMH1TR4S5GN47P
0-230 PSI (0-16 BAR), UL listed	460	LMH1105S5GN47P	LMH1TR5S5GN47P
0-300 PSI (0-20 BAR), UL listed	600	LMH1106S5GN47P	LMH1TR6S5GN47P
0-360 PSI (0-25 BAR), UL listed	720	LMH1107S5GN47P	LMH1TR7S5GN47P
0-500 PSI (0-35 BAR), UL listed	1,000	LMH1108S5GN47P	LMH1TR8S5GN47P
0-580 PSI (0-40 BAR), UL listed	1,160	LMH1109S5GN47P	LMH1TR9S5GN47P
0-725 PSI (0-50 BAR), UL listed	1,450	LMH1101T5GN47P	LMH1TR1T5GN47P
0-870 PSI (0-60 BAR), UL listed	1,740	LMH1102T5GN47P	LMH1TR2T5GN47P
0-1,000 PSI (0-70 BAR), UL listed	2,000	LMH1103T5GN47P	LMH1TR3T5GN47P
0-1,500 PSI (0-100 BAR), UL listed	3,000	LMH1104T5GN47P	LMH1TR4T5GN47P
0-2,000 PSI (0-150 BAR), UL listed	4,000	LMH1105T5GN47P	LMH1TR5T5GN47P
0-2300 PSI (0-160 BAR), UL listed	4,600	LMH1106T5GN47P	LMH1TR6T5GN47P
0-3,000 PSI (0-200 BAR), UL listed	6,000	LMH1107T5GN47P	LMH1TR7T5GN47P
0-3600 PSI (0-250 BAR)	7,200	LMH1108T5GN47P	LMH1TR8T5GN47P
0-4000 PSI (0-300 BAR)	8,000	LMH1109T5GN47P	LMH1TR9T5GN47P
0-5,000 PSI (0-350 BAR)	10,000	LMH1101U5GN47P	LMH1TR1U5GN47P
0-6,000 PSI (0-400 BAR)	12,000	LMH1102U5GN47P	LMH1TR2U5GN47P
0-7500 PSI (0-520 BAR)	15,000	LMH1103U5GN47P	LMH1TR3U5GN47P
0-9000 PSI (0-600 BAR)	18,000	LMH1104U5GN47P	LMH1TR4U5GN47P
0-10,000 PSI (0-700 BAR)	20,000	LMH1105U5GN47P	LMH1TR5U5GN47P
0-15,000 PSI (0-1,000 BAR)	30,000	LMH1106U5GN47P	LMH1TR6U5GN47P

Series Number (how to order)

LMH Engineering Codes		LMH -	-	-	-	-	-	-
OUTPUT	4...20 mA, 2-wire	1						
	0...10 Vdc, 3-wire	3						
	0...5 Vdc, 3-wire	6						
	0.5...4.5 Vdc, 3-wire, ratiometric output	R						
ELECTRICAL CONNECTION	Cable Outlet, PVC Shielded & jacketed #24 AWG (1meter), IP67		T R					
	M12 circular male connector, IP67		M 0					
	DIN 43650 Type A, IP65		1 0					
	Packard (compact) , IP65		M 1					
SERIES PRESSURE RANGE (PSI)	0-150 PSI (0-10 BAR)			3 S				
	0-200 PSI (0-15 BAR)			4 S				
	0-230 PSI (0-16 BAR)			5 S				
	0-300 PSI (0-20 BAR)			6 S				
	0-360 PSI (0-25 BAR)			7 S				
	0-500 PSI (0-35 BAR)			8 S				
	0-580 PSI (0-40 BAR)			9 S				
	0-725 PSI (0-50 BAR)			1 T				
	0-870 PSI (0-60 BAR)			2 T				
	0-1,000 PSI (0-70 BAR)			3 T				
	0-1,500 PSI (0-100 BAR)			4 T				
	0-2,000 PSI (0-150 BAR)			5 T				
	0-2300 PSI (0-160 BAR)			6 T				
	0-3,000 PSI (0-200 BAR)			7 T				
	0-3600 PSI (0-250 BAR)			8 T				
	0-4000 PSI (0-300 BAR)			9 T				
	0-5,000 PSI (0-350 BAR)			1 U				
	0-6,000 PSI (0-400 BAR)			2 U				
	0-7500 PSI (0-520 BAR)			3 U				
	0-9000 PSI (0-600 BAR)			4 U				
	0-10,000 PSI (0-700 BAR)			5 U				
	0-15,000 PSI (0-1,000 BAR)			6 U				
ACCURACY	0.5% Gauge pressure				5 G			
PROCESS CONNECTION	1/4" NPT male					N 4		
	1/2" NPT male					N 2		
	G 1/4" male					G 4		
	G 1/2" male					G 2		
SEAL	17-4 PH Stainless Steel all welded						7 P	
	316L Stainless Steel all welded						7 S	
SPECIAL	PSI pressure range (standard scale, do not need to include in p/n)							R 1
	BAR pressure range							R 1 1
	Additional 6 ft (2m) PVC cable							C L 1
	Additional 10 ft (3m) PVC cable							C L 2
	Additional 15 ft (4.5m) PVC cable							C L 3
	Special							Z # #

LST Sanitary Pressure Transmitter

Description & Features:

- Sanitary tri-clamp with all stainless steel construction and designed eliminate debris build-up in the diaphragm
- Compact yet rugged stainless steel housing with highly accurate stainless steel sensor
- Available ranges from vacuum to 5,000 PSI (350 BAR)
- DIN-style electrical connection, cable outlet & M12 also available
- ±0.5% accuracy standard, ±0.25% accuracy optional
- CE mark and RoHS compliant
- Electromagnetic protection
- 5 year warranty

Applications:

- With a hygienic tri-clamp connection, the LST is designed for all sanitary applications including food & beverage, dairy, pharmaceutical and bio-technology

Specifications	
Output Signal	4…20 mA, 2-wire / Vs = 10-30 Vdc 0…10 Vdc, 3-wire / Vs = 10-30 Vdc 0…5 Vdc, 3-wire / Vs = 10-30 Vdc 1...5 Vdc, 3-wire / Vs = 10-30 Vdc
Accuracy	±0.5% Full Scale Output, ±0.25% FSO optional
Overload/Burst Pressure	<1,500 PSI @ 200%, <5,000 PSI @ 300%
Load Resistance	RL = (U-10)/0.02(Ω) (4~20mA current output), >20KΩ (voltage output)
Long Term Stability	±0.25% FSO (typically per year)
Response Time	1 ms
Storage Temperature	-10 to 70 deg C (14 to 158 deg F)
Operating Temperature	-40 to 85 deg C (-40 to 185 deg F)
Insulation Resistance	>100 MΩ @ 50 VDC
Reverse Polarity Protection	Yes
Electromagnetic Protection	Yes
Enclosure Rating	IP65 for DIN 43650-A, IP66 for Cable Outlet / M12
Housing	1Cr18Ni9Ti
Wetted Parts	316L welded sensor
Process Connections	Tri-clamp 1.5” (50.5mm), 2.0” (64mm) and 2.5” (78mm)
Operation LIfe	1 million cycles, minimum
Weight	185 grams (0.4 pounds)

Tri-Clamp® is a registered trademark of Tri-Clover, Inc.

Wiring Diagram

2-wire-system (current)

3-wire-system (current / voltage)

Dimensions (mm)

27mm = 1.1"

91mm = 3.6"

Order Codes

Range (PSI)	Proof-Pressure	4/20mA, 0.5% Accuracy 2" Tri-Clamp connetion	
		DIN 43650 Electrical connection	Cable Outlet, 1m
-14.5-0 PSI (-1-0 BAR)	15.0	LST1101V5GT26S	LST1TR1V5GT26S
0-15 PSI (0-1 BAR)	30.0	LST1104P5GT26S	LST1TR4P5GT26S
0-30 PSI (0-2 BAR)	60.0	LST1106P5GT26S	LST1TR6P5GT26S
0-60 PSI (0-4 BAR)	120.0	LST1109P5GT26S	LST1TR9P5GT26S
0-100 PSI (0-6.9 BAR)	200.0	LST1102S5GT26S	LST1TR2S5GT26S
0-160 PSI (0-11 BAR)	320.0	LST1103S5GT26S	LST1TR3S5GT26S
0-200 PSI (0-13.8 BAR)	400.0	LST1104S5GT26S	LST1TR4S5GT26S
0-300 PSI (0-20.7 BAR)	600.0	LST1106S5GT26S	LST1TR6S5GT26S
0-500 PSI (0-34.5 BAR)	1000.0	LST1108S5GT26S	LST1TR8S5GT26S
0-725 PSI (0-50 BAR)	1450.0	LST1101T5GT26S	LST1TR1T5GT26S
0-1,000 PSI (0-70 BAR)	2000.0	LST1103T5GT26S	LST1TR3T5GT26S
0-1,500 PSI (0-100 BAR)	3000.0	LST1104T5GT26S	LST1TR4T5GT26S
0-2,000 PSI (0-150 BAR)	6000.0	LST1105T5GT26S	LST1TR5T5GT26S
0-3,000 PSI (0-200 BAR)	9000.0	LST1107T5GT26S	LST1TR7T5GT26S
0-4,000 PSI (0-300 BAR)	12000.0	LST1109T5GT26S	LST1TR9T5GT26S
0-5,000 PSI (0-350 BAR)	15000.0	LST1101U5GT26S	LST1TR1U5GT26S

Tri-Clamp® is a registered trademark of Tri-Clover, Inc.

Series Number (how to order)

LST Engineering Codes		L S T -	-	-	-	-	-	-
OUTPUT	4...20 mA, 2-wire	1						
	0...10 Vdc, 3-wire	3						
	1...5 Vdc, 3-wire	5						
	0...5 Vdc, 3-wire	6						
	Other output type, specify	X						
ELECTRICAL CONNECTION	DIN 43650 Type-A, IP65		1 0					
	Cable Outlet, PVC Shielded, 1 meter, IP66		T R					
	M12, IP66		M 0					
	Other material, specify		X X					
SERIES PRESSURE RANGE (PSI)	-14.5-0 PSI (-1-0 BAR)			1 V				
	0-15 PSI (0-1 BAR)			4 P				
	0-30 PSI (0-2 BAR)			6 P				
	0-60 PSI (0-4 BAR)			9 P				
	0-100 PSI (0-6.9 BAR)			2 S				
	0-160 PSI (0-11 BAR)			3 S				
	0-200 PSI (0-13.8 BAR)			4 S				
	0-300 PSI (0-20.7 BAR)			6 S				
	0-500 PSI (0-34.5 BAR)			8 6				
	0-725 PSI (0-50 BAR)			1 T				
	0-1,000 PSI (0-70 BAR)			3 T				
	0-1,500 PSI (0-100 BAR)			4 T				
	0-2,000 PSI (0-150 BAR)			5 T				
	0-3,000 PSI (0-200 BAR)			7 T				
	0-4,000 PSI (0-300 BAR)			9 T				
	0-5,000 PSI (0-350 BAR)			1 U				
	0-6,000 PSI (0-400 BAR)			2 U				
	0-7,500 PSI (0-520 BAR)			3 U				
	0-9,000 PSI (0-600 BAR)			4 U				
	0-10,000 PSI (0-700 BAR)			5 U				
	Other pressure range, specify			# #				
ACCURACY	0.5% Gauge pressure				5 G			
	0.25% Gauge pressure				2 G			
PROCESS CONNECTION	1.5" (50.5mm) Tri-Clamp					T 4		
	2.0" (64mm) Tri-Clamp					T 2		
	2.5" (78mm) Tri-Clamp					T 3		
	Other process connection, specify					# #		
SEAL	316L welded						6 S	
SPECIAL	PSI pressure range (standard, no need to include)							R 1
	BAR pressure range							R 1 1
	Additional 6 ft (2m) PVC cable							C L 1
	Additional 10 ft (3m) PVC cable							C L 2
	Special							Z # #

Description & Features:

- Designed to measure the differential pressures of liquids and gases
- Compact yet rugged stainless steel housing with highly accurate stainless steel sensor
- Available ranges from low pressure to 500 PSI (34.5 BAR)
- DIN-style electrical connection, cable outlet also available
- ±0.5% accuracy standard
- CE mark and RoHS compliant
- Electromagnetic protection
- 5 year warranty

Applications:

- Utilized to measure two varying and different pressures. Ideal for across-the-line filters, flow measurement, liquid tank levels and many other Commercial and Industrial applications

Specifications	
Output Signal	4-20 mA, 2 wire 0-5 Vdc or 0-10 Vdc 0…10 Vdc, 3-wire / Vs = 10-30 Vdc 0…5 Vdc, 3-wire / Vs = 10-30 Vdc 1...5 Vdc, 3-wire / Vs = 10-30 Vdc
Accuracy	±0.5% Full Scale Output
Overload/Burst Pressure	150% / 3 times
Load Resistance	RL = (U-10)/0.02(Ω) (4~20mA current output), >20KΩ (voltage output)
Long Term Stability	±0.25% FSO (typically per year)
Response Time	1ms
Storage Temperature	-10 to 70 deg C (14 to 158 deg F)
Operating Temperature	-40 to 85 deg C (-40 to 185 deg F)
Insulation Resistance	>100 MΩ @ 50 VDC
Reverse Polarity Protection	Yes
Electromagnetic Protection	EN50081-1/2, EN50082-2
Enclosure Rating	IP65 for DIN 43650-A, IP66 for Cable Outlet
Housing	1Cr18Ni9Ti
Wetted Parts	316L welded sensor
Process Connections	1/4” NPT Female or Male, G1/4 Female or Male
Operation LIfe	1 million cycles, minimum
Lightning Protection	Yes
Weight	200 grams (0.4 pounds)

Wiring Diagram

2-wire-system (current)

3-wire-system (current / voltage)

Dimensions (mm)

12mm = 0.5"

27mm = 1.1"

40mm = 1.6"

60mm = 2.4"

84mm = 3.3"

145mm = 5.7"

148mm = 5.8"

Order Codes

Range (PSI)	Proof-Pressure (PSI)	4/20mA, 0.5% Accuracy DIN Electrical Connection	
		1/4" NPT F x F	1/4" NPT M x M
0-15 PSI (0-1 BAR)	22.5	LTD110D015DF46S	LTD110D015DM46S
0-30 PSI (0-2 BAR)	45.0	LTD110D025DF46S	LTD110D025DM46S
0-60 PSI (0-4 BAR)	90.0	LTD110D035DF46S	LTD110D035DM46S
0-100 PSI (0-6.9 BAR)	150.0	LTD110D045DF46S	LTD110D045DM46S
0-160 PSI (0-11 BAR)	340.0	LTD110D055DF46S	LTD110D055DM46S
0-200 PSI (0-13.8 BAR)	300.0	LTD110D065DF46S	LTD110D065DM46S
0-300 PSI (0-20.7 BAR)	450.0	LTD110D075DF46S	LTD110D075DM46S
0-500 PSI (0-34.5 BAR)	750.0	LTD110D085DF46S	LTD110D085DM46S

Series Number (how to order)

LTD Engineering Codes		L T D -	-	-	-	-	-	-
OUTPUT	4…20 mA, 2-wire		1					
	0…10 Vdc, 3-wire		3					
	1…5 Vdc, 3-wire		5					
	0…5 Vdc, 3-wire		6					
	Other output type, specify		X					
ELECTRICAL CONNECTION	DIN 43650 Type-A, IP65			1 0				
	Cable Outlet, PVC Shielded, 1 meter, IP66			T R				
	Other material, specify			X X				
SERIES PRESSURE RANGE (PSI D)	0-15 PSI (0-1 BAR)				D 0 1			
	0-30 PSI (0-2 BAR)				D 0 2			
	0-60 PSI (0-4 BAR)				D 0 3			
	0-100 PSI (0-6.9 BAR)				D 0 4			
	0-160 PSI (0-11 BAR)				D 0 5			
	0-200 PSI (0-13.8 BAR)				D 0 6			
	0-300 PSI (0-20.7 BAR)				D 0 7			
	0-500 PSI (0-34.5 BAR)				D 0 8			
	Other differential pressure range, specify				D # #			
ACCURACY	0.5% Differential pressure					5 D		
PROCESS CONNECTION	1/4" NPT F x F						F 4	
	1/4" NPT M x M						M 4	
	G 1/4 F x F						E 2	
	G 1/4 M x M						E 4	
SEAL	316L welded							6 S
SPECIAL	PSI pressure range (standard, no need to include)							
	BAR pressure range							
	Additional 6 ft (2m) PVC cable							
	Additional 10 ft (3m) PVC cable							
	Special							

SPECIAL	PSI pressure range (standard, no need to include)	R 1
	BAR pressure range	R 1 1
	Additional 6 ft (2m) PVC cable	C L 1
	Additional 10 ft (3m) PVC cable	C L 2
	Special	Z # #

LTF Flush Mount Transmitter

Description & Features:

- Flush mounted stainless steel diaphragm to eliminate any debris build-up in the pressure cavity
- Compact yet rugged stainless steel housing with highly accurate stainless steel sensor
- Available ranges from vacuum to 10,000 psi (700 BAR)
- DIN-style electrical connection, cable outlet & M12 also available
- ±0.5% accuracy standard, ±0.25% accuracy optional
- CE mark and RoHS compliant
- Electromagnetic protection
- 5 year warranty

Applications:

- Ideally suited for the pressure measurement of viscous fluids or media which may clog a standard process connection

Specifications	
Output Signal	4…20 mA, 2-wire / Vs = 10-30 Vdc 0…10 Vdc, 3-wire / Vs = 10-30 Vdc 0…5 Vdc, 3-wire / Vs = 10-30 Vdc 1...5 Vdc, 3-wire / Vs = 10-30 Vdc
Accuracy	±0.5% Full Scale Output, ±0.25% FSO optional
Overload/Burst Pressure	<1,500 PSI @ 200%, <10,000 PSI @ 300%
Load Resistance	RL = (U-10)/0.02(Ω) (4~20mA current output), >20KΩ (voltage output)
Long Term Stability	±0.25% FSO (typically per year)
Response Time	1 ms
Storage Temperature	-10 to 70 deg C (14 to 158 deg F)
Operating Temperature	-40 to 85 deg C (-40 to 185 deg F)
Insulation Resistance	>100 MΩ @ 50 VDC
Reverse Polarity Protection	Yes
Electromagnetic Protection	Yes
Enclosure Rating	IP65 for DIN 43650-A, IP66 for Cable Outlet / M12
Housing	1Cr18Ni9Ti
Wetted Parts	316L welded sensor
Process Connections	G1/4, G1/2, G3/4, G1 and M20*1.5
Operation LIfe	1 million cycles, minimum
Weight	185 grams (0.4 pounds)

Order Codes

Range (PSI)	Proof-Pressure (PSI)	4/20mA, 0.5% Accuracy DIN Electrical Connection	
		G1/4 M	G1/2 M
-14.5-0 PSI (-1-0 BAR)	15.0	LTF1101V5GG46S	LTF1101V5GG26S
0-15 PSI (0-1 BAR)	30.0	LTF1104P5GG46S	LTF1104P5GG26S
0-30 PSI (0-2 BAR)	60.0	LTF1106P5GG46S	LTF1106P5GG26S
0-60 PSI (0-4 BAR)	120.0	LTF1109P5GG46S	LTF1109P5GG26S
0-100 PSI (0-6.9 BAR)	200.0	LTF1102S5GG46S	LTF1102S5GG26S
0-160 PSI (0-11 BAR)	320.0	LTF1103S5GG46S	LTF1103S5GG26S
0-200 PSI (0-13.8 BAR)	400.0	LTF1104S5GG46S	LTF1104S5GG26S
0-300 PSI (0-20.7 BAR)	600.0	LTF1106S5GG46S	LTF1106S5GG26S
0-500 PSI (0-34.5 BAR)	1000.0	LTF1108S5GG46S	LTF1108S5GG26S
0-725 PSI (0-50 BAR)	1450.0	LTF1101T5GG46S	LTF1101T5GG26S
0-1,000 PSI (0-70 BAR)	2000.0	LTF1103T5GG46S	LTF1103T5GG26S
0-1,500 PSI (0-100 BAR)	3000.0	LTF1104T5GG46S	LTF1104T5GG26S
0-2,000 PSI (0-150 BAR)	6000.0	LTF1105T5GG46S	LTF1105T5GG26S
0-3,000 PSI (0-200 BAR)	9000.0	LTF1107T5GG46S	LTF1107T5GG26S
0-4,000 PSI (0-300 BAR)	12000.0	LTF1109T5GG46S	LTF1109T5GG26S
0-5,000 PSI (0-350 BAR)	15000.0	LTF1101U5GG46S	LTF1101U5GG26S
0-6,000 PSI (0-400 BAR)	18000.0	LTF1102U5GG46S	LTF1102U5GG26S
0-7,500 PSI (0-520 BAR)	22500.0	LTF1103U5GG46S	LTF1103U5GG26S
0-9,000 PSI (0-600 BAR)	27000.0	LTF1104U5GG46S	LTF1104U5GG26S
0-10,000 PSI (0-700 BAR)	30000.0	LTF1105U5GG46S	LTF1105U5GG26S

Wiring Diagram

2-wire-system (current)

3-wire-system (current / voltage)

Dimensions (mm)

12mm = 0.5"

20mm = 0.8"

27mm = 1.1"

69mm = 2.7"

LTF Engineering Codes		L T F -	-	-	-	-	-	-
OUTPUT	4...20 mA, 2-wire	1						
	0...10 Vdc, 3-wire	3						
	1...5 Vdc, 3-wire	5						
	0...5 Vdc, 3-wire	6						
	Other output type, specify	X						
ELECTRICAL CONNECTION	DIN 43650 Type-A, IP65		1 0					
	Cable Outlet, PVC Shielded, 1 meter, IP66		T R					
	M12, IP66		M 0					
	Other material, specify		X X					
SERIES PRESSURE RANGE (PSI)	-14.5-0 PSI (-1-0 BAR)			1 V				
	0-15 PSI (0-1 BAR)			4 P				
	0-30 PSI (0-2 BAR)			6 P				
	0-60 PSI (0-4 BAR)			9 P				
	0-100 PSI (0-6.9 BAR)			2 S				
	0-160 PSI (0-11 BAR)			3 S				
	0-200 PSI (0-13.8 BAR)			4 S				
	0-300 PSI (0-20.7 BAR)			6 S				
	0-500 PSI (0-34.5 BAR)			8 6				
	0-725 PSI (0-50 BAR)			1 T				
	0-1,000 PSI (0-70 BAR)			3 T				
	0-1,500 PSI (0-100 BAR)			4 T				
	0-2,000 PSI (0-150 BAR)			5 T				
	0-3,000 PSI (0-200 BAR)			7 T				
	0-4,000 PSI (0-300 BAR)			9 T				
	0-5,000 PSI (0-350 BAR)			1 U				
	0-6,000 PSI (0-400 BAR)			2 U				
	0-7,500 PSI (0-520 BAR)			3 U				
	0-9,000 PSI (0-600 BAR)			4 U				
	0-10,000 PSI (0-700 BAR)			5 U				
	Other pressure range, specify			# #				
ACCURACY	0.5% Gauge pressure				5 G			
	0.25% Gauge pressure				2 G			
PROCESS CONNECTION	G1/4 Male					G 4		
	G1/2 Male					G 2		
	G3/4 Male					G 3		
	G1 Male					G 1		
	M20 * 1.5					M 2		
SEAL	316L welded						6 S	
SPECIAL	PSI pressure range (standard, no need to include)							R 1
	BAR pressure range							R 1 1
	Additional 6 ft (2m) PVC cable							C L 1
	Additional 10 ft (3m) PVC cable							C L 2
	Special							Z # #

Description & Features:

- Microprocessor-based high performing transmitter
- Explosion proof smart pressure transmitter for hazardous locations
- Rugged stainless steel construction with silicone sensing technology
- 0.1%, 0.2% or 0.5% accuracy
- Digital HART or Modbus communications available
- ±0.25% accuracy
- cCSAus approved for hazardous locations (up to 10,000 psi)
- 5 NACE compliant for sour gas applications
- Single seal ANSI compliance pending
- CRN registered
- 5 year warranty

Applications:

- Suitable for a variety of hazardous and smart pressure transmitter-installations including petrochemical plants, pipelines, fuel transfer systems and power plants
- Any hazardous locaiton requiring high performance pressure monitoring

Specifications	
Output Signal	4/20 mA, 2-wire / V = 10-30 VDC 4/20 mA + HART, 2-wire / V = 16.5-55 VDC Modbus-RTU / RS485, 4-wire / V = 9-30 VDC 0.5/4.5 VDC, 3-wire / V = 6-30 VDC 0.5/4.5 VDC, 3-wire ratiometric output / V = 5 VDC
Accuracy	0.2% URL standard, 0.1% and 0.5% optional
Stability	0.1% URL per year
Temperature Ranges	Working temperature: -40/85 deg C, -40/185 deg F Storage temperature: -40/110 deg C, -40/230 deg F Media temperature: Silicone oil -30/80 deg C (-22/176 deg F)
Working Humidity	0-95 %
Pressure Connection	1/4” or 1/2” NPT M, 1/4” or 1/2 “ GM or M 20
Housing	All stainless steel construction including welded seal
Wetted Parts	316L, NACE compliant stainless steel
Overload Pressure	1.5 x rated pressure
Power Consumption	</- 500 mW (20.8 mA output @ 24 VDC)
Vibration	10 g, 25…2,000 Hz
Shock	500 g, 1 ms
Protection Class	EMI, ESD, RFI protection - Surge immunity IEC61000-4-5 IP67 standard
Approvals	CSA for USA & Canada (up to 10,000 psi) - Class I Division 1 Group A, B, C & D T6 / Class II Division 1 Group E, F & G T80 deg C / Class III CRN Registered
Weight	0.95 lbs (0.43 kg)
Operational Life	10 million cycles

Order Codes

Process Connection		1/4" NPT	1/2" NPT	1/4" NPT	1/2" NPT	1/4" NPT	1/2" NPT	1/4" NPT	1/2" NPT
Pressure Range	Overload Limit (psi)	4/20 mA		4/20 mA + HART		0.5/4.5 VDC		MODBUS RS485	
-1/0/1 PSI	1.52	LXP011XN4	LXP011XN2	LXP01HXN4	LXP01HXN2	LXP013XN4	LXP013XN2	LXP01RXN4	LXP01RXN2
-3/0/3 PSI	4.35	LXP021XN4	LXP021XN2	LXP02HXN4	LXP02HXN2	LXP023XN4	LXP023XN2	LXP02RXN4	LXP02RXN2
-5/0/5 PSI	7.61	LXP031XN4	LXP031XN2	LXP03HXN4	LXP03HXN2	LXP033XN4	LXP033XN2	LXP03RXN4	LXP03RXN2
-14.5/0/14.5 PSI	21.76	LXP041XN4	LXP041XN2	LXP04HXN4	LXP04HXN2	LXP043XN4	LXP043XN2	LXP04RXN4	LXP04RXN2
-14.5/0/30 PSI	43.50	LXP051XN4	LXP051XN2	LXP05HXN4	LXP05HXN2	LXP053XN4	LXP053XN2	LXP05RXN4	LXP05RXN2
-14.5/0/100 PSI	152.29	LXP061XN4	LXP061XN2	LXP06HXN4	LXP06HXN2	LXP063XN4	LXP063XN2	LXP06RXN4	LXP06RXN2
-14.5/0/145 PSI	217.60	LXP071XN4	LXP071XN2	LXP07HXN4	LXP07HXN2	LXP073XN4	LXP073XN2	LXP07RXN4	LXP07RXN2
-14.5/0/250 PSI	369.80	LXP081XN4	LXP081XN2	LXP08HXN4	LXP08HXN2	LXP083XN4	LXP083XN2	LXP08RXN4	LXP08RXN2
-14.5/0/500 PSI	761.40	LXP091XN4	LXP091XN2	LXP09HXN4	LXP09HXN2	LXP093XN4	LXP093XN2	LXP09RXN4	LXP09RXN2
-14.5/0/1,000 PSI	1,522.90	LXP101XN4	LXP101XN2	LXP10HXN4	LXP10HXN2	LXP103XN4	LXP103XN2	LXP10RXN4	LXP10RXN2
-14.5/0/2,500 PSI	3,698.50	LXP111XN4	LXP111XN2	LXP11HXN4	LXP11HXN2	LXP113XN4	LXP113XN2	LXP11RXN4	LXP11RXN2
-14.5/0/5,000 PSI	7,614.50	LXP121XN4	LXP121XN2	LXP12HXN4	LXP12HXN2	LXP123XN4	LXP123XN2	LXP12RXN4	LXP12RXN2
-14.5/0/6,000 PSI	8,702.30	LXP131XN4	LXP131XN2	LXP13HXN4	LXP13HXN2	LXP133XN4	LXP133XN2	LXP13RXN4	LXP13RXN2
-14.5/0/8,700 PSI	13,053.40	LXP141XN4	LXP141XN2	LXP14HXN4	LXP14HXN2	LXP143XN4	LXP143XN2	LXP14RXN4	LXP14RXN2
-14.5/0/10,000 PSI	15,229.00	LXP151XN4	LXP151XN2	LXP15HXN4	LXP15HXN2	LXP153XN4	LXP153XN2	LXP15RXN4	LXP15RXN2
-14.5/0/14,500 PSI	21,755.70	LXP161XN4	LXP161XN2	LXP16HXN4	LXP16HXN2	LXP163XN4	LXP163XN2	LXP16RXN4	LXP16RXN2

Dimensions (mm)

Explosion Proof Version

Water Proof Version

Process Connections

Cable outlet

Label	4-20mA	4-20mA +HART	0.5-4.5 VDC	Modbus-RTU/RS485
Red	Power+	Power+	Power+	Power+
Black	Power-	Power-	Power-	Power-
White	Key-Z	Key-Z	Key-Z	A+
Yellow	-	-	Signal+	B-

Pin Configurations

Label	Two wires	Three wires	Four wires	Modbus-RTU/RS485
Red	Power+	Power+	Power+	Power+
Black	Power-	Power-	Power-	Power-
Blue		signal+	Signal+	A+
Yellow			Signal-	B-

Label	Two Wires	Three Wires	Four Wires	Modbus - RTU/RS485
Red	Power +	Power +	Power +	Power +
Black	Power -	Power -	Power -	Power -
Blue		Signal +	Signal +	A +
Yellow			Signal -	B -

Series Number (how to order)

LXP ENGINEERED PART NUMBER		L X P - □ - □ - □□□ - □ - □ - □□ - □□ - □ - □ - □ - □□□
OUTPUT	4...20 mA / 2-wire	1
	4...20 mA / 2-wire + HART	H
	Modbus-RTU / RS485, 4-wire	R
	0.5...4.5 V, 3-wire	3
	0.5...4.5 V, 3-wire, ratiometric output	4
SERIES PRESSURE RANGE (PSI)	-1/0/1, smallest calibration span 0.7	P 0 1
	-3/0/3, smallest calibration span 1.5	P 0 2
	-5/0/5, smallest calibration span 3.0	P 0 3
	-14.5/0/14.5, smallest calibration span 5.1	P 0 4
	-14.5/0/30, smallest calibration span 14.5	P 0 5
	-14.5/0/100, smallest calibration span 29.0	P 0 6
	-14.5/0/145, smallest calibration span 72.5	P 0 7
	-14.5/0/250, smallest calibration span 145	P 0 8
	-14.5/0/500, smallest calibration span 247	P 0 9
	-14.5/0/1,000, smallest calibration span 508	P 1 0
	-14.5/0/2,500, smallest calibration span 1,015	P 1 1
	-14.5/0/5,000, smallest calibration span 2,466	P 1 2
	-14.5/0/6,000, smallest calibration span 2,901	P 1 3
	-14.5/0/8,700, smallest calibration span 4,351	P 1 4
	-14.5/0/10,000, smallest calibration span 5,076	P 1 5
	-14.5/0/14,500, smallest calibration span 7,252 (not CSA approved)	P 1 6
	Custom Pressure Range (Numbers from P01 to P99)	P X X
PRESSURE	Gauge (standard)	G
	Absolute (Only available in 0-1,450 psi pressure ranges and 0.2% accuracy)	A
ACCURACY	0.2% (standard)	2
	0.10%	1
	0.50%	5
ELECTRICAL CONNECTION	Flame proof G 1/2 M, cable diameter 7.5mm, IP67	E 1
	Flame proof M20 x 1.5 M, cable diameter 7.5mm, IP67	E 2
	Flame proof 1/2" NPT M, cable diameter 7.5mm, IP67 (standard)	E 3
	Water proof connector M16 x 1.5, coper braided zinc material, cable diameter 6-8mm, IP65	E 4
	Stainless steel wate proof connector, cable diameter 7.5mnm, IP68	E 5
PROCESS CONNECTION	1/4" NPT M	N 4
	1/2" NPT M	N 2
	1/4" NPT F	F 4
	1/2" NPT F	F 2
	G 1/4" M, EN837	G 4
	G 1/2" M, EN837	G 2
	G 1/4" M, ISO228 DIN16288	D 4
	M20 * 1.5 M, ISO261	M 2
	Custom Process Connection	X X
SEALS	Welded (standard)	W
PRESSURE PORT	304 SS	4
	316 SS (standard)	6
DIAPHRAGM MATERIAL	316 SS (standard)	6
SPECIAL	Cable Length, metres (2m is standard length), PUR, per metre	U X X
	Cable Length, metres, PVC	V X X
	Custom Range (R1=psi, R2=kPa, R3=kg/cm2, R4=cmH2O, R5=ftH2O, R6=inHg, R7=mmHg, R10=ATM, R11=bar, R12=mbar, R13=MPa, R14=mH2O, R15=mmH2O, R16=Pa)	R X X
	Customer Specific (Numbers from Z01 to Z99)	Z # #

LY14 WinSMART™ Pressure Transmitter

Description & Features:

- Smart multi-functional digital pressure transmitter designed for industrial applications
- Explosion proof and intrinsically safe designs for hazardous locations
- Stainless steel and aluminum housing
- Gauge and Absolute pressure measurement
- 0.1% accuracy
- Simple to operate 3-push button control with 5-digit display
- 4/20mA plus HART® digital communication
- Simplified re-zero calibration via push-button fuctionality
- 10:1 rangeability allows for installation in any application

Applications:

- Suitable for pressure measurement in Oil & Gas installations (onshore and offshore), power generation, including renewable energy facilities, waste water locations and many other hazardous areas.

Specifications	
Output Signal	4/20 mA + HART, 2-wire / V = 9-32 VDC
LCD Display	Available with LCD display (standard) or without LCD display (optional)
Accuracy	0.1% URL standard
Stability	0.2% of URL for two-years
Temperature Ranges	Working/Media temperature: -25/95°C (with display -13/203 deg F), -40/185°C (without display -4/158 deg F) Ambient temperature: -40/60°C (with display -40/140 deg F), -40/115°C (without display -4/240 deg F) Storage temperature: -40/110°C (with display -40/85 deg F), -40/230°C (without display -40/446 deg F)
Working Humidity	0-100 % relative humidity
Pressure Connection	1/2” NPT M or F, G1/2”, M20*1.5
Housing	304SS, 316SS, Rugged die-cast aluminum housing (painted Blue)
Wetted Parts	316 SS process connection, 316 L diaphragm
Response Time	200ms
Turn On Time	2 seconds (with minimum damping enabled)
Power consumption	<162.8 mW
Vibration Effect	+/- 0.005% of URL per G to 200 Hz, in accordance to IEC60770-1:1999
Available Pressure Units	kPa, Mpa, bar, psi, mmHg, mmH2O, mH2O, inH2O, ftH2O, inHg, mHg, TORR, mbar, g/cm2, kg/cm2, Pa, ATM, m, cm, mm
Protection Class	EMC, reverse polarity protected
Approval	ATEX, II 2 G Ex db IIC T6 Gb ATEX, II 1 G Ex ia IIC T1~T6 Ga Intrinsically safe parameters: Ui=28Vdc, Ii=93mA, Pi=0.65W, Ci=5nF, Li=0 mH
Protection Class	IP66
Weight	5.95 lbs (2.7 kg)
Operational Life	100 million cycles

Order Codes

4/20 mA + HART®, 2-Wire Option		ATEX Ex db		ATEX Ex ia	
		Process Connection, 1/2" NPT M	Process Connection, G1/2"	Process Connection, 1/2" NPT M	Process Connection, G1/2"
Range (PSI)	Overload Pressure (PSI)	Electrical Entry 1/2" NPT F	Electrical Entry M20*1.5	Electrical Entry 1/2" NPT F	Electrical Entry M20*1.5
0/1 psi	1.5	LY14HXD3P50G1R2N2W6LS	LY14HXD3P50G1R5G2W6LS	LY14HIA3P50G1R2N2W6LS	LY14HIA3P50G1R5G2W6LS
0/5 psi	7.5	LY14HXD3P51G1R2N2W6LS	LY14HXD3P51G1R5G2W6LS	LY14HIA3P51G1R2N2W6LS	LY14HIA3P51G1R5G2W6LS
0/30 psi	45.0	LY14HXD3P52G1R2N2W6LS	LY14HXD3P52G1R5G2W6LS	LY14HIA3P52G1R2N2W6LS	LY14HIA3P52G1R5G2W6LS
0/100 psi	150.0	LY14HXD3P53G1R2N2W6LS	LY14HXD3P53G1R5G2W6LS	LY14HIA3P53G1R2N2W6LS	LY14HIA3P53G1R5G2W6LS
0/300 psi	450.0	LY14HXD3P54G1R2N2W6LS	LY14HXD3P54G1R5G2W6LS	LY14HIA3P54G1R2N2W6LS	LY14HIA3P54G1R5G2W6LS
0/1,000 psi	1,500.0	LY14HXD3P55G1R2N2W6LS	LY14HXD3P55G1R5G2W6LS	LY14HIA3P55G1R2N2W6LS	LY14HIA3P55G1R5G2W6LS
0/3,000 psi	4,500.0	LY14HXD3P56G1R2N2W6LS	LY14HXD3P56G1R5G2W6LS	LY14HIA3P56G1R2N2W6LS	LY14HIA3P56G1R5G2W6LS

Dimensions (mm)

78mm = 3.1"

130mm = 5.1"

195mm = 7.7"

Wiring Diagram

Pipe Mounting Bracket

WinSMART™ Pressure Transmitter (threaded interface) overall dimensions

(unit: mm)

Dimensional drawing of mounting bracket

(unit mm)

Series Number (how to order)

LY14 CONFIGURED PART NUMBER		- □ - □□ - □ - □□□ - □ - □ - □□ - □□ - □ - □ - □ - □ - □□□
OUTPUT	4...20 Ma + HART / 2-wire	H
AREA CLASSIFICATION	Hazardous location per ATEX Ex db	X D
	Intrinsically Safe per ATEX Ex ia	I A
CASE HOUSING	Die-Cast Aluminum, Blue	1
	304 Stainless Steel	2
	316 Stainless Steel	3
SERIES PRESSURE RANGE (P	0/1	P 5 0
	0/5	P 5 1
	0/30	P 5 2
	0/100	P 5 3
	0/300	P 5 4
	0/1,000	P 5 5
	0/3,000	P 5 6
	Other, specify range	P # #
PRESSURE	Gauge	G
	Absolute	A
ACCURACY	0.10 %	1
ELECTRICAL CONNECTION	1/2" NPT F	R 2
	M20*1.5 F	R 5
PROCESS CONNECTION	1/2" NPT M	N 2
	1/2" NPT F	F 2
	1/4" NPT M	N 4
	G1/2" M	G 2
	M20*1.5	M 2
SEALS	Welded	W
PRESSURE PORT	316 SS	6
DIAPHRAGM	316L SS	L
	Hastelloy C	H
	Tantalum	T
Fill Fluid	Silicone Oil	S
	Fluorine Oil	F
SPECIAL	U-shaped 2" mounting bracket 304SS	2 M
	Without LCD display	W D
	Special	Z # #

WinSMART™ Explosion Proof Pressure Transmitter

LY16

Description & Features:

- Microprocessor-based high performing transmitter
- Explosion proof smart pressure transmitter for hazardous locations
- Sour gas NACE0175 compliant
- Built-in temperature sensor
- 0.2% standard; 0.5%, 0.1%, 0.075% or 0.05% optional
- Simple to operate 3-push button control
- HART 5 or Modbus communications available
- Low power option available
- Re-zero fuction for safe field calibration
- Wide range of accuracies and turndown ratios allow for installation in any application setting
- CRN Registered, up to 6,000 psi
- 5 year warranty

Applications:

- Pressure monitoring for oil and gas, well head process control, petrochemical installations, power generation equipment and all hazardous locations
- Suitable for general-purpose areas including potable water, installations and hydraulic systems

Specifications	
Output Signal	4/20 mA, 2-wire / V = 10.5-55 Vdc 4/20 mA + HART 5, 2-wire / V = 16.5-55 vdc or 12.55-55 Vdc (low power) 1/5 Vdc, 3-wire / V = 10.5-55 Vdc Modbus, 4-wire / V = 9-30 Vdc
LCD Display	LCD display (standard) or without LCD display (optional)
Accuracy	0.2% standard; 0.5%, 0.1%, 0.075% or 0.05% optional
Stability	0.1% per year
Temperature Ranges	Working: -40/85°C, -40/185°F (LCD may not be readable at temperatures below -20°C/ -4°F) Storage: -40/110°C (with display -40/85°C), -40/230°F (without display -40/185°F) Media: silicone oil filling: -40/120°C (-40/248°F)
Working Humidity	5-100% at 40°C (104°F)
Pressure Connection	1/4" or 1/2" NPTM or F, 1/4" or 1/2" GM (large 10mm orifice)
Housing	Rugged die-cast aluminum housing, painted blue
Wetted Parts	316L SS
Overload Pressure	1.5 x rated pressure
Power Consumption	=500 mW @ 24 VDC, 20.8 mA (LCD); </= 493mW @ 24VDC, 20.55mA (without LCD)
Wake-Up Time	6 seconds
Vibration	20g, 20Hz…5kHz According to GB/T 1827.3 / IEC 61298-3 tests, <0.1% URL
Shock	20g, 20Hz…5kHz
Available Pressure Units	kPa, Mpa, bar, psi, mmHg, mmH_2O, mH_2O, inH_2O, ftH_2O, inHg, mHg, TORR, mbar, g/cm^2, kg/cm^2, Pa, ATM
Available Temperature units	Celsius (°C), Fahrenheit (°F)
Protection Class	EMI, ESD, RFI, reverse polarity protected; Surge protection; IEC 61000-4-2/4-3/4-4/4-5/4-6/4-8
Approvals	**CSA, for USA & Canada** • Class I, 1, Group A,B,C and D T6 | Class II, Division 1 Group E, F and G T80°C | Class III **Intertek, for USA & Canada** • Class I, Zone 0 A Ex ia IIC T6 Gb | Class I, Division 1, Group A-D, T6 | - 40°C to 60°C SIL 2 Capable • IEC 61508: 2010 **ATEX** • II 2G Ex db IIC T6 Gb • II 1G Ex ia IIC T6 Ga
Protection Class	IP66 / IP67
Weight	2.9 lbs (1.3 kg)
Operational Life	100 million cycles

LY16 WinSMART™ Explosion Proof Pressure Transmitter

Order Codes

Pressure Range	Smallest Calibration Span	Low Range Limit (LRL)	Upper Range Limit (URL)	Overload Limit	Quick Codes, per CSA, Stainless Steel Welded Process Connection 1/2" NPT M			
					4/20 mA	4/20 mA + HART (Power Supply = 16.5-55 VDC)	1/5 VDC	MODBUS RS485
-1/0/1 PSI	0.7 PSI	-1.0 PSI	1.0 PSI	1.5 PSI	LY16P011X	LY16P01HX	LY16P012X	LY16P01RX
-3/0/3 PSI	1.5 PSI	-2.9 PSI	2.9 PSI	4.4 PSI	LY16P021X	LY16P02HX	LY16P022X	LY16P02RX
-5/0/5 PSI	3.0PSI	-5.1 PSI	5.1 PSI	7.6 PSI	LY16P031X	LY16P03HX	LY16P032X	LY16P03RX
-14.5/0/14.5 PSI	5.1 PSI	-14.5 PSI	14.5 PSI	21.8 PSI	LY16P041X	LY16P04HX	LY16P042X	LY16P04RX
-14.5/0/30 PSI	14.5 PSI	-14.5 PSI	29.0 PSI	43.5 PSI	LY16P051X	LY16P05HX	LY16P052X	LY16P05RX
-14.5/0/100 PSI	29.0 PSI	-14.5 PSI	101.5 PSI	152.3 PSI	LY16P061X	LY16P06HX	LY16P062X	LY16P06RX
-14.5/0/150 PSI	72.5 PSI	-14.5 PSI	145.0 PSI	217.6 PSI	LY16P071X	LY16P07HX	LY16P072X	LY16P07RX
-14.5/0/250 PSI	145 PSI	-14.5 PSI	246.6 PSI	369.8 PSI	LY16P081X	LY16P08HX	LY16P082X	LY16P08RX
-14.5/0/500 PSI	247 PSI	-14.5 PSI	507.6 PSI	761.4 PSI	LY16P091X	LY16P09HX	LY16P092X	LY16P09RX
-14.5/0/1,000 PSI	508 PSI	-14.5 PSI	1,015.0 PSI	1,522.9 PSI	LY16P101X	LY16P10HX	LY16P102X	LY16P10RX
-14.5/0/2,500 PSI	1,015 PSI	-14.5 PSI	2,465.6 PSI	3,698.5 PSI	LY16P111X	LY16P11HX	LY16P112X	LY16P11RX
-14.5/0/5,000 PSI	2,466 PSI	-14.5 PSI	5,076.0 PSI	7,614.5 PSI	LY16P121X	LY16P12HX	LY16P122X	LY16P12RX
-14.5/0/6,000 PSI	2,901 PSI	-14.5 PSI	5,801.5 PSI	8,702.26 PSI	LY16P131X	LY16P13HX	LY16P132X	LY16P13RX
-14.5/0/8,700 PSI	4,351 PSI	-14.5 PSI	8,702.0 PSI	13,053.4 PSI	LY16P141X	LY16P14HX	LY16P142X	LY16P14RX
-14.5/0/10,000 PSI	5,076 PSI	-14.5 PSI	10,152.6 PSI	15,229.0 PSI	LY16P151X	LY16P15HX	LY16P152X	LY16P15RX
-14.5/0/14,500 PSI	7,252 PSI	-14.5 PSI	14,503.8 PSI	21,755.7 PSI	LY16P161X	LY16P16HX	LY16P162X	LY16P16RX

Dimensions (mm)

Process Connections

Pin Configurations

4-20mA two wires, intrinsic safety (module terminals-four terminals)

① Power supply+ is connected with transmitter terminals+
② Signal+ is connected with transmitter terminals-
③ Signal- is connected with power supply-

Module terminals-six terminals (Only for Modbus-RTU/RS485)

Lable	P+	P-	A	B	Out	PE
Modbus-RTU/RS485	Power+	Power-	A+	B-		Housing
Five wires	Power+	Power-	A+	B-	Signal+	Housing ground

Series Number (how to order)

LY16 ENGINEERED PART NUMBER		L Y 1 6 -	-	-	-	-	-	-	-	-	-
OUTPUT	4…20 mA / 2-wire	1									
	4…20 mA / 2-wire + HART, 16.5/55 Vdc	H									
	4…20 mA / 2-wire + HART, 12/55 Vdc	D									
	1…5 V, 3-wire	2									
	MODBUS RS485, 2-wire	R									
AREA CLASSIFICATION	Without area classification, standard		S								
	Hazardous location per CSA, IP66		X								
	Instrisically Safe per Intertek, IP67		I								
	Explosive atmosphere per ATEX, IP67		T								
SERIES PRESSURE RANGE (PSI)	-1/0/1, smallest calibration span 0.7			P 0 1							
	-3/0/3, smallest calibration span 1.5			P 0 2							
	-5/0/5, smallest calibration span 3.0			P 0 3							
	-14.5/0/14.5, smallest calibration span 5.1			P 0 4							
	-14.5/0/30, smallest calibration span 14.5			P 0 5							
	-14.5/0/100, smallest calibration span 29.0			P 0 6							
	-14.5/0/150, smallest calibration span 72.5			P 0 7							
	-14.5/0/250, smallest calibration span 145			P 0 8							
	-14.5/0/500, smallest calibration span 247			P 0 9							
	-14.5/0/1,000, smallest calibration span 508			P 1 0							
	-14.5/0/2,500, smallest calibration span 1,015			P 1 1							
	-14.5/0/5,000, smallest calibration span 2,466			P 1 2							
	-14.5/0/6,000, smallest calibration span 2,901			P 1 3							
	-14.5/0/8,700, smallest calibration span 4,351			P 1 4							
	-14.5/0/10,000, smallest calibration span 5,076			P 1 5							
	-14.5/0/14,500, smallest calibration span 7,252			P 1 6							
	Other, specify P17 thru P99			P # #							
PRESSURE	Gauge (standard)				G						
	Absolute (Only available in 0-1,450 psi pressure ranges and 0.2% accuracy)				A						
ACCURACY	0.2%, 2:1 turndown (standard)					2					
	0.5%, 2:1 turndown					5					
	0.10% (up to 6,000 psi), 10:1 turndown					1					
	0.075% (up to 6,000 psi) 20:1 turndown					7					
	0.05% (up to 1,000 psi) 20:1 turndown					4					
ELECTRICAL CONNECTION	Water proof M20x1.5 F, PVC, IP66 (standard)						C 1				
	Flame proof 1/2" NPT F, SS, IP66 or IP67						C 2				
	Flame proof M20x1.5 F, SS, IP66 or IP67						C 3				
PROCESS CONNECTION	1/4" NPT M							N 4			
	1/2" NPT M (standard)							N 2			
	1/4" NPT F							F 4			
	1/2" NPT F							F 2			
	9/16" Autoclave F							A 9			
	G1/4" M (includes M20x1.5 F cable entry)							G 4			
	G1/2" M (includes M20x1.5 F cable entry)							G 2			
SEALS	FKM O-Ring								F		
	Welded (standard)								W		
PRESSURE PORT	304 SS (standard)									4	
	316 SS									6	
	Hastelloy C									H	
DIAPHRAGM	316L SS (standard)										6
	Hastelloy C										H
SPECIAL	U-shaped 2" mounting bracket										2 M
	Without LCD display										W D
	Other, specify Z1 thru Z99										Z # #

LY34 WinSMART™ Differential Pressure Transmitter

Description & Features:

- Smart multi-functional digital differential pressure transmitter designed for industrial applications
- Explosion proof and intrinsically safe designs for hazardous locations
- Stainless steel and aluminum housing
- Gauge, absolute and differential pressure measurement
- 0.1% accuracy
- Simple to operate 3-push button control with 5-digit display and 100% bar graph
- 4/20mA plus HART® digital communication
- Simplified re-zero calibration via push-button fuctionality
- 10:1 rangeability allows for installation in any application

Applications:

- Ideally suited for hazardous locations requiring either a stainless steel or die-cast aluminum housing.
- Suitable for differential pressure measurement in Oil & Gas installations (on-shore and offshore), power generation, including renewable energy facilities, filtration monitoring, tank level and flow measurement in hazardous areas.

Specifications	
Output Signal	4/20 mA + HART, 2-wire / V = 9-32 VDC
LCD Display	Available with LCD display (standard) or without LCD display (optional)
Accuracy	0.1% URL standard
Stability	0.2% of URL for two-years
Temperature Ranges	Working/Media temperature: -25/95°C (with display -13/203 deg F), -40/185°C (without display -4/158 deg F) Ambient temperature: -40/60°C (with display -40/140 deg F), -40/115°C (without display -4/240 deg F) Storage temperature: -40/110°C (with display -40/85 deg F), -40/230°C (without display -40/446 deg F)
Working Humidity	0-100 % relative humidity
Housing	304SS, 316SS, Rugged die-cast aluminum housing (painted Blue)
Pressure Connection	2 x 1/4” NPT F, 1/2” NPT F adapters available
Diaphragm	316L SS with BUNA-N, Hastelloy® C or Monel or Tantalum plus Vitron or PTFE o-rings optional
Drains & Vents	304SS or 316SS
Response Time	200 ms
Turn on Time	2 seconds (with minimum Damping enabled)
Power Consumption	<162.8 mW
Vibration Effect	+/- 0.005% of URL per G to 200 Hz, in accordance to IEC60770-1:1999
Available pressure units	kPa, Mpa, bar, psi, mmHg, mmH2O, mH2O, inH2O, ftH2O, inHg, mHg, TORR, mbar, g/cm2, kg/cm2, Pa, ATM, m, cm, mm
Protection Class	EMC, reverse polarity protected
Approval	ATEX, II 2 G Ex db IIC T6 Gb ATEX, II 1 G Ex ia IIC T1~T6 Ga Intrinsically safe parameters: Ui=28Vdc, Ii=93mA, Pi=0.65W, Ci=5nF, Li=0 mH
Protection Class	IP66
Weight	15.9 lbs (7.2 kg)
Operational Life	100 million cycles

Order Codes

4/20 mA + HART® , 2-Wire Option		ATEX Ex db		ATEX Ex ia	
		Process Connection, 1/4" NPT F	Process Connection, 1/4" NPT F	Process Connection, 1/4" NPT F	Process Connection, 1/4" NPT F
Range (PSI)	Overload Pressure (PSI)	Electrical Entry 1/2" NPT F	Electrical Entry M20*1.5	Electrical Entry 1/2" NPT F	Electrical Entry M20*1.5
0/0.2 psi (0/6"H2O)	1.0	LY34H1XD3D50D1R2F1B6LS	LY34H1XD3D50D1R5F1B6LS	LY34H1IA3D50D1R2F1B6LS	LY34H1IA3D50D1R5F1B6LS
0/1 psi	1.5	LY34H1XD3D51D1R2F1B6LS	LY34H1XD3D51D1R5F1B6LS	LY34H1IA3D51D1R2F1B6LS	LY34H1IA3D51D1R5F1B6LS
0/5 psi	7.5	LY34H1XD3D52D1R2F1B6LS	LY34H1XD3D52D1R5F1B6LS	LY34H1IA3D52D1R2F1B6LS	LY34H1IA3D52D1R5F1B6LS
0/30 psi	45.0	LY34H1XD3D53D1R2F1B6LS	LY34H1XD3D53D1R5F1B6LS	LY34H1IA3D53D1R2F1B6LS	LY34H1IA3D53D1R5F1B6LS
0/100 psi	150.0	LY34H1XD3D54D1R2F1B6LS	LY34H1XD3D54D1R5F1B6LS	LY34H1IA3D54D1R2F1B6LS	LY34H1IA3D54D1R5F1B6LS
0/300 psi	450.0	LY34H1XD3D55D1R2F1B6LS	LY34H1XD3D55D1R5F1B6LS	LY34H1IA3D55D1R2F1B6LS	LY34H1IA3D55D1R5F1B6LS
0/1,000 psi	1,500.0	LY34H1XD3D56D1R2F1B6LS	LY34H1XD3D56D1R5F1B6LS	LY34H1IA3D56D1R2F1B6LS	LY34H1IA3D56D1R5F1B6LS

Dimensions (mm)

LY34B4

LY34B5

LY34B6

WinSMART™ Differential Pressure Transmitter

Wiring Diagram

Order Codes

LY34 CONFIGURED PART NUMBER		-□□-□□-□-□□□-□-□-□□-□□-□-□-□□-□□□
OUTPUT	4…20 Ma + HART / 2-wire, linear output	H 1
	4…20 Ma + HART / 2-wire, square root output (>5psi)	H 2
AREA CLASSIFICATION	Hazardous location per ATEX Ex db	X D
	Intrinsically Safe per ATEX Ex ia	I A
CASE HOUSING	Die-Cast Aluminum, Blue	1
	304 Stainless Steel	2
	316 Stainless Steel	3
SERIES PRESSURE RANGE (PSI D)	0/0.2	D 5 0
	0/1	D 5 1
	0/5	D 5 2
	0/30	D 5 3
	0/100	D 5 4
	0/300	D 5 5
	0/1,000	D 5 6
	Other, specify range	D # #
PRESSURE	Differential	D
	Absolute	A
ACCURACY	0.10 %	1
ELECTRICAL CONNECTION	1/2" NPT F	R 2
	M20*1.5 F	R 5
PROCESS CONNECTION	Double flange 1/4" NPT F, drain in rear	F 1
	Double flange 1/4" NPT F, drain in upper	F 2
	Double flange 1/4" NPT F, drain in lower	F 3
SEALS	Buna-N (NBR)	B
	Viton (FKM)	V
	Low Temperature Viton	L
PRESSURE PORT	316 SS	6
DIAPHRAGM / FILL FLUID	316L SS + Silicone Oil	L S
	Hastelloy C + Silicone Oil (>5psi)	H S
	316L SS + Fluorine Oil	L F
SPECIAL	2" Tube-type Curved Mounting Bracket, 304SS	B 4
	Wall Mounted Bracket, 304SS	B 5
	2" Tube-type Flat Mounting Bracket, 304SS	B 6
	Without LCD display	W D
	Adapters 1/2" NPT (F)	A 2
	Special	Z # #

WinSMART™ Differential Pressure Transmitter LY36

Description & Features:

- Monosilicone-based high performing transmitter
- Explosion proof smart differential pressure transmitter for hazardous locations
- Sour gas NACE0175 compliant
- Built-in temperature sensor
- 0.075% or 0.05% accuracy
- Simple to operate 3-push button control
- HART 5 or Modbus communications available
- Low power option available
- Re-zero fuction for safe field calibration
- 20:1 turndown allows for installation in any application setting
- CRN Registered
- 5 year Warranty

Applications:

- Differential pressure monitoring for oil and gas installations, well head process control, petrochemical installations, power generation equipment and all hazardous locations

Specifications	
Output Signal	4/20 mA, 2-wire / V = 10.5-55 Vdc 4/20 mA + HART 5, 2-wire / V = 12-55 Vdc (low power) 1/5 Vdc, 3-wire / V = 10.5-55 Vdc Modbus, 4-wire / V = 9-30 Vdc
LCD Display	Available with LCD display (standard) or without LCD display (optional)
Accuracy	0.075% URL standard, 0.05% optional
Stability	0.2% per 5 years
Temperature Ranges	Working: -40/85°C, -40/185°F (LCD may not be readable at temperatures below -20°C/ -4°F) Storage: -40/110°C (with display -40/85°C), -40/230°F (without display -40/185°F) Media: silicone oil filling: -40/120°C (-40/248°F)
Working Humidity	5-100% at 40°C (104°F)
Pressure Connection	1/4" or 1/2" NPTM or F, 1/4" or 1/2" GM (large 12mm orifice)
Housing	Rugged die-cast aluminum housing, painted blue
Wetted Parts	316L SS with PTFE o-ring (Hastelloy® C optional)
Overload Pressure	Maximum of 3,600 or 6,000 psi
Power Consumption	=500 mW @ 24 VDC, 20.8 mA (LCD); </= 493mW @ 24VDC, 20.55mA (without LCD)
Wake Up Time	6 seconds
Vibration	20g, 20Hz…5kHz According to GB/T 1827.3 / IEC 61298-3 tests, <0.1% URL
Shock	20g, 20Hz…5kHz
Available Pressure Units	kPa, Mpa, bar, psi, mmHg, mmH_2O, mH_2O, inH_2O, ftH_2O, inHg, mHg, TORR, mbar, g/cm^2, kg/cm^2, Pa, ATM
Available Temperature units	Celsius (°C), Fahrenheit (°F)
Protection Class	EMI, ESD, RFI, reverse polarity protected; Surge protection IEC 61000-4-2/4-3/4-4/4-5/4-6/4-8
Approvals	**CSA, for USA & Canada** • Class I, Division 1, Group A,B,C and D T6 | Class II, Division 1 Group E,F and G T80°C | Class III **Intertek, for USA & Canada** • Class I, Zone 0 A Ex ia IIC T6 Gb | Class I, Division 1, Group A-D, T6 | - 40°C to 60°C **SIL 2 Capable** • IEC 61508: 2010 **ATEX** • II 2G Ex db IIC T6 Gb • II 1G Ex ia IIC T6 Ga
Protection Class	IP66 / IP67
Weight	8.8 lbs (4.0 kg)
Operational Life	100 million cycles

Hastelloy® is a registered trademark of Haynes International, Inc.

LY36 WinSMART™ Differential Pressure Transmitter

Order Codes

Differential Pressure Range	Smallest Calibration Span	Low Range Limit (LRL)	Upper Range Limit (URL)	Static Pressure Limit	High Side Overload Limit	Low Side Overload Limit	Quick Codes, per CSA, Stainless Steel O-Ring, Process Connection 1/2" NPT F			
							4/20 mA	4/20 mA + HART	1/5 VDC	MODBUS RS485
-24/0/24 "H20	0.09 'H2O	-24 'H2O	24 'H2O	3,626 PSI	3,626 PSI	2,321 PSI	LY36D101X	LY36D10HX	LY36D102X	LY36D10RX
-160/0/160 "H2O	1.7 "H2O	-160 "H2O	160 "H2O	5,801 PSI	3,626 PSI	2,321 PSI	LY36D201X	LY36D20HX	LY36D202X	LY36D20RX
-1,000/0/1,000 "H2O	10.1 "H2O	-1,000 "H2O	1,000 "H2O	5,801 PSI	3,626 PSI	2,321 PSI	LY36D301X	LY36D30HX	LY36D302X	LY36D30RX
-72.5/0/145 PSI	1.6 PSI	-72.5 PSI	145 PSI	5,801 PSI	3,626 PSI	2,321 PSI	LY36D501X	LY36D50HX	LY36D502X	LY36D50RX
-72.5/0/435 PSI	4.5 PSI	-72.5 PSI	435 PSI	5,801 PSI	3,626 PSI	2,321 PSI	LY36D601X	LY36D60HX	LY36D602X	LY36D60RX
-72.5/0/1,450 PSI	14.5 PSI	-72.5 PSI	1,450 PSI	5,801 PSI	3,626 PSI	2,321 PSI	LY36D701X	LY36D70HX	LY36D702X	LY36D70RX

Dimensions (mm)

Pin Configurations

4-20mA two wires, intrinsic safety (module terminals-four terminals)

① Power supply+ is connected with transmitter terminals+
② Signal+ is connected with transmitter terminals-
③ Signal- is connected with power supply-

Module terminals-six terminals (Only for Modbus-RTU/RS485)

Lable	P+	P-	A	B	Out	PE
Modbus-RTU/RS485	Power+	Power-	A+	B-		Housing
Five wires	Power+	Power-	A+	B-	Signal+	Housing ground

Mounting Adapters
Adaptor A1 (mm)

Adaptor A2 (mm)

Mounting Brackets

Pipe Mounting Bracket (Vertical) B1 (mm)

Plate Mounting Bracket B2 (mm)

Pipe Mounting Bracket (Horizontal) B3 (mm)

Process Connection

F1	
F2	
F3	

Code	Item	Description
F1	Flange/ Drain Valve	H structure, double flanges, process connection 1/4-18NPT(F), drain valve on the rear end of flange, material 316 Ss
F2		H structure, double flanges, process connection 1/4-18NPT(F), drain valve on the up part of flange, material 316 SS
F3		H structure, double flanges, process connection 1/4-18NPT(F), drain valve on the down part of flange, material 316 SS

Wetted Parts

Series Number (how to order)

LY36 ENGINEERED PART NUMBER		L Y 3 6 - □ - □ - □□□ - □ - □ - □□ - □□ - □ - □ - □ - □□□
OUTPUT	4…20 mA / 2-wire	1
	4…20 mA / 2-wire + HART, 16.5/55 Vdc	H
	4…20 mA / 2-wire + HART, 12/55 Vdc	D
	1…5 V, 3-wire	2
	MODBUS RS485, 2-wire	R
AREA CLASSIFICATION	Without area classification, standard	S
	Hazardous location per CSA, IP66	X
	Instrisically Safe per Intertek, IP67	I
	Explosive atmosphere per ATEX, IP67	T
SERIES PRESSURE RANGE (inches H2O)	-24/0/24, smallest calibration span 0.08	D 1 0
	-160/0/160, smallest calibration span 1.6	D 2 0
	-1,000/0/1,000, smallest calibration span 10.0	D 3 0
SERIES PRESSURE RANGE (psi)	-14.5/0/145, smallest calibration span 1.6	D 5 0
	-72.5/0/435, smallest calibration span 4.4	D 6 0
	-72.5/0/1,450, smallest calibration span 14.5	D 7 0
	Other, specify D01 thru D99	D # #
PRESSURE	Differential (standard)	D
	Absolute (<1,450 psi only)	A
ACCURACY	0.075%, 20:1 turndown (standard)	2
	0.05%, 20:1 turndown	5
ELECTRICAL CONNECTION	Water proof M20x1.5 F, PVC, IP66	C 1
	Flame proof 1/2" NPT F, SS, IP66 or IP67 (standard)	C 2
	Flame proof M20x1.5 F, SS, IP66 or IP67	C 3
PROCESS CONNECTION	Double flange 1/4" NPT (F), drain in rear (standard)	F 1
	Double flange 1/4" NPT (F), drain in upper	F 2
	Double flange 1/4" NPT (F), drain in lower	F 3
SEALS	PTFE O-Ring	F
PRESSURE PORT	316 SS	6
DIAPHRAGM	316 SSL (standard)	6
	Hastelloy C	H
SPECIAL	Without LCD display	W D
	Adaptor with guided pipe M20x1.5 (M)	A 1
	Adaptor 1/2" NPT (F) (standard)	A 2
	Horizontal pipe mounting kit CS, 2"	B 1
	Horizontal plate mounting kit CS	B 2
	Vertical pipe mounting kit CS, 2"	B 3
	3-handle manifold, MVA3ASH2D	M 3
	5-handle manifold, MVA5ASH2D	M 5
	Other, specify Z1 thru Z99	Z #

TY52 WinSMART™ Temperature Transmitter

Description & Features:

- Integrated temperature transmitter with ASIC signalling transmitter
- Explosion proof smart temperature transmitter for hazardous locations
- -50 to 400°C (-58/752°F) measure range
- 0.5% accuracy
- Simple to operate 3-push button control
- HART or Modbus communications available
- Low power option available
- Re-zero function for safe field calibration
- 5 Year Warranty

Applications:

- TY52 can be utilized and installed anywhere where temperature measurement is required. From Oil & Gas installations to Power Generation, this product has a rugged design and is equipped with the communication protocols to meet all your day to day requirements

C US

Specifications	
Output Signal	4/20 mA, 2-wire / V = 10.5-30 Vdc 4/20 mA + HART, 2-wire / V = 16.5-55 Vdc 1/5 Vdc, 3-wire / V = 12-30 Vdc Modbus, 4-wire / V = 12-32 Vdc
Sensor Type	PT100 RTD
Measuring Range	-50/400°C (-58/752°F)
LCD Display	LCD display (standard) or without LCD display (optional)
Accuracy	0.5% accuracy
Stability	0.05% or 0.1°C / year
Temperature Ranges	Working: -40/85°C, -40/185°F (LCD may not be readable at temperatures below -20°C/ -4°F) Storage: -40/100°C (with display -20/70°C), -40/212°F (without display -4/158°F)
Working Humidity	0-95%
Pressure Connection	1/2" NPTM, 1/2 GM or Flanged
Housing	Rugged die-cast aluminum housing, painted blue
Wetted Parts	316 SS, 304 SS
Power Consumption	=500 mW @ 24 VDC, 20.8 mA (LCD); </=493mW @ 24VDC, 20.55mA (without LCD)
Wake Up Time	6 seconds
Vibration	4g, 2…100Hz According to IEC 60068-2-6
Available Temperature Units	Celsius (°C), Fahrenheit (°F)
Protection Class	EMI, ESD, RFI, reverse polarity protected; Surge protection IEC1000-4-5
Approval	• Class I, Division 1, Groups A, B, C & D, T6... T1 • Class I, Division 2, Groups A, B, C & D, T4...T1 • Class II, Division 1, Groups E, F & G, T80°C... T400°C • Class III
Protection Class	IP66

Please Note: Thermowell sold separately.

Order Codes

Insertion Length (INCH), 1/2" NPT	4/20 mA Output	4/20 mA + HART Output	1/5 VDC Output	MODBUS RS485 Output
	°C/°F			
50mm (2")	TY520501	TY52050H	TY520502	TY52050R
100mm (4")	TY521001	TY52100H	TY521002	TY52100R
150mm (6")	TY521501	TY52150H	TY521502	TY52150R
200mm (8")	TY522001	TY52200H	TY522002	TY52200R
300mm (12")	TY523001	TY52300H	TY523002	TY52300R

See how to order guide for specific lengths L= Insertion length

Dimensions (mm)

Pin Configurations

4-20mA two wires (DIN43650)

① Connect the positive power supply (P+) to the positive power supply (P+) of temperature transmitter (terminals 1);
② Connect the negative power supply (P-) of temperature transmitter (terminals 2) to the positive signal module (S+);
③ Connect the negative signal module (S-) to the negative power supply (P-)

Three wires current/voltage signal (DIN43650)

① Connect the positive power supply (P+) to the positive power supply (P+) of temperature transmitter (terminals 1);
② Connect the negative power supply (P-) of temperature transmitter (terminals 2) to the negative power supply (P-), and connect the negative signal module (S-) to negative power supply (P-);
③ Connect the positive signal module (S+) of temperature transmitter (terminals 3) to the positive signal module (S+);

Process Connections

H01-H02 (mm)

Standard	Specification	Outer Diameter (ϕD)	Thickness (B)
HG/T20592-2009	DN50PN10-PN40	165	20
HG/T20592-2009	DN25PN10-PN40	115	16
Hole Circle (ϕK)	**Raised-face Diameter (ϕG)**	**Hole Diameter (ϕH)**	**Number (n)**
125	102	18	4
85	68	14	4

R01 (mm)

G01 (mm)

See how to order guide for specific lengths.

Order Codes (For Thermowell)

TY52 Series Thermowell selection, 304SS Material (Straight - Type)						
TY52 Insertion Length	Threaded-Type, Instrument Connection = 1/2" NPT		Flanged-Type, Instrument connection = 1/2" NPT			
	Process Connections -> 1/2" NPT	Process Connections -> 3/4" NPT	RF - Raised Face 150# 1.5"	150# 2"	300# 1.5"	300# 2"
50mm (2")	TY52T10N24L020	TY52T10N34L020	TY52T154A4L020	TY52T154A6L020	TY52T154A12L020	TY52T154A14L020
100mm (4")	TY52T10N24L050	TY52T10N34L050	TY52T154A4L050	TY52T154A6L050	TY52T154A12L050	TY52T154A14L050
150mm (6")	TY52T10N24L100	TY52T10N34L100	TY52T154A4L100	TY52T154A6L100	TY52T154A12L100	TY52T154A14L100
200mm (8")	TY52T10N24L200	TY52T10N34L200	TY52T154A4L200	TY52T154A6L200	TY52T154A12L200	TY52T154A14L200
300mm (12")	TY52T10N24L300	TY52T10N34L300	TY52T154A4L300	TY52T154A6L300	TY52T154A12L300	TY52T154A14L300
400mm (16")	TY52T10N24L400	TY52T10N34L400	TY52T154A4L400	TY52T154A6L400	TY52T154A12L400	TY52T154A14L400
500mm (18")	TY52T10N24L500	TY52T10N34L500	TY52T154A4L500	TY52T154A6L500	TY52T154A12L500	TY52T154A14L500

Note: Inside diameter (bore) fixed at 6.6mm + Outside diameter fixed at 10mm + Tip diameter fixed at 6mm (threaded) L= Insertion length includes instrument connection

TY52 Series Thermowell selection, 316SS Material (Straight - Type)						
TY52 Insertion Length	Threaded-Type, Instrument Connection = 1/2" NPT		Flanged-Type, Instrument connection = 1/2" NPT			
	Process Connections -> 1/2" NPT	Process Connections -> 3/4" NPT	RF - Raised Face 150# 1.5"	150# 2"	300# 1.5"	300# 2"
50mm (2")	TY52T10N26L020	TY52T10N36L020	TY52T156A4L020	TY52T156A6L020	TY52T156A12L020	TY52T156A14L020
100mm (4")	TY52T10N26L050	TY52T10N36L050	TY52T156A4L050	TY52T156A6L050	TY52T156A12L050	TY52T156A14L050
150mm (6")	TY52T10N26L100	TY52T10N36L100	TY52T156A4L100	TY52T156A6L100	TY52T156A12L100	TY52T156A14L100
200mm (8")	TY52T10N260200	TY52T10N360200	TY52T156A4L200	TY52T156A6L200	TY52T156A12L200	TY52T156A14L200
300mm (12")	TY52T10N26L300	TY52T10N36L300	TY52T156A4L300	TY52T156A6L300	TY52T156A12L300	TY52T156A14L300
400mm (16")	TY52T10N26L400	TY52T10N36L400	TY52T156A4L400	TY52T156A6L400	TY52T156A12L400	TY52T156A14L400
500mm (18")	TY52T10N26L500	TY52T10N36L500	TY52T156A4L500	TY52T156A6L500	TY52T156A12L500	TY52T156A14L500

Note: Inside diameter (bore) fixed at 6.6mm + Outside diameter fixed at 10mm + Tip diameter fixed at 6.4mm (flanged) L= Insertion length includes instrument connection

Series Number (how to order) Please Note: Thermowell sold separately.

TY52 ENGINEERED PART NUMBERS		
OUTPUT	4…20 mA / 2-wire	1
	4…20 mA / 2-wire + HART	H
	1…5 V, 3-wire	2
	Modbus, 2-wire	R
SENSOR & ACCURACY	PT100, 0.5 % (standard)	2
ELECTRICAL CONNECTION	Water proof M20x1.5 F, PVC, IP66	C 1
	Flame proof 1/2" NPT F, SS, IP66 (standard)	C 2
	Flame proof M20x1.5 F, SS, IP66	C 3
EXTENSION TUBE	No Extension (standard)	E 1
	50mm length, 12mm diameter, 316SS	E 2
	100mm length, 12mm diameter, 316SS	E 3
	150mm length, 12mm diameter, 316SS	E 4
	200mm length, 12mm diameter, 316SS	E 5
	Other, specify E6 thru E9	E Z
PROCESS CONNECTION	1/2" NPT (M) (standard)	N 2
	G 1/2 (M)	G 2
	Flange DN 25	F 2
	Flange DN 50	F 5
PROCESS CONNECTION MATERIAL	304 SS (standard)	4
	316 SS	6
OUTSIDE DIAMETER	6mm (1/2"), material same as process connection (standard)	D 1
	8mm, material same as process connection	D 2
	10mm, material same as process connection	D 3
	12mm, material same as process connection	D 4
	16mm, material same as process connection	D 5
	Other, specify D6 thru DZ	D Z
Insertion Length, in MM	50 (2")	L 0 0 5 0
	100 (4")	L 0 1 0 0
	150 (6")	L 0 1 5 0
	200 (8")	L 0 2 0 0
	300 (12")	L 0 3 0 0
	400 (16")	L 0 4 0 0
	500 (18")	L 0 5 0 0
	Other, specify thru L9999	L # # # #
SPECIAL	Without LCD display	W D
	Moveable process connection	M C
	Other, specify Z1 thru Z99	Z # #

Thermowell

SERIES		
THERMOWELL TYPE	Threaded	T 1 0
	Flanged	T 1 5
	Other, Specify	X X X
MATERIAL OF CONSTRUCTION	304SS	4
	316SS	6
	Other, Specify	X X
INSTRUMENT CONNECTION	1/2" NPT (F)	F 2
	M20 x 1.5 (F)	M 2
	Other, Specify	X X
PROCESS CONNECTION (THREADED)	1/2" NPT (M)	N 2
	3/4" NPT (M)	N 3
	M20 x 1.5 (M)	G 2
	Other, Specify	X X
PROCESS CONNECTION (FLANGED, RF)	150# 1.0"	A 0 2
	150# 1.5"	A 0 4
	150# 2.0"	A 0 6
	150# 3.0"	A 0 8
	300# 1.0"	A 1 0
	300# 1.5"	A 1 2
	300# 2.0"	A 1 4
	300# 3.0"	A 1 6
	600# 1.0"	A 1 8
	600# 1.5"	A 2 0
	600# 2.0"	A 2 2
	600# 3.0"	A 2 4
	DN25	D 2 5
	DN40	D 4 0
	DN50	D 5 0
	DN80	D 8 0
		X X X
OUTSIDE DIAMETER (MM)	6mm	6
	8mm	8
	10mm	1 0
	12mm	1 2
	16mm	1 6
	18mm	1 8
	Other, Specify	X X X
INSERTION LENGTH (MM)	50mm (2")	L 0 2 0
	100mm (4")	L 0 5 0
	150mm (6")	L 1 0 0
	200mm (8")	L 2 0 0
	300mm (12")	L 3 0 0
	400mm (16")	L 4 0 0
	500mm (18")	L 5 0 0
	Other, Specify (mm)	L
SPECIAL (Includes instrument connection)	Customer Defined	Z # # #

Note: Inside diameter (bore) fixed at 6.6mm
Threaded type -> Tip diameter fixed at 6mm
Flanged type -> Tip diameter fixed at 6.4mm

Winters Approvals / Certifying Agencies

3A

The objective of the 3A Sanitary Standards Committee is to formulate standards and accepted practices for equipment and systems used to process milk and milk products. Such standards are developed through all levels of sanitarians, equipment manufacturers and equipment users so those standards are acceptable to those involved in the sanitary aspects of dairy and related industries. The 3A Symbol Administrative Council authorizes manufacturers to display the 3A symbol on processing equipment that is in compliance with 3A Sanitary Standards.

CSA

The Canadian Standards Association (CSA) includes Canadian consumers, manufacturers, labour, government, and other regulatory agencies among its actively participating influences. The various groups work together to generate standard requirements (CSA standards) that demonstrate product quality, enhance market acceptability and improve quality and safety control procedures in manufacturing and construction for the Canadian marketplace. The standards generated by CSA are the cornerstones for determining a product's eligibility for certification in hazardous locations in Canada. CSA also performs product evaluation, testing and ongoing inspection to these standards and also to American and European standards through new inter-laboratory agreements.

CE

Having a CE marking is a declaration that Winters' product conforms to a specific Directive adopted by the EEA (European Economic Area), and is a requirement if the product is to be sold into any of the countries in this 18 member group. CE is an abbreviation for the "Conformité Européenne", meaning European Conformance. Unlike dangerous location approvals, CE markings are granted to products that conform to Directives which were developed using IEC and Cenelec standards. The Directives that affect transmitters are the EMC (Electromagnetic Compatibility) and LVD (Low Voltage) Directives. These state that the products must meet specific electromagnetic emission and immunity, as well as electrostatic discharge standards.

CRN

A Canadian Registration Number (CRN) is a number issued by each province or territory of Canada to the design of a pressure vessel or fitting. The CRN identifies the design has been accepted and registered for use in that province or territory. The CRN is assigned to any pressure vessel or fitting built to a registered design.

FM

FM Approvals is an international leader in third-party testing and certification services. They test property loss prevention products and services—for use in commercial and industrial facilities—to verify they meet rigorous loss prevention standards of quality, technical integrity and performance. How? By employing a worldwide certification process that's backed by scientific research and testing, and over a century of experience.The FM APPROVED mark is recognized and respected worldwide. Their certification instills confidence and commands respect in the marketplace.

ISO 9001

Winters is an ISO 9001 registered corporation. ISO 9001 requires an organization to demonstrate its ability to consistently provide products that meet customer and regulatory requirements, and enhance customer satisfaction through effective application of the system, including processes for continual improvement of the system and the assurance of conformity.

NACE

The National Association of Corrosion Engineers recommends practices such as methods of selection, design, installation, maintenance or operation of material or systems where corrosion is a factor. Some recommended practices focus on details of construction of a corrosion control system, methods of treating the surface of materials to reduce corrosion, requirements for using devices to reduce corrosion, and procedures for increasing the effectiveness, safety and economic benefits of an installation or system.

UL/ULC

Underwriters Laboratories and Underwriters Laboratories of Canada maintain a high commitment to public safety and dedication to exceed customer expectations through continual improvement in the delivery of quality services. The organizations develop and publish standards, classifications and specifications for products having a bearing on fire, accident or property hazards. If a product carries the UL mark, it means that UL found the product meeting UL's safety requirements. These requirements are based primarily on UL's own published Standards for Safety.

NSF

Manufacturers, regulators and consumers look to NSF International for the development of public health standards and certification programs that help protect the world's food, water, consumer products and environment. Their mission is to protect and improve global human health. As an independent, accredited organization, NSF's standards group facilitates the development of standards, and their service groups test and certify products and systems. They also provide auditing and risk management solutions for public health and the environment. Founded in 1944 as the National Sanitation Foundation, they changed their name to NSF International in 1990 as they expanded their services beyond sanitation and into global markets.

RoHS

The Restriction of Hazardous Substances Directive restricts the use of six hazardous materials in the manufacturing of electronic and electrical equipment. These materials are: lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls and polybrominated diphenyl ether. Bring "RoHS compliant" is commonly interpreted as bring "lead-free", or having under 0.1% of lead in the material.

SIL

This SIL Verification of Compliance has been issued on a voluntary basis. ECM confirms that a Test Report is existent for the above listed product(s) and found to meet the requirements of above standards for application in safety related system up to Safety Level of SIL 2. The unit must be properly designed into a Safety Instrument Function as per the requirements in the Safety Manual. The Verification Mark shown above can be affixed on the product. It is NOT permitted to alter the Verification Mark in any way. In addition the Verification's Holder is NOT allowed to transfer the Verification to third parties. This certificate can be checked for validity at www.entecerma.it.

ASME

ASME (American Society of Mechanical Engineers) is the leading international developer of codes and standards, hereafter referred to as standards, associated with the art, science, and practice of mechanical engineering. ASME is the globally recognized, trusted source of consensus standards since 1884. Many of Winters products adhere to the standards set out by ASME, for examples, mechanical Pressure Gauges comply to ASME standard B40.100. Here is the link to ASME's website: https://www.asme.org/codes-standards/about-standards

USA Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) was established to protect the quality of drinking water in the U.S. This law focuses on all waters actually or potentially designed for drinking use, whether from above ground or underground sources. The Act authorizes EPA to establish minimum standards to protect tap water and requires all owners or operators of public water systems to comply with these primary (health-related) standards. Additional information on the Code and the EPA is available here: https://www.epa.gov/laws-regulations/summary-safe-drinking-water-act

REACH

The Regulation on the registration, evaluation, authorisation and restriction of chemicals (REACH) is the main EU law to protect human health and the environment from the risks that can be posed by chemicals. This is done by better and earlier identification of the intrinsic properties of chemical substances and by taking measures, such as phasing out or restricting substances of very high concern. REACH also aims to enhance innovation and the competitiveness of the EU chemicals industry. For more information regarding REACH, follow this link: https://environment.ec.europa.eu/topics/chemicals/reach-regulation_en

INTERTEK

Intertek laboratory services test products and materials across industries, markets and locations. Intertek providing clients across the world with quality control, research, testing, measurement, and certification activities for industry, commerce, markets, institutions, and governments. The Intertek company website is located here: https://www.intertek.com/

Ingress Protection (IP) Ratings

The **IP** Code indicates the **degree of protection** provided by enclosures for electrical equipment (i.e. IP65 = No dust entry and protected against low pressure jet of water).

The first numeral indicates protection of persons against access to dangerous parts and protection of internal equipment against the ingress of solid foreign objects.

X	Protection unspecified (untested)
0	No special protection provided
1	Protection of hand against accidental access to dangerous parts, and protection of equipment against objects larger than 50mm
2	Protection of fingers against access to dangerous parts, and protection of equipment against objects larger than 12mm
3	Protection against objects larger than 2.5mm (e.g. tools, wires)
4	Protection against objects larger than 1mm (e.g. line tools, wires)
5	Protection against entry of dust in sufficient quantity to interfere with satisfactory operation of equipment
6	Complete protection against entry of dust

The second numeral indicates protection of internal equipment against harmful ingress of water.

X	Protection unspecified (untested)
0	No special protection provided
1	Protection against drops of water falling vertically
2	Protection against drops of water falling vertically when the object is tilted by up to 15 degrees from its normal position (in any direction)
3	Protection against spraying water at up to 60 degrees from the vertical
4	Protection against splashing and spraying water from all practicable directions
5	Protection against a low pressure jet of water from all practicable directions
6	Protection against heavy seas or a strong jet of water from all practicable directions
6D	Protection against driving rain at angles down to horizontal
7	Protection against immersion
8	Protection against submersion (tests subject to agreement, but no less severe than numeral 7)

Pressure Switch Reference

Hazardous Location Definitions

Class I	Locations in which flammable gases or vapours are or may be present in the air in quantities sufficient to produce explosive or ignitable mixtures.
Class II	Locations which are hazardous because of the presence of combustible dust.
Class III	Locations which are hazardous because of the presence of easily ignitable fibers or flyings, but in which such fibers or flyings are not likely to be suspended in air in quantities sufficient to produce ignitable mixtures.
Division 1	Locations in which hazardous concentrations in the air exist continuously, intermittently, or periodically under normal operating conditions.
Division 2	Locations in which hazardous materials are handled, processed, or used, but where such materials are normally within closed containers or closed systems from which they can escape only in case of accidental rupture or breakdown.
Group A	Atmospheres containing acetylene.
Group B	Atmospheres containing hydrogen, or gases or vapours of equivalent hazard, such as manufactured gas.
Group C	Atmospheres containing ethyl-ether vapours, ethylene, or cyclo-propane.
Group D	Atmospheres containing gasoline, hexane, naphtha, benzine, butane, propane, alcohol, benzol, lacquer solvent vapours, or natural gas.
Group E	Atmospheres containing metal dust, including aluminum, magnesium and their commercial alloys and other metals of similar hazardous characteristics.
Group F	Atmospheres containing carbon black, coal or coke dust.
Group G	Atmospheres containing flour, starch or grain dust.

Hazardous Location Definitions - International

The International Electrotechnical Commission (IEC) classifies hazardous locations by Zone and Group. Zone is similar to the term “Division” in that it defines the likelihood of hazard:

Zone 0	An area in which an explosive gas/air mixture is constantly present or present for long periods of time.
Zone 1	An area in which an explosive gas/air mixture is likely to occur during normal operation (Similar to Division 1).
Zone 2	An area in which an explosive/air mixture is not likely to occur but if so, only for short periods of time (Similar to Division 2).

NEMA Enclosure Ratings

Certain Winters products (i.e. pressure transmitters and pressure switches) can be classified per the National Electrical Manufacturer's Association Enclosure (NEMA) classifications. NEMA is a non-profit trade organization composed of manufacturers of electrical power apparatus. NEMA created voluntary standards for electrical enclosures. These classifications describe the environment in which the product can be used due to the protection the enclosure provides. ("Enclosure" includes electrical and mechanical connections and external adjustments). Among others, NEMA classifies enclosures based on the effects of external icing, corrosion and rusting, or contamination from oil and coolants.

Pressure switches, transmitters and other electronic products may also be classified according to the voluntary standards set by NEMA for electrical enclosures.

Type	Seal	Indoor/Outdoor	Description
1	General Purpose	Indoor	Protection against ingress of solid foreign objects (falling dirt)
2	Drip-proof	Indoor	Protection against ingress of solid foreign objects (falling dirt); and protection against ingress of water (dripping and light splashing)
3	Dust-tight/rain-tight	Outdoor	Protection against ingress of solid foreign objects (falling dirt and windblown dust); protection against ingress of water (rain, sleet, snow); and that will be undamaged by the external formation of ice on the enclosure
3R	Dust-tight/rain-tight	Outdoor	Protection against ingress of solid foreign objects (falling dirt); protection against ingress of water (rain, sleet, snow); and that will be undamaged by the external formation of ice on the enclosure
4	Water-tight/dust-tight	Indoor/Outdoor	Protection against ingress of solid foreign objects (falling dirt and windblown dust); protection against ingress of water (rain, sleet, snow, splashing water, and hose directed water); and that will be undamaged by the external formation of ice on the enclosure
4X	Water-tight/dust-tight	Indoor/Outdoor	Protection against ingress of solid foreign objects (windblown dust); protection against the ingress of water (rain, sleet, snow, splashing water, and hose directed water); protection against corrosion; and that will be undamaged by the external formation of ice on the enclosure
5	Dust-tight	Indoor	Protection against ingress of solid foreign objects (falling dirt and settling airborne dust, lint, fibers, and flyings); protection against ingress of water (dripping and light splashing)
6	Water-tight/dust-tight	Indoor/Outdoor	Protection against ingress of solid foreign objects (falling dirt); protection against ingress of water (hose directed water and the entry of water during occasional temporary submersion at a limited depth); and that will be undamaged by the external formation of ice on the enclosure
6P	Water-tight/dust-tight	Indoor/Outdoor	Protection against ingress of solid foreign objects (falling dirt); protection against ingress of water (hose directed water and the entry of water during prolonged submersion at a limited depth); that provides an additional level of protection against corrosion and that will be undamaged by the external formation of ice on the enclosure
7	Explosion proof/Class I Groups A, B, C, D	Indoor Hazardous	Enclosures constructed for indoor use in hazardous (classified) locations classified as Class I, Division 1, Groups A, B, C, or D as defined in NFPA 70
8	Explosion proof/Class I	Indoor/Outdoor	Enclosures constructed for either indoor or outdoor use in hazardous (classified) locations classified as Class I, Division 1, Groups A, B, C, and D as defined in NFPA 70
9	Explosion Proof/Class II Groups E or G	Indoor Hazardous	Enclosures constructed for indoor use in hazardous (classified) locations classified as Class II, Division 1, Groups E, F, or G as defined in NFPA 70
11	Oil-tight/Corrosion	Indoor	Protection from corrosive effects of gases and liquid dripping, seepage and external condensation or corrosive, oil immersion
12	Oil-tight/Dust-tight	Indoor	Protection against ingress of solid foreign objects (falling dirt and circulating dust, lint, fibers, and flyings); protection against ingress of water (dripping and light splashing)
13	Oil-tight/Dust-tight	Indoor	Protection against ingress of solid foreign objects (falling dirt and circulating dust, lint, fibers, and flyings); protection against ingress of water (dripping and light splashing); protection against the spraying, splashing, and seepage of oil and non-corrosive coolants

CRN (Canadian Registration Number)

The Canadian Registration Number (CRN) is a number issued by each province/territory in Canada to the design of boilers, pressure vessels or fittings. Industrial instrumentation such as pressure gauges, thermometers and related accessories all fall under this jurisdiction. The CRN identifies that the design has been accepted and registered for use in that province/territory. Please refer to the individual product pages to see if a series is CRN registered.

Prov.	Pressure Gauges	Diaphragm Seals	Thermowells	Mini Ball Valves	Needle Valves	Multiport and Block & Bleed Valves	Cooling Towers, Syphons, Snubbers and Test Plugs	WinSMART™/ Transmitters/ Switches	Over-pressure Protector
ON	0F6751.5R8	0F6751.5R8 0F24177.5**	0F6751.5R80	C6751.5R40	C18567.50	C19638.50	F6751.5R8	0F24008.5 0F17528.5 0F20906.5ADD1*	0F11487.5R1
QC	0F6751.56R8	0F6751.56R8 0F24177.56**	0F6751.56R80	C6751.56R40	C18567.56	0C19638.56	0F6751.56R8	0F17528.56 0F20906.56ADD1*	0F11487.56R1
BC	0F6751.51R8	0F6751.51R8 0F24177.51**	0F6751.51R8	0C6751.51R40	C18567.51	0C019638.51	0F6751.51R8	0F17528.51 0F20906.51*	0F11487.51R1
AB	0F06751.52R8	0F06751.52R8 0F24177.52	0F06751.52R80	C06751.52R40	C18567.52	0C19638.52	0F06751.52R8	0F17528.52 0F209056.52*	0F11487.52R1
MB	0F6751.54R80	F6751.54R80	F6751.54R80	C6751.54R40	C18567.54	Exempt	0F6751.54R8	0F17528.54 0F20906.54*	0F11487.54R1
SK	0F6751.53R8	0F6751.53R8 0F24177.53	0F6751.53R80	C6751.53R40	C18567.53	0C19638.56	0F6751.53R8	0F17528.56 0F20906.56ADD1*	0F11487.56R1
NB	0F6751.57R8	0F6751.57R8 0F24177.5	0F6751.57R80	C6751.57REV4	0C18567.57	0C19638.57	0F6751.57R8	0F17528.57 0F20906.57ADD1*	0F11487.57R1
NS	0F6751.58R8	0F6751.58R8 0F24177.5	0F6751.58R80	C6751.58R40	C18567.58	0C19638.58	0F6751.58R8	0F17528.58 0F20906.58ADD1*	0F11487.58R1
PE	0F6751.59R8	0F6751.59R8 0F24177.5	0F6751.59R80	C6751.59REV4	0C18567.59	0C19638.59	0F6751.59R8	0F17528.59 0F20906.59ADD1*	0F11487.59R1
NL	0F6751.50R8	0F6751.50R8 0F24177.5	0F6751.50R80	C6751.50REV4	0C18567.59	0C19638.50	0F6751.50R8	0F17528.50 0F20906.50ADD1*	0F11487.50R1
YT	0F6751.5YR8	0F6751.5YR8 0F24177.5	0F6751.5YR8	0C6751.5YREV4	0C18567.5Y	0C19638.5Y	0F6751.5YR8	0F17528.5Y 0F20906.5YADD1*	0F11487.5YR1
NT	0F6751.5TR8	0F6751.5TR8 0F24177.5	0F6751.5TR80	C6751.5TREV4	0C18567.5T	0C19638.5T	0F6751.5TR8	0F17528.5T 0F20906.5TADD1*	0F11487.5TR1
NU	0F6751.5NR8	0F6751.5NR8 0F24177.5	0F6751.5NR8	0C6751.5NREV4	0C18567.5N	0C19638.5N	0F6751.5NR8	0F17528.5N 0F20906.5NADD1*	0F11487.5NR1

*9WPS Only **D44 Only

OTHER APPROVALS/STANDARDS THAT WINTERS ADHERES TO

ASME B40.1
CAN. DEPT. OF DEFENSE
FCI
NATO
U.S. SDWA
U.S. NAVY
U.S. DEPT. OF DEFENSE
U.S. COAST GUARD

Notes

Pressure Conversion Table

Dial Scale	psi	kPa	kg/cm^2	cm of H_2O	feet of H_2O	inches of Hg	mm of Hg	inches of H_2O	ounces per square inch	atmosphere	bar	mbar	MPa
psi	1	6.894757	0.070306958	70.306927	2.306723	2.03602	51.71486	27.68068	16	0.0680460	0.06894757	68.9476	0.00689
kPa	0.1450377	1	0.01019716	10.19745	0.3345618	0.29522997	7.500610	4.01472	2.320603	0.009669235	0.01	10	0.001
kg/cm^2	14.223343	98.06694	1	1000.026	32.809312	28.95901	735.5588	393.711806	227.57349	0.967841596	0.98066494	980	0.09806
cm of H_2O	0.0142229	0.0980634	0.00099997	1	0.032808	0.0289581	0.7355372	0.3937	0.227566	0.000967814	0.000980634	0.9806	0.000098
feet of H_2O	0.433515	2.968961	0.03047912	30.480	1	0.882646	22.4192	12	6.93624	0.02949896	0.02968961	29.689	0.00298
inches of Hg	0.4911542	3.386389	0.0345316	34.53253	1.132957	1	25.4	13.595484	7.85847	0.0334211	0.03386389	33.8639	0.00386
mm of Hg	0.0193368	0.1333225	0.00135951	1.359554	0.0446046	0.039370079	1	0.535255	0.3093888	0.0013157895	0.001333225	1.33322	0.00013
inches of H_2O	0.03612628	0.2490819	0.00254219	2.54	0.08333	0.0735539	1.8682683	1	0.578020	0.00245825	0.002490819	2.49089	0.000249
ounces per square inch	0.0625	0.4309223	0.004394308	4.394308	0.14417	0.12725125	3.23218	1.73004	1	0.004252875	0.004309223	4.309	0.0004309
atmosphere	14.6960	101.32535	1.033231	1033.2633	33.8995	29.9213	760	406.794	235.136	1	1.0132535	1013.25	0.1013
bar	14.5038	100	1.019716	1019.7466	33.4833	29.5300	750.0626	401.8596	232.0608	0.986923	1	1000	0.1
mbar	0.0145	0.1	0.001019	1.019	0.03456	0.02953	0.75006	0.40146	0.23206	0.00099	0.001	1	0.0001
MPa	145	1000	10.197	10197.45	334.56	295.299	7500.61	4014.74	2320.603	9.669	10	10000	1

How to use Winters' conversion table:

1. Find the COLUMN with the unit of measure you want to convert from and move down that COLUMN until you find the number "1"
2. Move horizontally within the same ROW to find the Conversion Factor
3. Multiply the Conversion Factor (number in the box) by the amount you are changing from to get the pressure in the scale you are seeking (e.g. 50 bar to be converted to psi scale: 1 bar equals to 14.5038 psi (Conversion Factor), so 50 bar equals to 725.19 psi)

Use Winters' Converter online: www.winters.com/converter.htm

WINTERS Instruments

WINTERS INSTRUMENTS

MANUFACTURER OF INDUSTRIAL INSTRUMENTATION

Winters Instruments is a global manufacturer of premium quality pressure and temperature instrumentation, with distribution partners in over 90 countries. Please contact us for your nearest Regional Manager.

Corporate - Canada
Winters Instruments
121 Railside Road
Toronto, Ontario
M3A 1B2
Tel: 416-444-2345
1-800-WINTERS
sales@winters.com

Canada - Edmonton
Winters Instruments
7503 Girard Road, #100
Edmonton, Alberta
T6B 2H2
Tel: 482-947-1124
1-800-WINTERS
sales@winters.com

USA - Houston
Winters Instruments
5400 W. Sam Houston Pkwy N.
Houston, Texas
77041
Tel: 281-880-8607
1-800-WINTERS
usasales@winters.com

Europe - Middle East - Africa
Winters Instruments
Dubai Airport Free Zone
6WB G50
Dubai, United Arab Emirates
Tel: 971-4295-9177
emeasales@winters.com

Asia - Shanghai
Winters Instruments
Room 203, Building 8,
No. 471, Guiping Road
Shanghai
200233
China
Tel: 86-21-6104-2610
asiasales@winters.com
www.wintersasia.com

Latin America
Winters Instruments
Lamadrid 121
Los Troncos del Talar,
B1608CEC
Buenos Aires, Argentina
Tel: 54-11-4715-3036
latinsales@winters.com
www.winters.com.ar

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