

Mid-West[®] Instrument



“Diaphragm Type” Model 522 Differential Pressure Gauge & Switch



Range: 0-5 PSID to 0-50 PSID

Available Dial Scales: PSID and Dual Scale PSID/kPa or PSID/bar



Model 522 Diaphragm Type DP Gauge provides outstanding capabilities in a modestly priced differential pressure gauge/switch.

Suited for use on dissimilar fluids, wet gas and process fluids with particulates present.

Common Applications: Filter/Strainer Monitoring, Compressed Air, Hydraulic, Refrigerant, Pump Performance Testing, Heat Exchanger Pressure Drop Monitoring, Water Treatment Applications.

Gauge Features:

- Aluminum, 316 / 316L S.S. or Acetal Gauge Body.
- Wetted Parts: 316 SS, Ceramic, & Acetal components
- Seal & Diaphragm Material: Buna-N or Viton
- Safe Working Pressure: 1000 PSIG
- ¼" FNPT Process Connections (End Connected)
- Weather-resistant construction standard.
- 2-1/2" or 4-1/2" Black on White Dial (Dial Color Breaks Optional)
- Shatter Resistant Acrylic Lens
- **Optional:** (2)10-32 mounting holes on back of gauge body 1.75" apart x .330" Depth
- Accuracy $\pm 5\%$ Full Scale (ascending)



Shown with special option color dial

NOTE: Reverse pressure should be avoided.

Switch Option:

- Hermetically Sealed Switch
 - (1) DIN 43650/IP65-PG9 NEMA 4X Plug-in Connector Switch**
Compression plug accepts 4.5 to 7mm cable
 - “LA” = Output: SPDT, 3W, 0.25 Amp, 125 VAC/VDC
Switch Adjustable from 25%-70% of Full Scale Range
 - “LE” = Output: SPST, 60W, 3 Amp, 240 VAC/VDC, Normally Open
Switch Adjustable from 40%-95% of Full Scale Range
 - CE and ROHS Marked for conformance with the Low Voltage Directive(73/23/EEC)
- **Product of the switching voltage & current shall not exceed 60W



DIN
Connector Shown

Operation: Differential pressure is sensed by flexible elastomer diaphragm and a calibrated spring. A magnetic coupling transmits the sensing element motion to an indicating pointer. This prohibits the possibility of fluid leaking into the gauge case, while assuring total isolation of the process fluid within the pressure capsule. The diaphragm assures total separation between high and low pressure signals.

Temperature Limits: -40 °F (-40° C) to 200°F (93°C). These limits are based on the entire instrument being saturated to these temperatures. System (process) temperatures may exceed these limitations with proper installation. Contact our customer service representative for details.

Standards: All Model 522 Series differential pressure gauges either conform to and/or are designed to the requirements of the following standards: ASME B1.20.1, ASME B40.100 GRADE B, NEMA Std. 250, EN-61010-1 UL Std. No. 50 & 508, CSA-C22.2 No. 14

**The use of diaphragm seals is not recommended.
Attempts to install such seals on this gauge will void the warranty**

Mid-West[®] Instrument

"LA" Switch Set Point		"LE" Switch Set Point		DIAL RANGE	
Min Set Pt.	Max Set PT.	Min Set Pt.	Max Set PT.	PSID	DUAL SCALE
1.25 PSID	3.75 PSID	2 PSID	4.75 PSID	0-5 PSID	0-5 PSID & 0-0.35 bar
2.50 PSID	7.50 PSID	4 PSID	9.50 PSID	0-10 PSID	0-5 PSID & 0-35 kPa
3.75 PSID	11.25 PSID	6 PSID	14.25 PSID	0-15 PSID	0-10 PSID & 0-0.7 bar
5.00 PSID	15.00 PSID	8 PSID	19.00 PSID	0-20 PSID	0-10 PSID & 0-70 kPa
6.25 PSID	18.75 PSID	10 PSID	23.75 PSID	0-25 PSID	0-15 PSID & 0-1 bar
7.50 PSID	22.50 PSID	12 PSID	28.50 P:SID	0-30 PSID	0-15 PSID & 0-100 kPa
10.00 PSID	30.00 PSID	16 PSID	38.00 PSID	0-40 PSID	0-20 PSID & 0-1.4 bar
12.50 PSID	37.50 PSID	20 PSID	47.50 PSID	0-50 PSID	0-20 PSID & 0-140 kPa
					0-25 PSID & 0-1.75 bar
					0-25 PSID & 0-175 kPa
					0-30 PSID & 0-2 bar
					0-30 PSID & 0-200 kPa
					0-40 PSID & 0-2.75 bar
					0-40 PSID & 0-275 kPa
					0-50 PSID & 0-3.5 bar
					0-50 PSID & 0-350kPa

The above mentioned ranges are some of the most popular requested today. Mid-West Instrument can provide special un-cataloged dial range requirements. Multiple scale dials, multiple color dials and special decals are available upon request. Please consult factory for complete information.

Model	Min. ΔP Range	Max. ΔP Range
522	0-5 PSID (0-0.35 bar)	0-50 PSID (0-3.5 bar)

Working Pressure: 1000 PSI (69 bar)

Proof Pressure: 2000 PSI (138 bar)

Max Differential Pressure (Hi to Low) 200 PSID (13.8 bar)

Temperature Limits: -40°F (-40°C) to +200°F (+93°C) - These limits are based on the entire instrument being saturated to these temperatures. System (process) temperatures may exceed these limitations with proper installation. Contact our customer service representative for details.

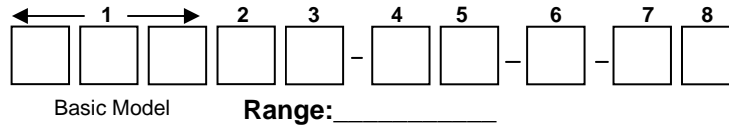
Standards: Model 522 Series gauge either conforms to and/or is designed to the requirements of the following standards:

ASME B1.20.1	ASME B40.100
NEMA Std. No. 250	CSA-C22.2 No. 14
EN-61010-1	UL Std. No. 50, 508

Standard Model Number Sequence: 522AA-02-00

1000 PSIG Working Pressure, Aluminum body, 316L Stainless Steel, Ceramic Magnets & Acetal Internal Parts,
Buna-N Diaphragm and Seals, 1/4" FNPT End Connections
2-1/2" Round Dial w/Engineered Plastic Dial Case with Shatter Resistant Acrylic Lens
Accuracy ±5% Full Scale (Ascending)

Range 0-5 PSID to 0-50 PSID (0-0.35 bar to 0-3.5 bar)



2	Material
A	Aluminum Body / 316 Stainless Steel, Ceramic & Acetal Internal Parts
p	Acetal (Plastic) Body / 316 Stainless Steel, Ceramic & Acetal Internal Parts
S	316 Stainless Steel Body / 316 Stainless Steel, Ceramic & Acetal Internal Parts
3	Dial Size & Type
A	2-1/2" Round, Black on White Dial w/Engineered Plastic Dial Case <i>(Standard)</i>
C	4-1/2" Round, Black on White Dial w/Engineered Plastic Dial Case
T	Non-Indicating DP Switch Only
4	Seal Materials
0	Buna-N <i>(Standard)</i>
1	Viton®-A Registered Trademark of Dupont
5	Process Connections
2	1/4" FNPT End Connections
6	Options
O	None
E	(2) 10-32 Mounting Holes, Spaced 1.75" apart x .330" Deep
K	1/2" FNPT Stainless Steel Adapters
Q	CRN (Canadian Registration Number) <i>(1) Aluminum & Stainless steel Bodies Only.</i>
<i>(1) 1,000 PSIG SWP for Aluminum & Stainless Steel Bodies</i>	
7	Electrical Configuration
O	None
L	(1) Switch in standard enclosure with plug-in connector (DIN43650/IP65-PG9)NEMA 4X
8	Electrical Specification
A	SPDT, 3W, .025 Amp, 125 VAC/VDC <i>Switch Adjustable from 25%-75% of Full Scale Range</i>
E	SPST, 60W, 3.0 Amp, 240 VAC/VDC <i>(Normally Open) Switch Adjustable from 40%-95% of Full Scale Range</i>

Factory Preset of switch available at no charge (Specify switch setting on the order)

Mid-West understands that in today's demanding environment, flexibility, quick response time and the ability to ship most of our product line in 2 weeks or less is essential to our customers. If you are in need of additional information visit our web site at www.midwestinstrument.com or contact us toll free at **1-800-648-5778** and one of our knowledgeable sales coordinators will be happy to assist you.

6500 Dobry Dr. • Sterling Heights, MI USA • Toll Free: 800-648-5778 • Ph 586-254-6500 • Fax 586-254-6509
Web Site: www.midwestinstrument.com • Email Contact: sales@midwestinstrument.com