

# Mid-West<sup>®</sup> Instrument



## “Diaphragm Type”

### Differential Pressure Gauge & Switch

## Model 130



Shown here with  
Range 0-5" H<sub>2</sub>O

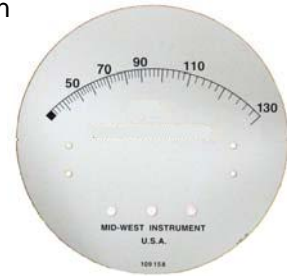
The low range capability of the **Model 130** is ideally suited for flow, liquid level and vacuum applications. Magnetic coupling between the sensing element and the indicating pointer provides for complete isolation of the process fluid within the pressure capsule. The few internal metal parts are 316 Stainless Steel.

#### Model 130:

- Housing materials: Glass-Reinforced Engineered Plastic, Aluminum, Brass or 316 Stainless Steel
- Accuracy: 0-5" thru 0-9.9" H<sub>2</sub>O ±5% Full Scale Ascending  
0-10" thru 0-400" H<sub>2</sub>O ±2% Full Scale Ascending
- Weather-resistant construction standard.
- Use on virtually all reasonably clean liquids or gases.
- Over-range protection to full rated working pressure.
- Diaphragm design allows use of dissimilar fluids on high and low side of gauge.
- Can be used with vacuum or pressure applications
- Shatter resistant lens.
- 4-1/2" (114 mm) Engineered Plastic dial standard.
- 1/4" NPT-F or 1/2" NPT-F Process Connections
- DP Ranges available in: Inches H<sub>2</sub>O, PSI, mbar, and KPa
- Available with Square Root dials for flow measurement

**Model 130** is a rugged general purpose differential pressure gauge with a 4-1/2" round dial.

**Common Applications:** Tank Level Monitoring Horizontal or Vertical Flow, Liquid Level, Indication/Balancing, Filter Monitoring for Gases, Water Treatment Applications and Vacuum Application



**0-130 M3/H**  
Flow Gauge Scale

Shown with  
Engineered Plastic Body



Shown with  
S.S. Cast Body

Model	Accuracy	Min. ΔP Range	Max. ΔP Range	MWP PSIG (bar)	Optional Switches
130	±2% or ±5%	0-5" H <sub>2</sub> O (0-12.4 mbar)	0-400" H <sub>2</sub> O (0-1000 mbar)	*300 (20) **500 (34)	1 & 2 Switches Hermetically Sealed

\*Glass-Reinforced Engineered Plastic \*\*Aluminum, Brass and Stainless Steel  
**Switches available on Aluminum, Brass & 316 S.S. bodies only.**

# “Diaphragm Type” Differential Pressure Gauge Switch Options Model 130



Model 130 in Explosion Proof (left) and NEMA 4X (right) enclosures

Shown w/Aluminum Body & (1) Reed Switch in Condulet enclosure

Model 130 is available in Aluminum, Brass and 316SS bodies only with one or two hermetically sealed reed switches for low and/or high limit alarm. These CSA listed switches are Single Pole Double Throw (SPDT) with adjustable set points. Switches can be set to activate/deactivate on rising or falling pressure. Switches are enclosed in a weather resistant housing. Switch setting is readily made with a screw adjustment.

CSA listed control switching is available in non-corrosive molded plastic enclosures. These are oil tight, dust tight and watertight per NEMA Type 4X standards.

CSA listed control switching is available in an explosion-proof enclosure which complies with NEC Class I, Groups C and D; Class II Groups E, F, and G; NEMA 7 and 9 standards. These are machined cast-aluminum enclosures with 1/2" FNPT conduit connection and 24" wire leads.



Shown w/Aluminum Body & (1) Reed Switch with Condulet enclosure and Plug-In Connector (Din 46350-PG 11)

Model Type	130 SPDT
Power	3 W
Max Current	0.25 Amps
Max Voltage VAC/VDC	125 VAC/VDC
Setting Full Scale	10-90%
Hysteresis (Max / Norm)	10% / 5% (FS)
Repeatability	1% F.S.
Connections	(3) 24" Leads 22 AWG



Shown in NEMA 4X Plastic enclosures

**Factory preset switch at no extra charge (Specify Setting)  
Specify increasing or decreasing range to be set.**

**Proof Pressure:** Two times rated working pressure at ambient temperature

**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 130 gauge either conforms to and/or is designed to the requirements of the following standards:

- |                            |                             |
|----------------------------|-----------------------------|
| ASME B1.20.1               | NACE MR0175                 |
| ASME B40.100               | NEMA Std. No. 250           |
| CSA-C22.2 No. 14.25 and 30 | SAE J514                    |
| EN-61010-1                 | UL Std. No. 50,508 and 1203 |

# Mid-West<sup>®</sup> Instrument

## Standard Dial Ranges: Model 130

Range Type				
IN H <sub>2</sub> O	PSID	KPa	mbar	Flow Scales
0-5"	0-5	0-1.6	0-16	0-1.0
0-10"	0-10	0-2.5	0-25	0-1.25
0-15"	0-15	0-4.0	0-40	0-1.5
0-20"		0-6.0	0-60	0-1.75
0-25"		0-10	0-100	0-2.0
0-30"		0-16	0-160	0-2.5
0-40"		0-25	0-250	0-3.0
0-50"		0-40	0-400	0-3.5
0-60"		0-60	0-600	0-4.0
0-75"		0-100	0-1000	0-4.5
0-100"				0-5.0
0-135"				0-5.5
0-150"				0-6.0
0-200"				0-6.5
0-300"				0-7.0
0-400"				0-7.5
				0-8.0
				0-8.5
				0-9.0
				0-9.5
				0-10

Available Multipliers for Flow Dials: X10, X100, X1000, and X10,000

Note: Not all ranges available in all diaphragm materials

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

Model	Min. ΔP Range	Max. ΔP Range
130	0-5" H <sub>2</sub> O (0-12.4 mbar)	0-400" H <sub>2</sub> O (0-1 bar)

**Proof Pressure:** Two times rated working pressure at ambient temperature

**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.

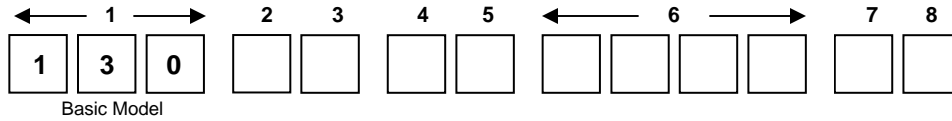
**Standards:** Model gauge either conforms to and/or is designed to the requirements of the following standards:

ASME B1.20.1	NACE MR0175
ASME B40.100	NEMA Std. No. 250
CSA-C22.2 No. 14.25 and 30	SAE J514
EN-61010-1	UL Std. No. 50,508 and 1203

### Standard Model Specifications: 130-PC-00-00

Glass-Reinforced Engineered Plastic Body, 316 Stainless Steel Internal Metal Parts  
 Ceramic Magnet, Buna-N Diaphragm and Seals, 1/4" Steel Compression Tube Fittings,  
 4-1/2" round dial, Engineered Plastic Case with Shatter Resistant Acrylic Lens,  
 (Aluminum, Brass & Stainless Steel Bodies-Dual 1/4" FNPT Top & Bottom)  
 Accuracy ±5% Full Scale (Ascending) 0-5" H<sub>2</sub>O to 0-9.9" H<sub>2</sub>O or equivalent  
 Accuracy ±3/2/3% Full Scale (Ascending) 0-10" H<sub>2</sub>O to 0-400" H<sub>2</sub>O or equivalent

**Range from 0-5" H<sub>2</sub>O to 0-400" H<sub>2</sub>O (0 - 12.4 mbar up to 0 - 1000 mbar)**



Range: \_\_\_\_\_



2	Material
P	Glass-Reinforced Egrd. Plastic Body / 316 Stainless Steel Internal Metal Parts <b>(not available with switches)</b>
A	Aluminum Body / 316 Stainless Steel Internal Metal Parts
B	Brass Body / 316 Stainless Steel Internal Metal Parts
S	316 Stainless Steel Body / 316 Stainless Steel Internal Metal Parts
Z	Special <b>(Un-coded Options)</b>
3	Dial Size & Type
C	4-1/2" Round Uni-Directional Dial w/Engineered Plastic Housing Assembly
E	3-1/2" Round Uni-Directional Dial w/Anodized Aluminum Housing Dial Case
G	4-1/2" Round Uni-Directional Dial w/Anodized Aluminum Housing Dial Case
T	Non-Indicating DP Switch Only
Z	Special <b>(Un-coded Options)</b>
4	Seal Materials
0	Buna-N
1	Viton ®-A Registered Trademark of Dupont <b>(0-20" H<sub>2</sub>O to 0-400" H<sub>2</sub>O)</b>
2	Silicone <b>(0-5" H<sub>2</sub>O to 0-100" H<sub>2</sub>O)</b>
4	Neoprene <b>(0-5" H<sub>2</sub>O to 0-100" H<sub>2</sub>O)</b>
5	Ethylene Propylene <b>(0-20" H<sub>2</sub>O to 0-400" H<sub>2</sub>O)</b>
9	Special <b>(Un-coded Options)</b>
5	Process Connections
0	1/4" (2) (Carbon Steel Compression Tube Fittings Standard on "P" Gauge Body) 1/4" FNPT (4) <b>(Standard on A, B, &amp; S. Gauge Bodies)</b>
1	1/4" (2) 316 Stainless Steel compression tube fittings
2	1/4" FNPT Brass Adapters <b>(Model P only)</b>
3	1/4" FNPT (2) Stainless Steel Adapters <b>(Model P only)</b>
9	Special <b>(Un-coded Options)</b>

Factory preset switches at no charge (Specify Setting)

## Standard Model Specifications – continued Model 130

6	Additional Options
O	NONE
B	Drain & Bleed Plugs, 316 S.S. (2) <b>(Model 130 P only)</b>
D	Drain & Bleed in NEMA 4X enclosure
F	Carbon Steel 2" Pipe Mounting Kit
G	Stainless Steel 2" Pipe Mounting Kit
H	Hastelloy C Internal wetted Metal parts & fittings. <b>(Poly body only)</b>
K	1/2" FNPT S.S. Adapter (2) <b>(Available on "A", "B", &amp; "S" Gauge Body)</b>
M	Maximum Indicator Follower Pointer
N	NACE <b>(Contact Factory)</b>
Q	CRN (Candian Registration Number) <b>(available on Poly and S.S. gauge bodies only)</b>
S	Shatter Proof Glass Lens <b>(Available with 4-1/2" Aluminum Dial Case only)</b>
T	Oxygen Cleaning
U	Stainless Steel Tag with S.S. Wire
V	Stainless Steel Tag and S.S. Screw
W	Wall Mount Kit (Not available with switches)
Z	Special <b>(Un-coded Options)</b>
<b>NOTE: Not All Options Available in Combination with other Options</b>	
7	Electrical Configurations (CE marked, except N & P) Switch option not available for 130-PC Models
H	One (1) Reed Switch with Condulet Enclosure
I	Two (1) Reed Switches with Condulet Enclosure
J	One (1) Reed Switch with Condulet Enclosure with Plug-in connector (DIN 43650/IP65-PG11)
K	Two (1) Reed Switches with Condulet Enclosure with Plug-in connector (DIN 43650/IP65-PG11)
L	One (1) Switch in NEMA 4X Plastic Enclosure
M	Two (2) Switches in NEMA 4X Plastic Enclosure
N	One (1) Switch in explosion proof enclosure with glass window cover. CSA & UL Listed <b>(1)</b>
P	Two (2) Switches in explosion proof enclosure with glass window cover. CSA & UL Listed <b>(1)</b>
Z	Special <b>(Un-coded Options)</b>
<b>(1) Complete assembly 3rd Party Certified Class I, Div.1, Groups C &amp; D; Class II, Div. 1, Groups E, F, &amp; G.</b>	
8	Electrical Specifications (For Resistive Loads)
A	SPDT 3W, 0.25 Amp, 125 VAC/VDC <b>(Standard)</b> (Switch adjustable range of 10-90%)
Z	Special <b>(Un-coded Options)</b>
<b>NOTE:</b> The use of diaphragm seals is not recommended for Model 130 gauges	
<b>WARNING:</b> Attempts to install such seals on Model 130 gauges will void warranty	

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