BULLETIN NO. 130/18
(SUPERSEDES BULLETIN NO. 130/11)

# Mid-West® Instrument

## "Diaphragm Type"
## Differential Pressure Gauge & Switch
## Model 130


Shown here with Range 0-5" H2O

**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 GPM**
Flow Gauge Scale


*"A World Leader in Differential Pressure Gauges & Switches*

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 316L Stainless Steel.

Shown with Engineered Plastic Body

**Model 130:**

- Housing materials: Glass-Reinforced Engineered Plastic, Aluminum, Brass and 316L Stainless Steel
- Accuracy: 0-5" thru 0-9.9" H2O ±5% Full Scale Ascending 0-10" thru0-400" H2O ±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" Engineered Plastic dial assembly standard.
- ¼" FNPT & ½" FNPT Process Connections
- DP Ranges available in: Inches H2O, PSID, mbar, and Kpa
- Available with Square Root dials for flow measurement

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" H20 (0-12.4 mbar) | 0-400" H20 (0-1 bar) | *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 | 130 |
|---|---|
| Type | SPDT |
| Power 3 | W |
| Max Current | 0.25 Amps |
| Max Voltage VAC/VDC | 125 VAC/VDC |
| Setting Full Scale | 10-90% |
| Hysterisis (Max / Norm) | 10% / 5% (FS) |
| Repeatability 1% | F.S. |
| Connections | (3) 24" Leads 22 AWG |

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

Shown in NEMA 4X
Plastic enclosures

**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® Instrument

## Standard Dial Ranges: Model 130

| Range Type | | | | |
|---|---|---|---|---|
| IN $H_2O$ | 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" H2O (0-12.4 mbar) | 0-400" H2O (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
ASME B40.100
CSA-C22.2 No. 14.25 and 30
EN-61010-1
NACE MR0175
NEMA Std. No. 250
SAE J514
UL Std. No. 50,508 and 1203

## Standard Model Number Sequence: 130-PC-00-OO

Glass-Reinforced Engineered Plastic Body, 316 Stainless Steel Internal Metal Parts
Ceramic Magnet, Buna-N Diaphragm and Seals, ¼" Steel Compression Tube Fittings,
4-1/2" Round Dial, Engineered Plastic Dial Case with Shatter Resistant Acrylic Lens,
(Aluminum, Brass & Stainless Steel Bodies-Dual ¼" FNPT Top & Bottom)

**Accuracy ±5% Full Scale (Ascending)** 0-5" $H_2O$ to 0-9.9" $H_2O$ or equivalent
**Accuracy ±3/2/3% Full Scale (Ascending)** 0-10" $H_2O$ to 0-400" $H_2O$ or equivalent

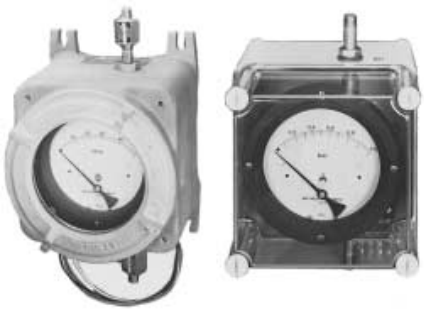
**Range 0-5 IN $H_2O$ to 0-400 IN $H_2O$ (0-12.4 mbar to 0-1 bar)**

***Gauge Body and Internal components are considered wetted parts.***

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|
| 1 3 0 | | | | | | | |

Basic Model

**Range:**_____

| 2 | Material |
|---|---|
| P | Glass-Reinforced Engineered. Plastic Body / 316 S.S. Internal Metal Parts *(Not available with switches)* |
| 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 ***(Un-coded Options)*** |
| **3** | **Dial Size & Type** |
| C | 4-1/2" Round Dial w/Engineered Plastic Dial Case |
| E | 3-1/2" Round Dial w/Anodized Aluminum Housing Dial Case |
| G | 4-1/2" Round Dial w/Anodized Aluminum Housing Dial Case |
| T | Non-Indicating DP Switch Only |
| Z | Special ***(Un-coded Options)*** |
| **4** | **Seal Materials** |
| 0 | Buna-N *(Standard)* |
| 1 | Viton ®-A Registered Trademark of Dupont *(0-20" H2O to 0-400" H2O)* |
| 2 | Silicone *(0-5" H2O to 0-100" H2O)* |
| 4 | Neoprene *(0-5" H2O to 0-100" H2O)* |
| 5 | Ethylene Propylene *(0-20" H2O to 0-400" H2O)* |
| 9 | Special ***(Un-coded Options)*** |
| **5** | **Process Connections** |
| 0 | 1/4" (2) (Carbon Steel Compression Tube Fittings Standard on "P" Gauge Body)<br>1/4" FNPT (4) *(Standard on A, B, & S. Gauge Bodies)* |
| 1 | 1/4" (2) 316 Stainless Steel compression tube fittings |
| 2 | 1/4" FNPT Brass Adapters *(Available on Model P, Engineered plastic body only)* |
| 3 | 1/4" FNPT (2) Stainless Steel Adapters *(Available on Model P, Engineered plastic body only)* |
| 9 | Special ***(Un-coded Options)*** |

**Factory preset switches at no charge (Specify Setting)**

## Model 130 - continued

| 6 | Additional Options |
|---|---|
| O | NONE |
| B | Drain & Bleed Plugs, (2) 316 S.S. *(Model 130 P only)* |
| 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. *(Available with Glass Reinforced Plastic body only)* |
| K | 1/2" FNPT S.S. Adapter (2) *(Available on "A", "B", & "S" Gauge Body)* |
| M | Maximum Indicator Follower Pointer *(Not available with 3-1/2" Dial)* |
| N | NACE *(Available on Aluminum and Stainless Steel Bodies only)* |
| Q | CRN (Canadian Registration Number) *(Available on Glass Reinforced Plastic and S.S. gauge bodies only)* |
| S | Shatter Proof Glass Lens *(4-1/2" available with "G" option Aluminum Dial Case only)* |
| T | Oxygen Cleaning |
| U | Stainless Steel Tag with S.S. Wire |
| V | Stainless Steel Tag and S.S. Screw |
| W | Wall Mount Kit |
| Z | Special ***(Un-coded Options)*** |
| | *NOTE: Not All Options Available in Combination with other Options* |
| **7** | **Electrical Configurations (CE and ROHS marked, except N & P)**<br>**Switch option not available for 130-PC Models** |
| O | None |
| 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 **(1)** |
| P | Two (2) Switches in explosion proof enclosure with glass window cover. CSA & UL Listed **(1)** |
| Z | Special ***(Un-coded Options)*** |
| **(1)** Complete assembly 3rd Party Certified Class I, Div.1, Groups C & D; Class II, Div. 1, Groups E, F, & G. | |
| **8** | **Electrical Specifications (For Resistive Loads)** |
| A | SPDT 3W, 0.25 Amp, 125 VAC/VDC *(Switch adjustable range of 10-90%)* |
| Z | Special ***(Un-coded Options)*** |
| **NOTE:** The use of diaphragm seals is not recommended for Model 130 gauges | |
| **WARNING:** Attempts to install such seals on Model 130 gauges will void warranty | |

**Factory preset switches at no charge (Specify Setting)**

**MID-WEST INSTRUMENT** has been serving a variety of industries (Power, Chemical, Petro-Chemical, HVAC, Water Filtration etc…) for over 50 years. Over 1,000,000 DP Gauges have been produced bearing the Mid-West name or private branded for our OEM customers!

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. Standard configurations can be customized and modified to suit our customer's needs for ease of installation or retrofit.