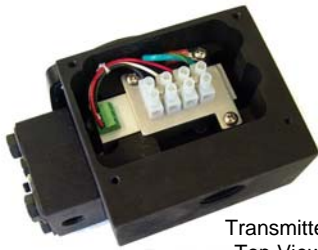


# Mid-West<sup>®</sup> Instrument

## “Diaphragm Type” Differential Pressure Switches & Transmitter Model 140/142

The Model 140/142 Transmitter offers a highly visible local display along with the independent 4-20mA output. This allows for precise monitoring at the unit or at the control panel. This economical priced unit works well in tank level applications and in fluids with high solids content.



Transmitter  
CSA Listed for  
Division 2 Hazardous  
Location Service

Transmitter  
Top View

- Choice of 4-20ma Transmitter or 1 to 2 magnetically actuated hermetically sealed reed switches to provide high and low limit alarm or control.
- Aluminum, 316L Stainless Steel or Brass Gauge Body
- Wetted 316 SS and Ceramic moving parts
- Wide variety of elastomers available
- Weather-resistant construction standard.
- SWP of 3,000 PSIG (207 bar) for ALM. & S.S.Body
- SWP of 1,500 PSIG (103 bar) for Brass Body
- Over-range protection to maximum pressure.
- Shatter resistant acrylic lens.
- Available with 2 ½" or 4 ½" Dials or Non-Indicating
- Available DP Ranges: Inches H<sub>2</sub>O, PSID, bar, and Kpa
- Gauge accuracy ± 2% full scale (ascending)
- Transmitter accuracy ± 2% full scale (from 20% to 100% of scale, ascending)
- Transmitter operating temperature: -20°F to +150°F (-20°C to +65°C)

Model	Gauge Accuracy	Min. ΔP Range	Min. ΔP Range	Max Line Pressure PSIG (bar)	Optional Switches
142	±3/2/3%	0-20" H2O (0-50 mbar)	0-25 PSID (0-1.7 bar)	3000 (200)**	1 or 2 Switches or 4-20 mA Transmitter
140	±3/2/3%	0-25 PSID (0-1.7 bar)	0-100 PSID (0-7 bar)	3000 (200)**	1 or 2 Switches or 4-20 mA Transmitter

### Model 140/142 Indicating Switch(es) or 4-20mA Transmitter SPECIFICATIONS

#### TRANSMITTER

##### Features:

Microprocessor based, external zero interface:  
8-28 Vdc loop powered, 2 wire interface

##### Electrical:

Accuracy ±2% (from 20% to 100% of scale, ascending)  
Supply Voltage 8-28 Vdc  
Output 4-20mA  
Max Loop Resistance 1000 Ohms

##### Interface:

4 position terminal strip for 16-22 Awg wire  
Pin 1 – return, Pin 2 = zero, Pin 3 = 8-28 Vdc, Pin 4-chassis  
½" NPT access

**Environmental:** Weatherproof

**Rating:** (NEMA 4X, IP65)

#### SWITCHES

##### Features:

1 or 2 hermetically sealed reed switches

##### Electrical:

Switch rating & adjustability  
3W 0.25 Amp 125 VAC/VDC  
**(10-90% F.S. 140) (15-95% F.S. 142)**  
25W, 0.5 Amp 230 VAC/VDC NO  
**(10-90% F.S. 140) (15-95% F.S. 142)**

##### Interface:

7 position terminal strip for 16-22 Awg wire  
½" NPT access

**Environmental:** Weatherproof

**Rating:** (NEMA 4X, IP65)

# “Diaphragm Type”

## Differential Pressure Gauge Switch & Transmitter Options

### Models: 140 & 142



**Model 140 shown with “AA” switch option**

(1) Reed switch located inside NEMA 4x enclosure with 7 position terminal strip. An opening at rear of enclosure accepts ½” flexible weather-proof or conduit connector (supplied by customer).

**Model 142 shown with “BA” switch option**

(2) Reed switches located inside NEMA 4x enclosure with 7 position terminal strip. An opening at rear of enclosure accepts ½” flexible weather-proof or conduit connector (supplied by customer).

Model 140 & 142 “Delta Meters” are available with either one or two hermetically sealed reed switches for either high alarm, low alarm, or both and a 4-20mA transmitter depending on model. The switches are Single Pole Double Throw (SPDT) or Single Pole Single Throw (SPST) with adjustable set points. Switches can be set to activate/deactivate on rising or falling pressure.

Model 140& 142 standard switch enclosure is non-corrosive molded plastic that is oil tight, dust tight, and water tight per NEMA 4X. External access to the switch adjustment is provided. CSA Listed Explosion Proof enclosures with SPDT or SPST switches rated Class I, Groups C & D, Class II I, Groups E, F, & G are available. Switch leads are 24”, 18 Awg, and are color coded where applicable.

"Model 140" Electrical Configurations (CE marked, except C, D, T & W)	
<b>A</b>	One (1) Reed Switch in NEMA 4X/IP66 Enclosure
<b>B</b>	Two (2) Reed Switches in NEMA 4X/IP66 Enclosure
<b>C</b>	One (1) Switch in Explosion Proof Enclosure. Division 1 Hazardous Locations (2)
<b>D</b>	One (2) Switches in Explosion Proof Enclosure. Division 1 Hazardous Locations (2)
<b>E</b>	One (1) Reed Switch in NEMA 4X/IP66 Aluminum Enclosure, Division 2 Hazardous Locations (3)
<b>F</b>	Two (2) Reed Switches in NEMA 4X/IP66 Aluminum Enclosure, Division 2 Hazardous Locations (3)
<b>T</b>	4-20 mA Transmitter in NEMA-4X/IP66 aluminum enclosure
<b>W</b>	4-20 mA Transmitter in general purpose enclosure, Division 2 Hazardous Locations (3)
<b>Z</b>	Special ( <b>Un-coded Options</b> )
	(2) Complete assembly 3rd Party Certified Class I, Div.1, Groups C & D; Class II, Div. 1, Groups E, F, & G.
	(3) Complete assembly 3rd Party Certified Class I, Div.2, Groups A, B, C, & D; Class II, Div.2, Groups F and G.
"Model 142" Electrical Configurations (CE marked, except T & W)	
<b>A</b>	One (1) Reed Switch in NEMA 4X/IP66 Enclosure
<b>B</b>	Two (2) Reed Switches in NEMA 4X/IP66 Enclosure
<b>E</b>	One (1) Reed Switch in NEMA 4X/IP66 Aluminum Enclosure, Division 2 Hazardous Locations (3)
<b>F</b>	Two (2) Reed Switches in NEMA 4X/IP66 Aluminum Enclosure, Division 2 Hazardous Locations (3)
<b>T</b>	4-20 mA Transmitter in NEMA-4X/IP66 aluminum enclosure
<b>W</b>	4-20 mA Transmitter in general purpose enclosure, Division 2 Hazardous Locations (3)
<b>Z</b>	Special ( <b>Un-coded Options</b> )
	(2) Complete assembly 3rd Party Certified Class I, Div.1, Groups C & D; Class II, Div. 1, Groups E, F, & G.
	(3) Complete assembly 3rd Party Certified Class I, Div.2, Groups A, B, C, & D; Class II, Div.2, Groups F and G.
Electrical Specifications (For Resistive Loads)	
<b>A</b>	SPDT 3W, 0.25 Amp, 125 VAC/VDC (standard) (Switch adjustable range of 15-90%)
<b>B</b>	SPST, 25W, 0.5 Amp., 230 VAC/VDC (Normally Open) (Switch adjustable range of 15-90%)
<b>T</b>	4-20 mA Transmitter (8-28 VDC Loop Power) (± 2% Accuracy from 20-100% of scale, Ascending)
<b>Z</b>	Special ( <b>Un-coded Options</b> )

