



# SANITARY FLUSH DIAPHRAGM PRESSURE TRANSMITTER

## Models 218, 318

### FEATURES:

- Flush Diaphragm for slurry measurement and cleanability
- Wet - wet true gauge pressure measurement that does not require vented cable
- Rugged, All-welded, corrosion-resistant type 316 Stainless Steel construction
- NEMA-4X enclosure
- 3A Approved

### PRESSURE RANGES:

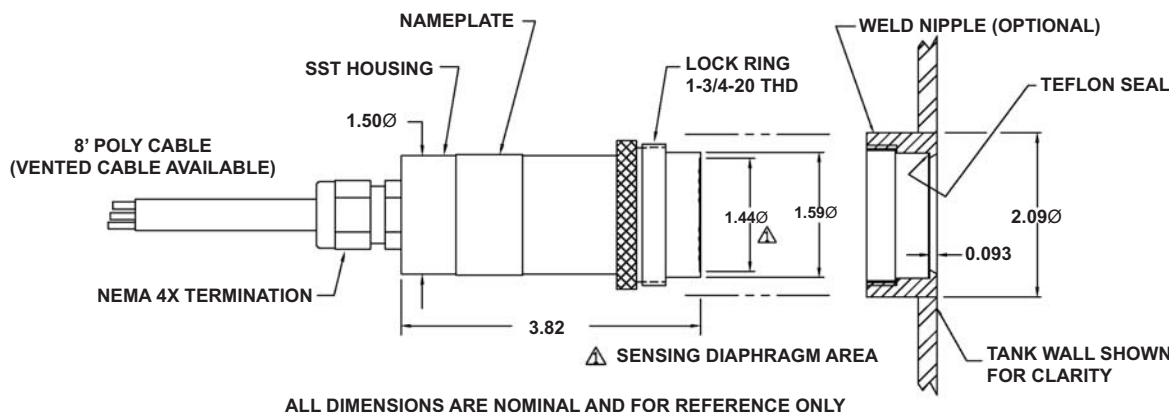
- From 0-20" wc through 0-1000 psi (See ordering guide)

### ACCURACY:

- To ±0.1% FSO (RSS).



FLUSH DIAPHRAGM



| MODEL 18 ACCESSORIES              |   |
|-----------------------------------|---|
| <b>Weld Nipples</b>               |   |
| WN18-AA-AA-2.1                    | 1-3/4" - 20 316 SS 2.1" OD  |
| WN18-AA-FQ-2.1                    | M44 - 1.25 316 SS 2.1" OD   |
| WN18-AA-AA-2.5                    | 1-3/4" - 20 316 SS 2.5" OD  |
| WN18-AA-FQ-2.5                    | M44 - 1.25 316 SS 2.5" OD   |
| <b>Weld Plugs</b>                 |   |
| WP18-AA-AA                        | 1-3/4" - 20 316SS   |
| WP18-AA-FQ                        | M44 - 1.25 316SS  |
| <b>Lock Rings</b>                 |   |
| LR18-AA-AA                        | 1-3/4" - 20 316SS   |
| LR18-AA-FQ                        | M44 - 1.25 316SS  |
| <b>Calibration / Test Fixture</b> |   |
| CTF18-AL-AA                       | Aluminum 1/3/4" - 20 X 1/4" NPTF  |
| CTF18-AL-FQ                       | Aluminum M44 - 1.25 X 1/4" NPTF   |
| <b>Face Seal</b>                  |   |
| GS18                              | Teflon gasket - Model 18  |
| <b>Indicators</b>                 | Numerous indicators available to meet   |
| <b>SSU</b>                        | System set up - matching GP:50 transducer to GP:50 indicator calibration and units of measure |

## WIRING CODE

|                  | 218           | 318           |
|------------------|---------------|---------------|
| <b>A/1 RED</b>   | + EXC.        | + EXC./SIGNAL |
| <b>B/2 GREEN</b> | + SIGNAL      | NC            |
| <b>C/3 WHITE</b> | NC            | NC            |
| <b>D/4 BLACK</b> | - EXC./SIGNAL | - EXC./SIGNAL |
| <b>E/5 BLUE</b>  | NC            | NC            |
| <b>F/6 BROWN</b> | NC            | NC            |
| <b>SHIELD</b>    | OPEN          | OPEN          |

GP:50 reserves the right to make product improvements and amendments to the product specifications stated throughout this brochure without prior notification. Please contact the factory on all critical dimensions and specifications for verification.

A5SL-18.00 Rev B



Specifications reflect standard product, improved performance/mechanical options available. Modifications may alter specs, consult factory for more information.

|                                   |  |
|-----------------------------------|--|
| <b>Accuracy</b>                   | (Non-linearity, hysteresis, RSS Non-repeatability) RSS<br>A: ±0.5% FSO (RSS)<br>B: ±0.2% FSO (RSS)<br>C: ±0.1% FSO (RSS)   |
| <b>Wetted Parts</b>               | Type 316 Stainless steel   |
| <b>Resolution</b>                 | Infinite, 0.02% FSO practical minimum  |
| <b>Temperature Limits *</b>       | Compensated 30°F to +170°F<br>Operating 0°F to +185°F  |
| <b>Temperature Compensation *</b> | Zero Within ±2% FSO/100° F<br>Span Within ±2% FSO/100° F   |
| <b>Orientation Shift</b>          | Zero ±1 in WC, Option GJ or JH is recommended on ranges ≤ 200 in wc  |
| <b>Electricals</b>                | Excitation Voltage<br>(Model 218) 10.5-32 Vdc<br>(Model 318) 13-37 Vdc<br><br>Output at 70° F<br>(Model 218) 5.0 Vdc ±2% FSO<br>(Model 318) 4-20 mA ±2% FSO<br><br>Zero Balance<br>(Model 218) 0.0 Vdc ±5% FSO at 70°F Horizontal position.<br>(Model 318) 4.0 mA ±5% FSO at 70°F Horizontal position.<br><br>Load Impedance<br>(Model 318) 1200 ohms maximum at 37 Vdc<br><br>Output Loading<br>(Model 218) 3000 ohms minimum |
| <b>Span</b>                       | (Model 218) 5 Vdc ±2% FSO at 70°F<br>(Model 318) 16 mA ±2% FSO at 70°F   |
| <b>Mechanicals</b>                | Proof Pressure 3 times full scale pressure<br>Burst Pressure 5 times full scale pressure<br>Case Materials Type 316 stainless steel<br>Weight 12 oz. nominal (not including Weld Nipple)   |
| <b>Enclosure</b>                  | All-welded type 316 Stainless steel. Rated NEMA-4x. Approved 3A  |
| <b>Connections</b>                | Pressure 1-3/4" - 20 UNF thread to 316 Stainless Steel Weld Nipple (Weld Nipple not included)<br><br>Electrical * Cable NEMA-4x with molded 6 conductor, polyurethane jacket, 8' long.   |
| <b>Identification</b>             | Electro etched on transducer   |

\*See modifications on ordering guide.

Use the following codes to identify desired item.

## ORDERING GUIDE:

| MODEL | ACCURACY | RANGE | TYPE | OPTIONS               |
|-------|----------|-------|------|-----------------------|
| ●     | —        | ●     | —    | ● — ● — ● — ● / ● / ● |

Example: 318-D-XQ-2CA

### MODEL

218 5 Vdc  
318 4-20 mA

### ACCURACY

B 0.5% FSO  
C 0.2% FSO  
D 0.1% FSO

### PRESSURE RANGE

|              |               |                      |
|--------------|---------------|----------------------|
| <b>IN WC</b> |               |                      |
| <b>XB</b> 20 | <b>XK</b> 100 | <b>XU</b> 750        |
| <b>XC</b> 25 | <b>XM</b> 150 | <b>XW</b> 1000       |
| <b>XD</b> 30 | <b>XO</b> 200 | <b>XY</b> 1500       |
| <b>XF</b> 50 | <b>XQ</b> 300 | <b>YA</b> 2000       |
| <b>XH</b> 75 | <b>XS</b> 500 | <b>SZ</b> Non-stand. |

|               |               |                 |
|---------------|---------------|-----------------|
| <b>PSI</b>    |               |                 |
| <b>PC</b> 1   | <b>PP</b> 15  | <b>RB</b> 150   |
| <b>PE</b> 2   | <b>PR</b> 20  | <b>RD*</b> 200  |
| <b>PG</b> 3   | <b>PT</b> 30  | <b>RF*</b> 300  |
| <b>PJ</b> 5   | <b>PV</b> 50  | <b>RH*</b> 500  |
| <b>PL</b> 7.5 | <b>PX</b> 75  | <b>RJ*</b> 600  |
| <b>PN</b> 10  | <b>PZ</b> 100 | <b>RK*</b> 750  |
|               |               | <b>RM*</b> 1000 |

\* No reference slots, cable vented

### PRESSURE TYPE

2 Gauge  
3 Absolute (Ranges ≥ 0-5 psia)  
4 Vacuum  
8 Elevated  
10 Compound

### OPTIONS

AA None

### ALTERNATE CONNECTOR OR CABLE

CA Bendix PTIH-10-6P (Mate: PT06E-10-6S[SR] not included)  
CF 1/2" NPT (M) thread with 8" potted leads (Non-Vented)  
CH NEMA-4X cable, 8' vented polyurethane jacket cable (only available on ranges up to an including 299 PSI)  
CJ DIN 43650 (Hirshmann) w/Mate  
CL 1/2" NPT (M) conduit, 2' vented polyurethane jacket cable (ranges 0-299 PSI)  
CT Teflon jacketed cable, Tefzel used on submersible units (options CH, CL, CW, DE, GM)  
CZ Alternate Connector/Cable/Other

### ALTERNATE PRESSURE PORT

FQ M44 X 1.25 Metric thread  
FZ Non-standard pressure port

### GENERAL

DE IP-67 (NEMA-6) vented polyurethane jacket cable, neoprene grommet.  
CW Submersible housing, 8' non-vented polyurethane jacket cable, neoprene grommet, 1/2" NPT (M) conduit  
GA Standardized Full Scale Output, (FSO = (Full Scale Reading) - (Zero Reading) ±0.5% FSO)  
GB Alternate Electronic Output (specify Zero and Span output values)  
GE Improved Temperature Compensation to ±0.5% FSO/100°F for Zero & Span Respectively, (from 30°F to 180°F)  
GF Expanded process temperature range, -65 to 250°F (± 2% FSO/100°F)  
GJ Add Zero & Span Controls. (Approx. ±20% FSO adjustment)  
GK Inconel Diaphragm and Diaphragm Housing  
GM Submersible housing w/8' Std Cable  
GP Hastelloy Diaphragm and Diaphragm Housing  
GS 0-10 Vdc FSO, Model 218. (Requires 16 - 32 Vdc excitation)  
HL RFI Protection (for unit proximity to radio transmitter)  
JH Remote Cable-Mounted Zero and Span Controls (Model 318 only)  
GZ Customer special