



## Pressure, Level & Temperature Transmitters & Transducers

2770 Long Road, Grand Island, NY 14072 USA

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### SANITARY FLUSH DIAPHRAGM PRESSURE TRANSMITTER

### Models 218, 318



74-03  
Cert no. 668

#### FEATURES:

- Flush Diaphragm for slurry measurement & cleanability
- Wet - wet true gauge pressure measurement that does not require vented cable
- Rugged, All-welded, corrosion-resistant type 316 SST construction
- NEMA-4X enclosure
- Complies with 3A standard 74-03

#### PRESSURE RANGES:

- From 0-30" wc through 0-1000 psi

#### ACCURACY:

- From  $\pm 0.5\%$  FSO to  $\pm 0.1\%$  FSO (RSS)

#### WIRING:

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

#### Accuracy:

(Includes Hysteresis, Non-linearity, Non-Repeatability)

- **Series A:**  $\pm 0.5\%$  FSO (RSS)
- **Series B:**  $\pm 0.2\%$  FSO (RSS)
- **Series C:**  $\pm 0.1\%$  FSO (RSS)

#### Resolution:

- Infinite, 0.02% FSO practical minimum

#### Wetted Parts:

- Type 316 SST

#### Temperature Limits:

- Compensated: 30° F to +170° F
- Operating: 0° to +185° F

#### Temperature Compensation:

- Effect on Zero / Span: Within  $\pm 2\%$  FSO/100°F for each

#### Orientation Shift:

- Zero:  $\pm 1$  in WC, Option GJ or JH is recommended on ranges  $\leq 200$  in WC

#### Span:

- **(Model 218):** 5 Vdc  $\pm 2\%$  FSO at 70° F
- **(Model 318):** 16 mA  $\pm 2\%$  FSO at 70° F

#### Enclosure:

- All-welded type 316 SST. Rated NEMA-4x. (3A 74-03 compliant)

#### Electricals:

- Excitation Voltage:  
**(Model 218)** 10.5-32 Vdc  
**(Model 318)** 13-37 Vdc
- Output at 70° F:  
**(Model 218)** 5.0 Vdc  $\pm 2\%$  FSO  
**(Model 318)** 4-20 mA  $\pm 2\%$  FSO
- Zero Balance:  
**(Model 218)** 0.0 mV/V  $\pm 5\%$  FSO at 70° F Horizontal position  
**(Model 318)** 4.0 mA  $\pm 5\%$  FSO at 70° F Horizontal position
- Load Impedance:  
**(Model 318)** 1200 ohms max. at 37 Vdc
- Output Loading:  
**(Model 218)** 3000 ohms min.

#### Mechanicals:

- Proof Pressure: 3 X full scale pressure
- Burst Pressure: 5 X full scale pressure
- Case Materials: Type 316 Stainless Steel
- Weight: 12 oz. nominal (not including Weld Nipple)
- Identification: Etched on transducer

#### Connections:

- Pressure: 1-3/4" - 20 UNF thread to 316 SST Weld Nipple (Weld Nipple not included)
- Electrical Cable: NEMA-4x with molded 6 conductor, polyurethane jacket, 8' long.

A5SL-18.00 Rev D



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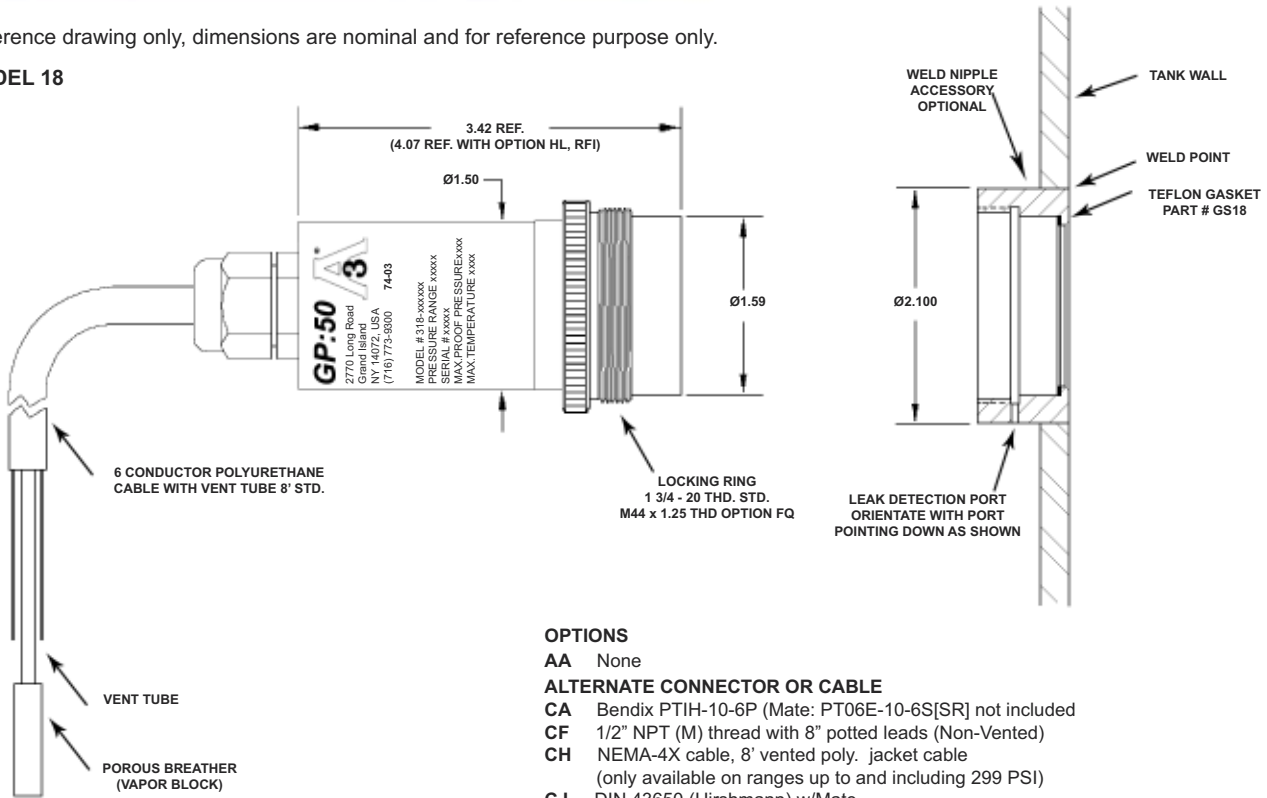
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Reference drawing only, dimensions are nominal and for reference purpose only.

## MODEL 18



### 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 poly. jacket cable

(only available on ranges up to and 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 Stand. Full Scale Output, (FSO = (Full Scale Reading) - (Zero Reading)  $\pm 0.5\%$  FSO)

GB Alternate Electronic Output (Specify Zero & Span output values)

GE Improved Temperature Compensation to  $\pm 0.5\%$  FSO/100°F for Zero & Span Respectively, (from 30°F to 180°F)

GF Expanded process temperature range, -65 to 250°F ( $\pm 2\%$  FSO/100°F)

GJ Add Zero & Span Controls. (Approx.  $\pm 20\%$  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

### MODEL 18 ACCESSORIES

#### Weld Nipples

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

#### Weld Plugs

WP18-AA-AA 1-3/4" - 20 316SS

WP18-AA-FQ M44 - 1.25 316SS

#### Lock Rings

LR18-AA-AA 1-3/4" - 20 316SS

LR18-AA-FQ M44 - 1.25 316SS

### Calibration / Test Fixture

CTF18-AL-AA Aluminum 1/3/4" - 20 X 1/4" NPTF

CTF18-AL-FQ Aluminum M44 - 1.25 X 1/4" NPTF

### Face Seal

GS18 Teflon gasket - Model 18

### NOTE:

Specifications reflect standard product, improved performance / mechanical options available.

Modifications may alter specs, consult factory for more information.

### MODELS

218 5 Vdc

318 4-20 mA

### ACCURACY (SERIES)

B 0.5% FSO

C 0.2% FSO

D 0.1% FSO

### PRESSURE RANGE (PSI) \* No reference slots, cable vented

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

### IN WC

XD	30	XK	100	XU	750
XF	50	XM	150	XW	1000
XH	75	XO	200	XY	1500
		XQ	300	YA	2000
		XS	500	SZ	Non- Standard

### PRESSURE TYPE

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