



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 0-20" 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: ± 1 in WC, Option GJ or JH is recommended on ranges ≤ 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 B



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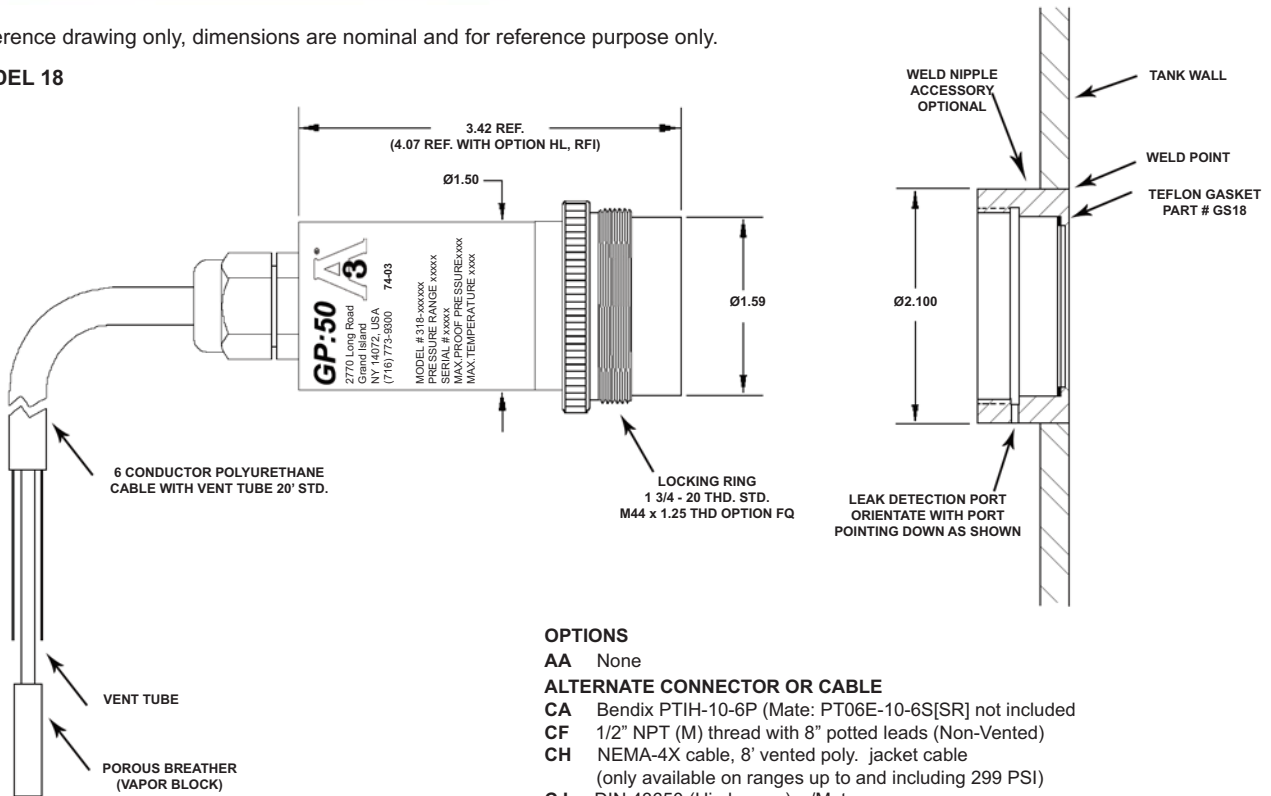
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Reference drawing only, dimensions are nominal and for reference purpose only.

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

XB	20	XK	100	XU	750
XC	25	XM	150	XW	1000
XD	30	XO	200	XY	1500
XF	50	XQ	300	YA	2000
XH	75	XS	500	SZ	Non- Standard

PRESSURE TYPE

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