SERIES 636 FIXED RANGE PRESSURE TRANSMITTER

Specifications – Installation and Operating Instructions

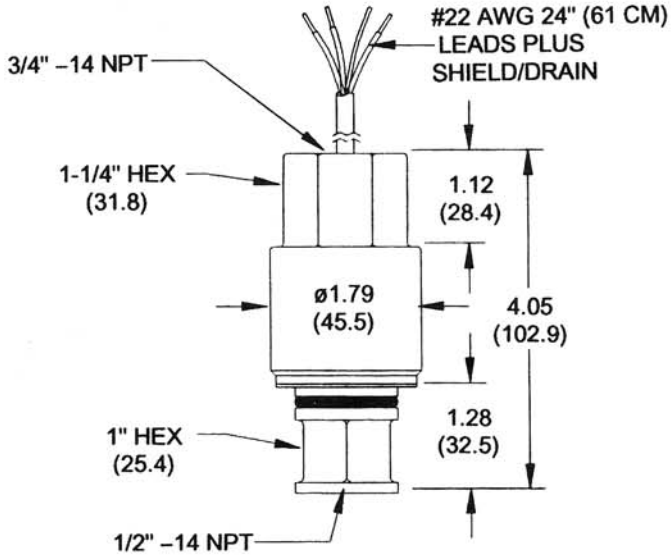

FIG. 1

The Series 636 Fixed Range Pressure Transmitter converts *liquid, gas or vapor pressure* into a 4-20 mA DC or 1-5 VDC (636LP) output signal. All 316 stainless steel construction makes it compatible with most corrosive media. This explosion-proof control is FM approved for use in hazardous locations and it meets NACE Standards for offshore applications. It is also weatherproof, capable of resisting a direct water spray. With these quality features and ±0.3% F.S. accuracy, the Series 636 Transmitter is an exceptional value.

The design is based on a sensitive piezoresistive sensing element consisting of four diffused strain gages. They form a bridge circuit which varies its resistance when stressed by the process pressure. Small size and light weight eliminate the need for complicated mounting hardware and mechanical supports. With simple in-line wiring, installation is quick and inexpensive. Slim profile enables mounting in spaces too tight for many other transmitters.

STOCKED MODELS

MODEL NUMBER		OPERATING	OPERATING
4-20 mA OUT	1-5 VDC OUT	RANGE, PSI	RANGE, BAR
636-0	636-0-LP	0-15	0-1
636-1	636-1-LP	0-30	0-2
636-2	636-2-LP	0-100	0-7
636-3	636-3-LP	0-300	0-20

SPECIFICATIONS

Service: Liquid, gas or vapor

Materials of Construction:
Process wetted parts: 316L stainless steel
Non-wetted parts: 316 stainless steel
Fluid fill: Dow Corning 200 silicone

Process Connection: 1/2″ NPT female

Electrical Connection: 3/4″ NPT female/cable

Weight: 13.2 ounces (374 grams)

Cable Length: 24 inches (61 cm), 22 AWG

Output: 4-20 mA DC, limited to 30 mA DC (636), 1-5 VDC (636LP).

Null: 4.0 mA ±2% span (636), 1 VDC ±1% span (636LP).

Span: 16.0 mA ±1% span (636), 4 VDC ±1% span (636LP).

Power Supply: 12 to 30 VDC (636), 8 to 14 VDC (636LP), reverse polarity protection.

Temperature Limits:
Electronics (ambient): –40 to 140°F (–40 to 60°C)
Process interface: –40 to 212°F (–40 to 100°C)
Storage: –40 to 212°F (–40 to 100°C)

Overrange Limit: 300% of full span pressure

Humidity Limits: 0-100% RH

Accuracy: ±0.30% of calibrated span including linearity hysteresis and repeatability (BFSL) at 25°C (77°F) and 12 VDC excitation.

Stability: ±0.5% for six months

Temperature Effect (includes span and zero):
±2% per 50°F (28°C) from –20 to 180°F (–29 to 82°C)

Vibration Effect: ±0.1% for 3g to 200 Hz

Position Effect: 0.05%/90° tilt

Overrange Effect: ±0.15% F.S. per 300% of max. range

CLASSIFICATIONS

Explosion-Proof for Class I, Div. I, Groups B, C & D; Class II, Groups E, F & G; and Class III Hazardous locations. Indoor and outdoor NEMA Type 4 enclosure.

INSTALLATION

Care should be taken during installation to prevent condensate accumulation in the conduit compartment or sediment accumulation in the diaphragm chamber. See Fig. 2 for suggested piping arrangements in several typical situations. Use pipe joint compound or Teflon® thread tape to assure a leak-proof process connection.

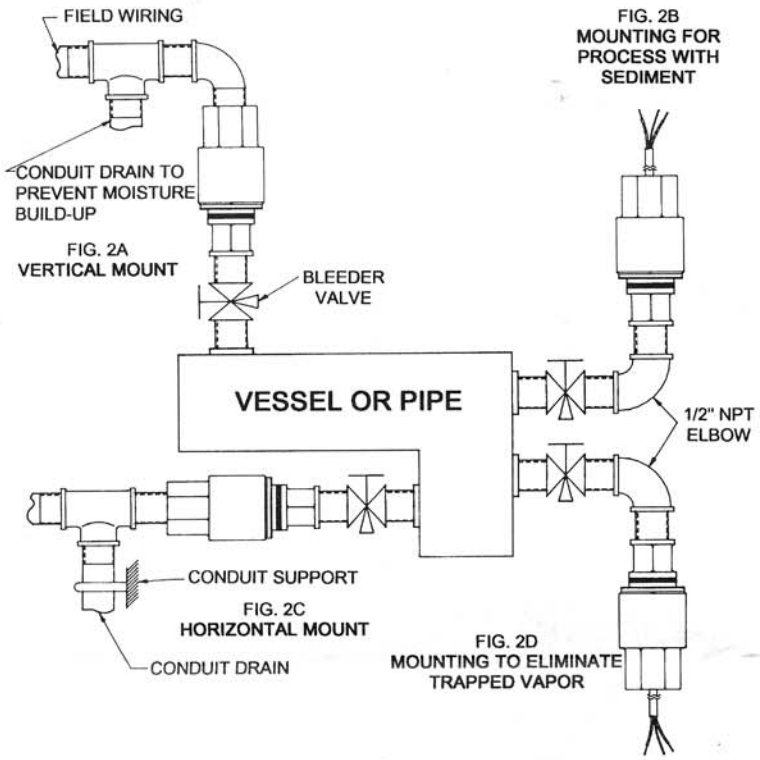

FIG. 2

ELECTRICAL CONNECTIONS

CAUTION: Do not exceed specified supply voltage rating. Permanent damage not covered by warranty will result. This unit is not designed for AC line voltage operation. Power must be off while wiring connections are being made.

An external power supply delivering 12-30 VDC with a minimum current capability of 40 mA DC (per transmitter) or 8-14 VDC if using model 636LP must be used to power the control loop. See Fig. 3.

To comply with good electrical practice, it is recommended that the transmitter be grounded. This can be accomplished through either the green wire or the transmitter case. To avoid a "ground loop" condition, DO NOT use both. The shield/drain wire is not connected to the case. This shield/drain is normally tied to ground at the receiver for optimal noise rejection.

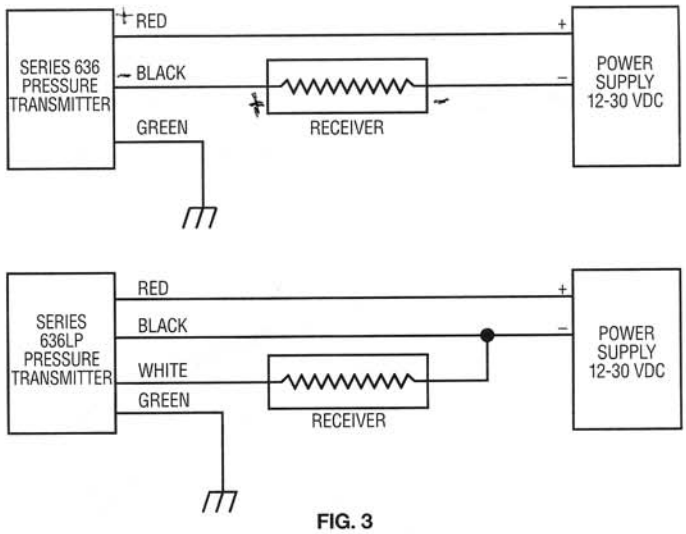

FIG. 3

The range of appropriate loop resistance, including the receiver load resistance for the DC power supply being used is limited to that expressed by the graph in Fig. 4.

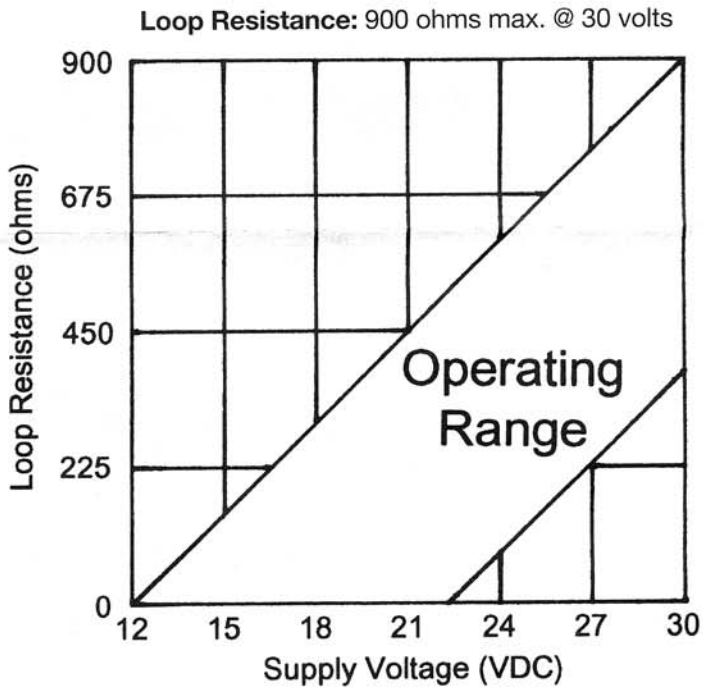

FIG. 4

MAINTENANCE

After final installation of the Series 636 Fixed Range Pressure Transmitter, no routine maintenance is necessary. These transmitters are not field serviceable and should be returned to the factory, freight prepaid, if repair is needed. Be sure to include a clear description of the problem plus any application information available.

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