

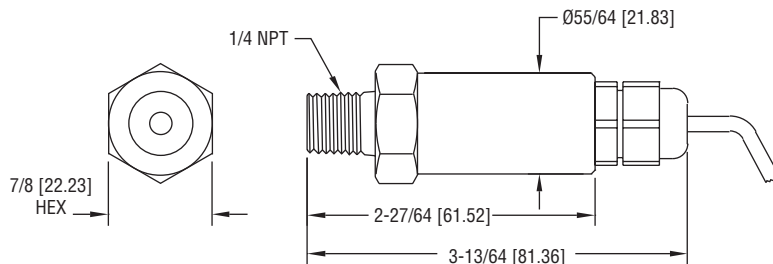


## Series 628CR Pressure Transmitter

### Specifications - Installation and Operating Instructions



General Purpose Housing



Accurate to  $\pm 1\%$  of full scale, **The Series 628CR Pressure Transmitter**, contains a low cost ceramic sensor housed in a compact, rugged, NEMA 4X stainless steel body. Ideal for the budget conscious OEMs that require high levels of performance, reliability and stability at an unbeatable price. The 628CR housing is small and lightweight for optimum compatibility with OEM systems. The design allows for a variety of pressure ranges from -14.7 to 500 psi and optional electrical connections allowing you to select the right transmitter for your application.

#### INSTALLATION

- 1. Location:** Select a location where the temperature of the transmitter will be between 0 and 175°F (-18 to 79°C). Distance from the receiver is limited only by total loop resistance. The tubing or piping supplying pressure to the unit can be practically any length required but long lengths will increase response time slightly.
- 2. Position:** The transmitter is not position sensitive. However all standard models are originally calibrated with the unit in a position with the pressure connection downward. Although they can be used at other angles, for best accuracy it is recommended that units be installed in the position calibrated at the factory.
- 3. Pressure Connection:** Use a small amount of plumber's tape or other suitable sealants to prevent leaks. Be sure the pressure passage inside the port is not blocked.

#### 4. Electrical Connections

**Wire Length** - The maximum length of wire connecting the transmitter and receiver is a function of wire size and receiver resistance. Wiring should not contribute more than 10% of the receiver resistance to total loop resistance. For extremely long runs (over 1000 feet), choose receivers with higher resistance to minimize the size and cost of connecting leads. Where wiring length is under 100 feet, wire as small as 22 AWG can be used.

#### CURRENT (4-20 mA) OUTPUT OPERATION

An external power supply delivering 9-30 VDC with minimum current capability of 40 mA DC (per transmitter) is required to power the control loop. See Fig. A for connection of the power supply, transmitter and receiver. The range of appropriate receiver load resistance ( $R_L$ ) for the DC power supply voltage available is expressed by the formula:

$$R_L \text{ Max} = \frac{V_{ps} - 13}{20 \text{ mA DC}}$$

Shielded cable is recommended for control loop wiring.

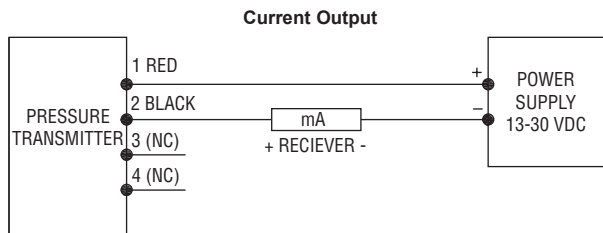


Fig. A: Current output connection

#### SPECIFICATIONS

- Service:** Compatible gases and liquids.
- Wetted Materials:** Ceramic, fluoroelastomer 316L SS.
- Accuracy:**  $\pm 1.0\%$  FS (includes linearity, hysteresis and repeatability).
- Stability:**  $\pm 0.25\%$  FS/year.
- Temperature Limits:** 0 to 185°F (-18 to 85°C).
- Compensated Temperature Range:** 0 to 175°F (-18 to 79°C).
- Pressure Limit:**
  - Max pressure: 2x range.
  - Burst pressure: 3x range.
- Thermal Effect:**  $\pm 0.04\%$  FS/°F.
- Power Requirements:** 9 to 30 VDC.
- Output Signal:** 4 to 20 mA.
- Response Time:** 3 ms typ.
- Loop Resistance:** 0-1200 Ohm max.
- Current Consumption:** 40 mA max.
- Electrical Connections:** Cable or DIN connector.
- Process Connection:** 1/4" male NPT or 1/4" male BSPT.
- Enclosure Rating:** NEMA 4X (IP65).
- Mounting Orientation:** Mount in any position.
- Weight:** 4.0 oz.
- Agency Approvals:** CE.

**DIN Electrical Connection:** When using cable version, black wire is negative (-) and red wire is positive (+). When using optional DIN plug, remove top-center screw and lift off the terminal block assembly. Wire to terminals shown below in Fig. B.

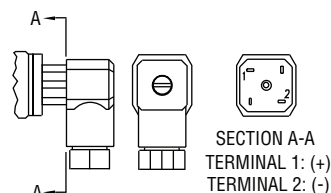


Fig. B

#### MAINTENANCE

After final installation of the pressure transmitter and its companion receiver, no routine maintenance is required. A periodic check of system calibration is suggested. The Series 628CR Transmitters are not field repairable and should be returned if repair is needed (field repair should not be attempted and may void warranty). Be sure to include a brief description of the problem plus any relevant application notes. Contact customer service to receive a return goods authorization number before shipping.