



Series 626 & 628 Pressure Transmitters

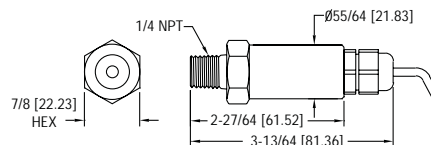
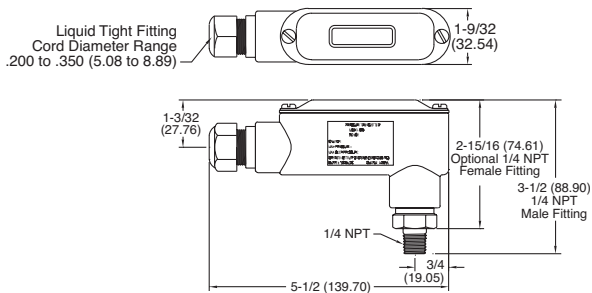
Specifications - Installation and Operating Instructions



-CH Conduit Housing



-GH General Purpose Housing



The Series 626 and 628 Pressure Transmitters converts a single positive pressure into a standard 4-20 mA output signal. The Series 626 and 628 can be used to accurately measure compatible gases and liquids; Series 626 full scale accuracy is 0.25%; Series 628 full scale accuracy is 1.0% (see specifications). Designed for industrial environments with a NEMA 4X (IP66) housing, this transmitter resists most effects of shock and vibration.



CAUTION: Do not exceed specified supply voltage ratings. Permanent damage not covered by warranty will result. This device is not designed for 120 or 240 volt AC operation. Use only on 13 to 30 VDC.

Pressure Ranges		
Pressure Range (psig)	Maximum Pressure (psig)	Over Pressure (psig)
30 Hg-0	30	150
30-0-15	30	150
30-0-30	60	300
30-0-45	100	300
30-0-60	200	500
30-0-100	200	500
0-5	10	50
0-15	30	150
0-30	60	300
0-50	100	300
0-100	200	500
0-150	300	750
0-200	400	1000
0-300	600	1500
0-500	1000	2500
0-1000	2000	5000
0-1500	3000	5000
0-2000	4000	5000
0-3000	6000	7500
0-5000	7500	10000
0-8000	10000	12000
0-30" Hg (vacuum)	30	150

SPECIFICATIONS

Service: Compatible gases and liquids.
Wetted Materials: Type 316, 316L SS.
Accuracy: 626: 0.25% full scale. 628: 1% full scale (includes linearity, hysteresis, and repeatability).
Temperature Limit: 0 to 200°F (-18 to 93°C).
Compensated Temperature Range: 0 to 175°F (-18 to 79°C).
Thermal Effect: 626: ±0.02% FS/°F. 628: ±0.04% FS/°F (includes zero and span).
Pressure Limits: See table.
Power Requirements: 13 to 30 VDC.
Output Signal: 4 to 20 mA. Optional 0-5, 1-5, 0-10, 1-6 or 2-10.
Zero & Span: Potentiometers inside conduit cover
Response Time: 50 msec.

Loop Resistance: 0 - 1300 ohms maximum for current. For voltage outputs, minimum load resistance: 2000 ohms.
Current Consumption: Transmitter: 40 mA max; Transmitter with optional display: 140 mA max.
Electrical Connections: Conduit Housing (-CH): terminal block, 1/2" female NPT conduit. General Purpose Housing (-GH): cable, DIN connector or 4-pin M-12.
Process Connection: 1/4" male/female NPT and BSPT.
Display: Optional 4-1/2 digit 1/2" (12.7 mm) height red LED.
Enclosure Rating: NEMA 4X (IP66).
Mounting Orientation: Mount in any position.
Weight: 10 oz (283 g).
Agency Approvals: CE:

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 13-30 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.

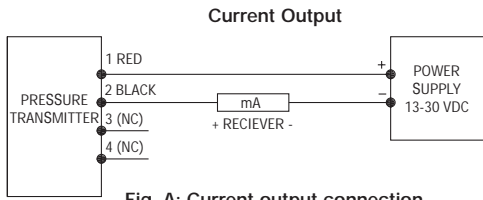
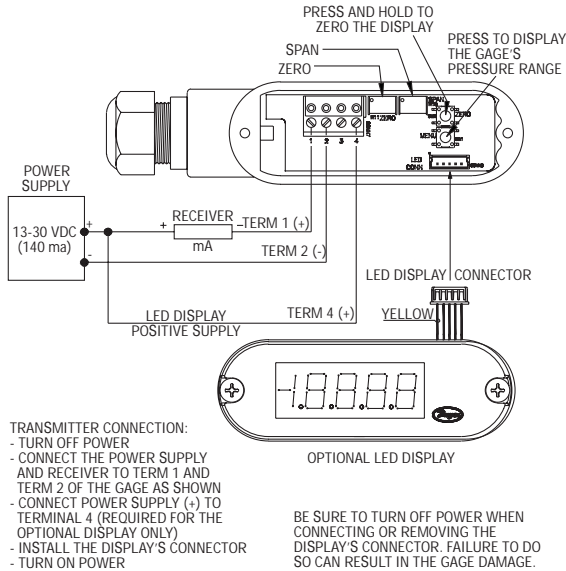


Fig. A: Current output connection

4a. Conduit Housing (-CH) Electrical connections to the pressure transmitters are made to the terminal block located inside the housing. Remove the screws and lift off the cover. Wire as shown in Fig. A, B or C. Use Fig. A for current output connection. Use Fig. B for current output with optional LED display. Use Fig. C for current output with optional LED display using two power supplies.

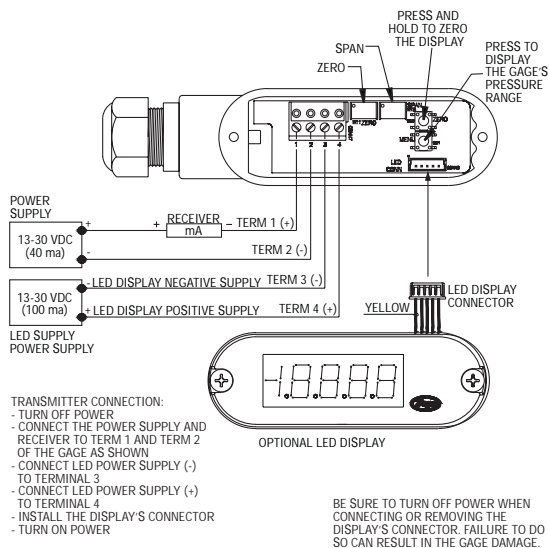
If ordering optional pre-wired cable, black wire is negative (-) and red wire is positive (+).



TRANSMITTER CONNECTION:
 - TURN OFF POWER
 - CONNECT THE POWER SUPPLY AND RECEIVER TO TERM 1 AND TERM 2 OF THE GAGE AS SHOWN
 - CONNECT POWER SUPPLY (+) TO TERMINAL 1 (REQUIRED FOR THE OPTIONAL DISPLAY ONLY)
 - INSTALL THE DISPLAY'S CONNECTOR
 - TURN ON POWER

BE SURE TO TURN OFF POWER WHEN CONNECTING OR REMOVING THE DISPLAY'S CONNECTOR. FAILURE TO DO SO CAN RESULT IN THE GAGE DAMAGE.

Fig. B: Current output with optional LED display connection



TRANSMITTER CONNECTION:
 - TURN OFF POWER
 - CONNECT THE POWER SUPPLY AND RECEIVER TO TERM 1 AND TERM 2 OF THE GAGE AS SHOWN
 - CONNECT LED POWER SUPPLY (-) TO TERMINAL 3
 - CONNECT LED POWER SUPPLY (+) TO TERMINAL 4
 - INSTALL THE DISPLAY'S CONNECTOR
 - TURN ON POWER

BE SURE TO TURN OFF POWER WHEN CONNECTING OR REMOVING THE DISPLAY'S CONNECTOR. FAILURE TO DO SO CAN RESULT IN THE GAGE DAMAGE.

Fig. C: Current output with optional LED display using two power supplies

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 626 and 628 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.

4b. General Purpose Housing (-GH) When using cable version of -GH General Purpose Housing, black wire is negative (-) and red wire is positive (+). When using optional Heirschman DIN Plug, remove top-center screw and lift off the terminal block assembly. Wire to terminals shown below in Fig. D. For optional 4-pin M-12 connector, wire to pins as shown in Fig. E.

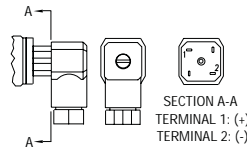


Fig. D

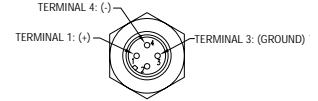


Fig. E

VOLTAGE (0-5, 1-5, 0-10, 1-6 or 2-10 Volt) OUTPUT OPERATION

(Other outputs contact the factory) See Fig. F for connection of the power supply, transmitter and receiver.

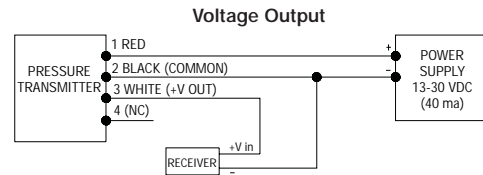
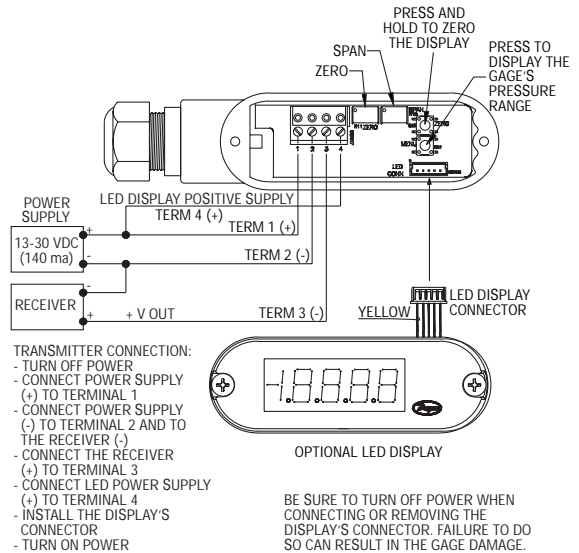


Fig. F: Voltage output connection

4c. Conduit Housing (-CH) Electrical connections to the pressure transmitters are made to the terminal block located inside the housing. Remove the screws and lift off the cover. Wire as shown in Fig. F or Fig. G. Use Fig. F for voltage output connection. Use Fig. G for voltage output with optional LED display connection. If ordering optional pre-wired cable, black wire is negative (-), red wire is positive (+) and white wire is +Vout.



TRANSMITTER CONNECTION:
 - TURN OFF POWER
 - CONNECT POWER SUPPLY (+) TO TERMINAL 1
 - CONNECT POWER SUPPLY (-) TO TERMINAL 2 AND TO THE RECEIVER (-)
 - CONNECT THE RECEIVER (+) TO TERMINAL 3
 - CONNECT LED POWER SUPPLY (+) TO TERMINAL 4
 - INSTALL THE DISPLAY'S CONNECTOR
 - TURN ON POWER

BE SURE TO TURN OFF POWER WHEN CONNECTING OR REMOVING THE DISPLAY'S CONNECTOR. FAILURE TO DO SO CAN RESULT IN THE GAGE DAMAGE.

Fig. G: Voltage output with optional LED display connection

4d. General Purpose Housing (-GH) When using cable version of -GH General Purpose Housing, black wire is negative (-), red wire is positive (+) and white wire is output. When using optional Heirschman DIN Plug, remove top-center screw and lift off the terminal block assembly. Wire to terminals shown below in Fig. H. For optional 4-pin M-12 connector, wire to pins as shown in Fig. I. If utilizing optional A-164 cable for M-12 connection, brown wire corresponds to pin #1, white #2, blue #3, and black #4.

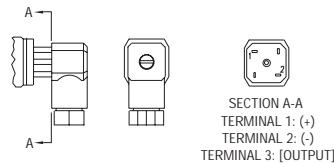


Fig. H

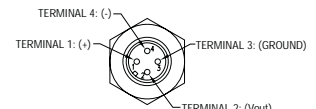


Fig. I