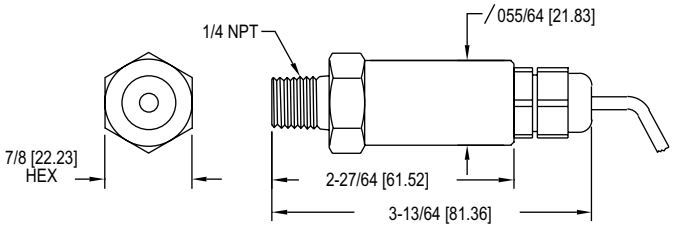
Series 626 & 628 Pressure Transmitters

Specifications - Installation and Operating Instructions

-GH General Purpose Housing



The **Series 626 & 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 VAC operation. Use only on 13-30 VDC.

PRESSURE LIMITS		
Range	***Maximum Pressure**	**Over Pressure**
0 to 5 psi	10 psi	50 psi
0 to 15 psi	30 psi	150 psi
0 to 30 psi	60 psi	300 psi
0 to 50 psi	100 psi	300 psi
0 to 100 psi	200 psi	500 psi
0 to 150 psi	300 psi	750 psi
0 to 200 psi	400 psi	1000 psi
0 to 300 psi	600 psi	1500 psi
0 to 500 psi	1000 psi	2500 psi
0 to 600 psi	1200 psi	3000 psi
0 to 1000 psi	2000 psi	5000 psi
0 to 1500 psi	3000 psi	5000 psi
0 to 3000 psi	6000 psi	7500 psi
*Pressures exceeding the maximum pressure limit may cause a calibration shift of up to ±3% of full scale.		

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. Position affects will be more noticeable on ranges below 30 psi.

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.

SPECIFICATIONS	
Service: Compatible gases and liquids. **Wetted Materials:** Type 316L SS. **Accuracy:** 626: 0.25% FS, 0.20% RSS; 628: 1.0% FS, 0.5% RSS; 626 absolute ranges: 0.5% FS, 0.35% RSS (includes linearity, hysteresis, and repeatability). **Temperature Limit:** 0 to 200°F (-18 to 93°C). **Compensation Temperature Range:** 0 to 175° (-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:** 10-30 VDC (for 4-20 mA, 0-5, 1-5, 1-6 VDC outputs); 13-30 VDC (for 0-10, 2-10 VDC outputs); 5 VDC ±0.5 VDC (for 0.5-4.5 VDC ratio-metric output). **Output Signal:** 4-20 mA, 0-5 VDC,1-5 VDC, 0-10 VDC, or 0.5-4.5 VDC.	**Loop Resistance:** 0-1000 Ω max. R max = 50 (Vps-10) Ω (4-20 mA output), 5 KΩ min (0-5, 1-5, 0.5-4.5 VDC output), 15 KΩ min (1-6, 0-10, 2-10 VDC output). **Current Consumption:** 38 mA maximum (for 4-20 mA output); 10 mA maximum (for 0-5, 1-5, 1-6, 0-10, 2-10, 0.5-4.5 VDC output); 140 mA maxumum (for all 626/628/629-CH with optional LED). **Electrical Connections:** Model dependent options: Wire end, Hirschman DIN EN 175801-803-C, Packard, Deutsch, M12. **Process Connection:** Model dependent options: 1/8″, 1/4″, 1/2″ male NPT; 1/4″ female NPT; 1/4″ male or female BSPT; 1/8″ or 1/4″ male BSPP ISO 1179; 1/4″ female SAE valve depressor. **Enclosure Rating:** NEMA 4X (IP66). **Mounting Orientation:** Mount in any position. **Weight:** 10 oz (283 g). **Compliance:** Standard: CE; Optional: NSF/ANSI 61/372, ANSI/UL 218, ANSI/UL 508, NEPA 20.

CURRENT (4-20 mA) OUTPUT OPERATION

An external power supply delivering 10-30 VDC with minimum current capability of 40 mA DC (per transmitter) is required to power the control loop. See Figure A for connection of the power supply, transmitter and receiver. The range of appropriate receiver load resistance (RL) for the DC power supply voltage available is expressed by the formula:

$$R_L \text{ Max} = \frac{Vps - 10}{20 \text{ mA DC}}$$

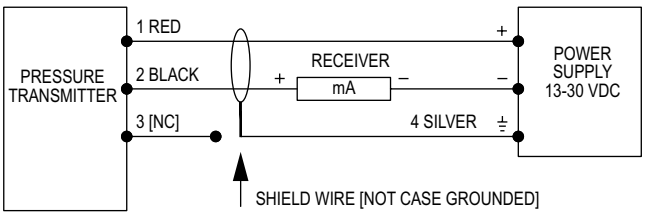


Figure A: Current output connection

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

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Hirschman DIN Connector with 4-20 mA When using cable version of -GH General Purpose Housing, black wire is negative [-] and red wire is positive [+]. When using optional Hirschman DIN Plug, remove top-center screw and lift off the terminal block assembly. Wire to terminals shown below in Figure B. For optional 4-pin M-12 connector, wire to pins as shown in Figure C.

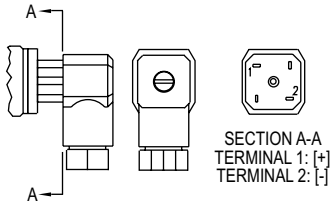

Figure B

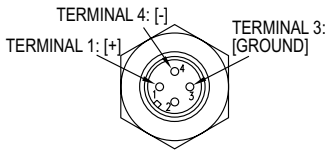

Figure C

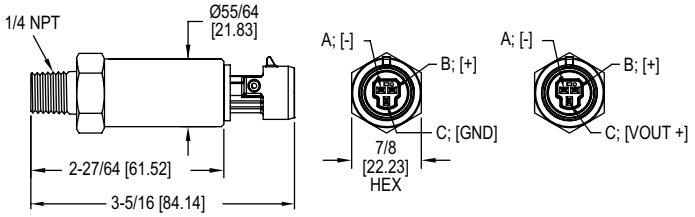

Figure D: Packard Connection

VOLTAGE (0-5, 1-5, 0-10, 1-6 or 2-10 VDC) OUTPUT OPERATION
(Other outputs contact the factory) See Figure E for connection of the power supply, transmitter and receiver.

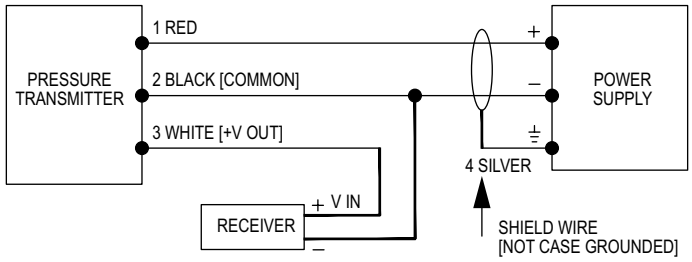

Figure E: Voltage output connection

Hirschman DIN Connector with Voltage Output 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 Hirschman DIN Plug, remove top-center screw and lift off the terminal block assembly. Wire to terminals shown below in Figure F. For optional 4-pin M-12 connector, wire to pins as shown in Figure G. If utilizing optional A-164 cable for M-12 connection, brown wire corresponds to pin #1, white #2, blue #3, and black #4.

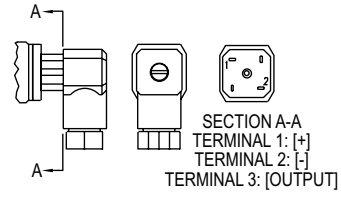

Figure F

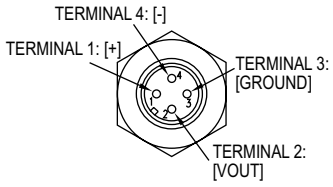

Figure G

RATIOMETRIC (0.5-4.5 VDC) OUTPUT OPERATION
(Other outputs contact the factory) See Figure K for connection of the power supply, transmitter and receiver.

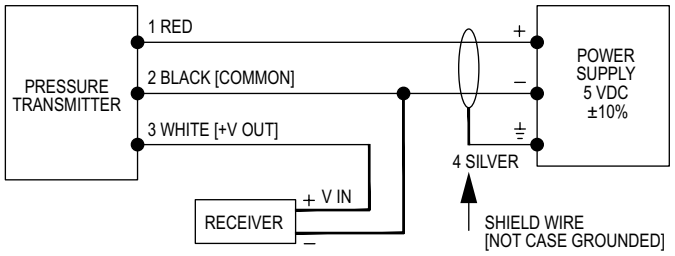

Figure K: Voltage output connection

General Purpose Housing with Ratiometric Output 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 Hirschman DIN Plug, remove top-center screw and lift off the terminal block assembly. Wire to terminals shown below in Figure H. For optional 4-pin M-12 connector, wire to pins as shown in Figure I. If utilizing optional A-164 cable for M-12 connection, brown wire corresponds to pin #1, white #2, blue #3, and black #4.

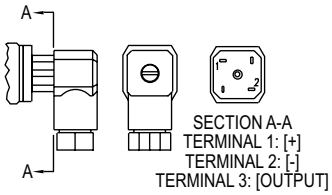

Figure H

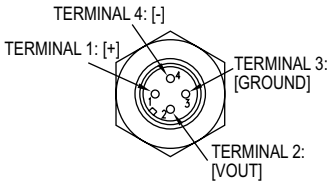

Figure I

Deutsche Connector with Voltage Output, Ratiometric and 4-20 mA
When using this cable version see Figure J for voltage output and ratiometric terminal connections. See Figure P for 4-20 mA terminal connections.

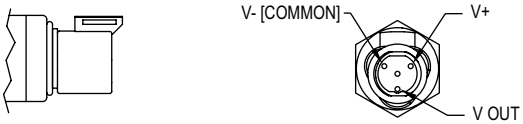

Figure J: Deutsche connection, voltage output

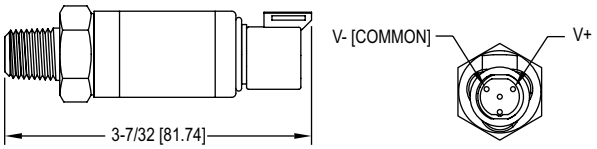

Figure P: Deutsche connection, 4-20 mA output

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.

CE APPROVAL
Note: Accuracy is increased to ±3.6% when a 10 V/m between 80-1000 mhz RF field is applied.

Note: Please do not touch, cover or puncture vent filter.

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