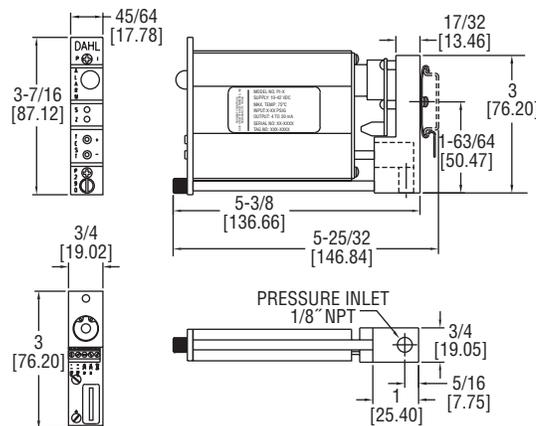




Model PI Pressure To Current Transducer

Specifications - Installation and Operating Instructions



The Model PI Pressure To Current Transducer converts a pneumatic input pressure to an accurately proportional output current with uncompromising accuracy and durability. The PI serves in high-density and panel-mounted applications. The rugged PI transducer offers a high density DIN rail adapters and is space saving with easy plug-in installation.

CALIBRATION

All PI transducers are fully calibrated at the factory to the output as ordered. It may be advisable to confirm that the calibration was maintained during shipment for maximum accuracy. Easily accessible span and zero screws are located on the front panel. They are multi-turn potentiometers with slip clutches at the ends of travel that can provide $\pm 20\%$ of span adjustability. Clockwise movement increases output on both potentiometers.

CAUTION This unit is only to be used with dry instrument air filtered to 40 micron. Excessive moisture or chemical contaminants can damage internal components.

CAUTION The PI Transducer can withstand over-pressurization of three (3) times the rated full scale without recalibration and four (4) times the full scale without failure.

CAUTION This unit can tolerate a maximum of 100 VDC at the input terminals indefinitely, although operation within the specifications is only guaranteed with power supplies between 10 and 42 VDC.

CAUTION Do not subject this transducer to a temperature above 180°F (82.2°C) or below -40°F (-40°C).

INSTALLATION/WIRING

To connect the DIN rail adapter to the transducer, match the connections together and tighten the screw to secure a snug fit. The PI is a "floating" transducer and consequently may tolerate a single ground anywhere in the 2-wire loop, with the single load placed anywhere as well. In most instances, the loads should be placed in the negative leg, although it isn't necessary. An earth ground can be placed on either end of the load, but may prefer to have the negative terminal of the supply earthed as well. Care must be taken to ensure the polarity of the input connections is correct regardless of where the loads or ground is placed. An inadvertent reversing of polarity will not damage the PI, but it will not function until the wiring is corrected. Proper wiring on the adapter uses the positive out and the negative out terminals. The positive end of the power supply is connected to the positive out terminal. The negative end of the power supply is connected to the negative out terminal. For measurements, place the reader between the positive out and the negative out wires. In all instances, current flow enters at the positive terminal and exits at the negative terminal. Refer to the figure to the on the next page.

SPECIFICATIONS

Service: Clean dry air filtered to 40 microns.

Input Signal: 3 to 15 psig and 3 to 27 psig.

Input Capacitance: 2 wire: 700 f, standard; Voltage: 5k f min.

Output: 2-wire: 4 to 20 mA.

Linearity: $\pm 0.15\%$ of span.

Hysteresis: $\pm 0.15\%$ of span max.

Accuracy: $\pm 0.15\%$ of span guaranteed; $\pm 0.10\%$ of span typical. Includes combined effects of linearity, hysteresis and repeatability errors.

Repeatability: $\pm 0.10\%$ of span; $\pm 0.03\%$ of span typical.

Response Time: 10 m sec to 99% of step change.

Power Requirements: 10 to 42 VDC.

Temperature Stability: Span and Zero: $\pm 0.007\%$ of span per °F max. deviation from 77°F calibration.

Temperature Limits:

Operating: -40 to 167°F (-40 to 75°C);

Storage: -60 to 185°F (-50 to 85°C).

Calibration Adjustments: Non-interactive, multi-turn span and zero potentiometers with approximately $\pm 10\%$ of span adjustment range.

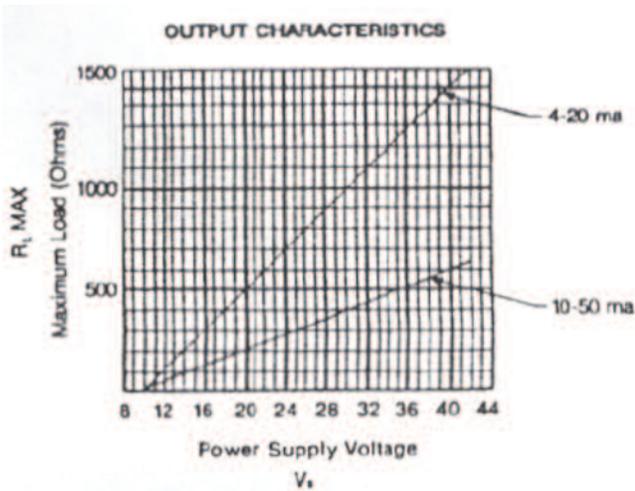
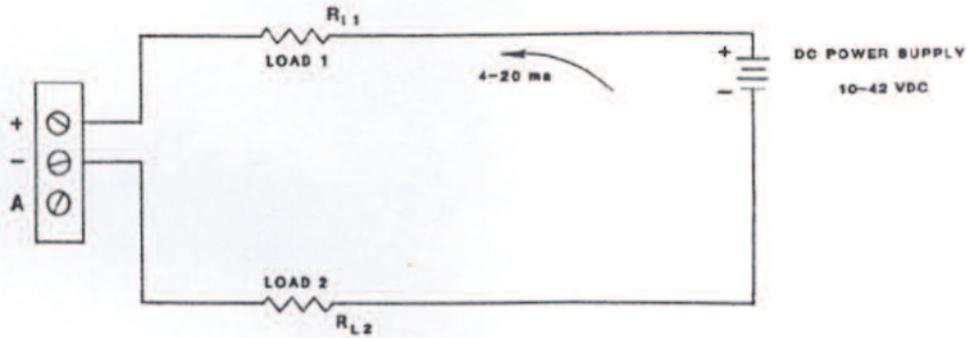
Connections:

Signal Air: 1/8" NPT female;

Electrical Wiring: Miniature terminal block accepts solid or stranded wire up to 14 AWG.

Weight: 0.5 lb (0.2 kg).

2-WIRE CHARACTERISTICS



$$R_L \text{ MAX} = \frac{V_s - 10v}{I \text{ MAX}}$$

MAINTENANCE/REPAIR

Upon final installation of the Model PI Pressure To Current Transducer, no routine maintenance is required. The Series PI is not field serviceable and should be returned if repair is needed. Field repair should not be attempted and may void warranty.

WARRANTY/RETURN

Refer to "Terms and Conditions of Sales" in our catalog and on our website. Contact customer service to receive a Return Goods Authorization number before shipping the product back for repair. Be sure to include a brief description of the problem plus any additional application notes.