Instructions
Differential Pressure Mini-Transmitter (-T5 & -T6)

Orange Research
140 Cascade Boulevard, Milford, Connecticut 06460
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www.orangeresearch.com

Orange Research is a leading supplier of differential pressure instruments in the form of gauges, switches and transmitters. They are based on sensitive sensors built within rugged, reliable pressure housings which make them popular for the most demanding environments. They withstand severe weather, vibration, shock and high line pressures. They are popular in oil & gas, hydraulics and chemicals markets along with the newer high tech industries. Popular applications include filtration, level and flow.

CAUTION: Do not exceed the maximum operating pressures listed on the body label. Use only with fluids or gases compatible with the instrument's wetted parts.

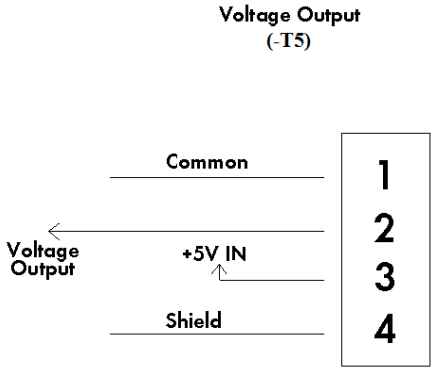
HOW IT WORKS: Pressure from two separate points acts against each side of a spring-loaded diaphragm/ magnet assembly. The pressure difference between these two points causes displacement of the diaphragm position. A Hall Effect sensor picks up the movement of the magnet and generates an electrical signal that is processed by the digital electronics, resulting in a voltage or current output.

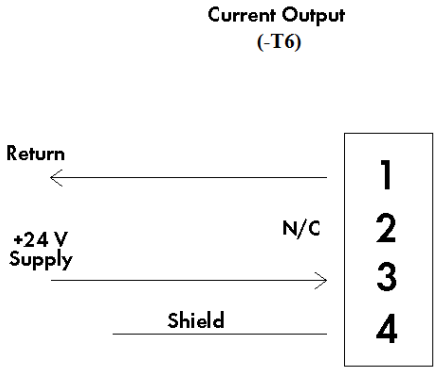
MECHANICAL INSTALLATION: Check maximum operating pressure for the model series you are using, listed on the instrument body label. Check instrument to identify *HI* and *LO* markings identifying the high and low pressure ports and connect piping accordingly. The transmitter can be stored and used within the temperature limits of 5°F to 175°F. Mount the transmitter where vibration is at a minimum. Install NPT fittings with sealing tape or other non-migrating sealant on the threads prior to installation. It is recommended that the instrument be installed above the pressure source to allow drainage and removal of particulate.

See wiring diagram and transmitter connector sections for all electronic wiring connections. Mating connectors are included.

IMPORTANT: *Because of its magnetic movement, these instruments should not be mounted in direct contact with a steel surface to avoid calibration shift in the movement. Mount the instrument so that the body is at least 1" away from metal surfaces using non-magnetic spacers or an optional aluminum mounting bracket.*

WIRING DIAGRAMS:





Voltage input is 5VDC ± 5% for 0.5-4.5VDC output devices.

Pin
1: Gnd (black)
2: Out (white)
3: 5V Input (red)
4: Shield - connect this pin to System Ground for optimum EMI/RFI protection.

Pin
1: Return (black)
2: No Connection (white)
3: 24V Positive Supply (red)
4: Shield - connect this pin to Return for optimum EMI/RFI protection.

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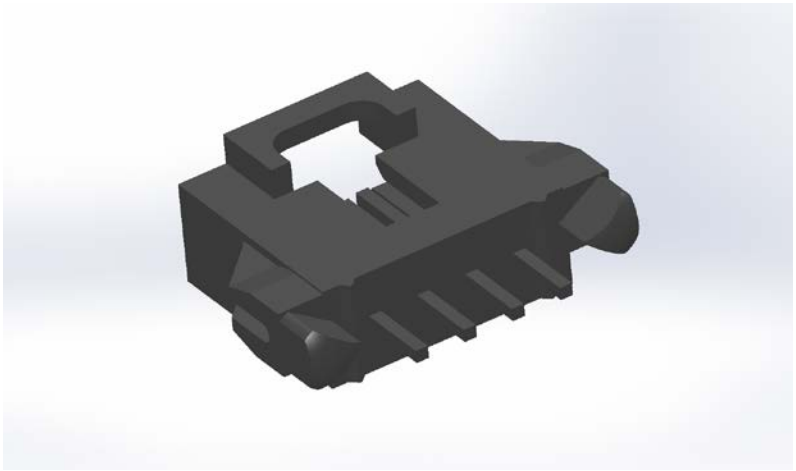
Transmitter Connector:

Molex receptacle: 50-57-9404 (housing), 16-02-0103 (terminals)

Mating Connector Included:

Molex header: P/N 70545-0038 (.100 centers)



The mini transmitter is calibrated and sealed at the factory. There are no field accessible adjustments on the transmitter mother board.