





ECONOMY ULTRA-LOW PRESSURE SENSOR

EUP Series

The EUP Ultra-Low Pressure Transducer can be used to measure positive, negative or differential pressure in the ranges of 0.1”wc to 0.4”wc and 25 Pa to 100 Pa. The highly accurate sensor is ideal for monitoring pressure of clean dry air or other inert gases. The pressure sensor technology is based on thermal flow measurement of gas through a micro-flow channel within the sensor chip, which results in superior sensitivity for ultra low pressures. The extremely low gas flow through the sensor ensures high immunity to dust contamination, humidity and long tubing. The device features field selectable current or voltage output signal types and can be set for unidirectional or bidirectional pressure measurements for the most flexible application. Typical HVAC applications include monitoring of filter differential pressure or clean room pressure. The output signal is factory calibrated and temperature compensated for highest start- up accuracy and trouble-free operation.

PRODUCT HIGHLIGHTS

* Ranges between 0.1”W.C. an 0.4”W.C. (25 Pa and 100 Pa)
* 6 selectable pressure ranges
* Polycarbonate enclosure with hinged and gasketed cover

ENGINEERING SPEC’S

* Shall be IP65 (NEMA 4X) with a UL94-V0 rated enclosure
* External mounting tabs must be slotted & tapered away from enclosure to ease field installation
* Enclosure shall be complete with neoprene gasket for duct to enclosure seal
* Enclosure shall be complete with threaded (1/2 NPT and/or M16) conduit connection
* Cover must be hinged and securely attached in the open position
* Operating range must be 0 to 50°C (32 to 122°F), 5 to 95 %RH, non-condensing
* Cover must contain security screw as extra protection from opening
* Product shall be CE approved







SPECIFICATIONS

|  |  |
| --- | --- |
| DESCRIPTION | ENGINEERING SPEC |
| PRESSURE RANGES | ±0.1” / 0 – 0.1 “W.C.  ±0.2” / 0 – 0.2 “W.C.  ±0.4” / 0 – 0.4 “W.C.  ±25 / 0 – 25 Pa  ±50 / 0 – 50 Pa  ±100 / 0 – 100 Pa |
| ACCURACY | ±1% F.S.O. (except for Units with -2 suffix ±2% F.S.O.) |
| OFFSET STABILITY | < 0.1% F.S.O. / year |
| RESPONSE TIME | 250 ms |
| THERMAL EFFECTS | ±0.2% of reading / 10°C (-20 to 85°C) typical |
| COMPENSATED RANGE | -25 to 85°C (-13 to 185°F) |
| PROOF PRESSURE | 2 bar, 200,000 Pa, 803.729” W.C. (30 PSI) |
| BURST PRESSURE | 5 bar, 500,000 Pa, 2009.32” W.C. (75 PSI) |
| MEDIA COMPATIBILITY | Dry air or inert gas |
| POWER SUPPLY | 24 Vac/dc ±20% (non-isolated half-wave rectified) |
| SUPPLY CURRENT | 10 mA for voltage output, 20 mA for current output |
| PROTECTION CIRCUITRY | Reverse voltage protected and output limited |
| OUTPUT SIGNAL | 4-20 mA (3-wire) or 0-10 Vdc (field selectable) |
| OUTPUT DRIVE CAPABILITIES | Current: 500Ω max @ 24 Vdc  Voltage: 10KΩ min |
| OPERATING CONDITIONS | 0 to 50°C (32 to 122°F), 5 to 90 %RH, non-condensing |
| STORAGE CONDITIONS | -20 to 85°C (-4 to 185°F) |
| WIRING CONNECTIONS | Screw terminal block (14 to 22 AWG) |
| PRESSURE CONNECTION | Barbed ports for 1/8” – 3/16” ID flexible tubing |
| CONDUIT CONNECTION | ½” NPT conduit or cable gland |
| ENCLOSURE | Polycarbonate UL94-V0, IP65 (NEMA 4X)  F style includes thread adapter (1/2” NPT to M16) and cable gland fitting |
| APPROVALS | CE, RoHS |
| COUNTRY OF ORIGIN | Canada |