ULTRA LOW PRESSURE TRANSMITTER

UP SERIES

The Ultra Low Pressure Transducer is used to measure diff­erential pressure up to 1”wc or 250 Pa and transmit via Analog and BACnet® Communications. It combines precision high sensitivity silicon sensing capabilities and the latest ASIC technology to substantially reduce o­ffset errors due to changes in temperature, stability to warm-up, long term instability and position sensitivity. It is ideal for monitoring pressure for air or other clean inert gas. It features bi-directional pressure measurement, an on-board auto-zero function, a backlight LCD to display the pressure value and an alarm relay with variable trip points. The device is field-configurable via the local menu or the BACnet® connection. A weatherproof Polycarbonate enclosure with a hinged and gasketed cover is provided for ease of installation.

PRODUCT HIGHLIGHTS

• Measure differential pressure up to 1” WC or 250 Pa

• provide either an analog or BACnet® compatible signal to a building automation system.

• LCD with user menu

* Four selectable pressure ranges
* RS-485 network with either BACnet® protocol
* Onboard auto zero function
* Alarm output with adjustable high and low alarms
* Weatherproof Enclosure

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

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| DESCRIPTION | ENGINEERING SPEC |
| PRESSURE RANGES | UPB1B: ±1 “WC or ±250 Pa  UPB2B: ±0.25 “WC or ±60 Pa  UPB1A: ±1”, 0-1”, ±0.5”, 0-0.5 “WC, ±250, 0-250, ±125, 0-125 Pa  UPB2A: ±0.25”, 0-0.25”, ±0.125”, 0-0.125 “WC, ±60, 0-60, ±30, 0-30 Pa |
| ACCURACY | ±1% F.S. of selected range @ 22°C (72°F) including hysteresis, non-linearity and repeatability |
| STABILITY | ±1% FS max (1 year) |
| THERMAL EFFECTS | ±2% F.S. maximum, 10 to 40°C (50 to 104°F) |
| RESPONSE TIME | BACnet®: 1 to 60 seconds, menu or BACnet® selectable  Analog: 5 or 30 seconds, switch selectable |
| MEDIA COMPATIBILITY | Dry air and inert gas |
| PROOF PRESSURE | UPB1: 100 “WC (24.9 kPa)  UPB2: 40 “WC (9.96 kPa) |
| BURST PRESSURE | UPB1: 200 “WC (49.8 kPa)  UPB2: 80 “WC (19.9 kPa) |
| ZERO ADJUSTMENT | Pushbutton auto-zero |
| POWER SUPPLY | 24 Vac/dc, ±10% |
| CONSUMPTION | Analog: 37 mA maximum  BACnet®: 52 mA maximum |
| PROTECTION CIRCUITRY | Reverse voltage protected and output limited |
| INPUT VOLTAGE EFFECT | Negligible over specified operating range |
| LCD DISPLAY | Size: 38.1 x 16.5 mm (1.5” x 0.65”)  Digit Height: 11.43 mm (0.45”)  Symbols: “WC, Pa  Backlight: Enable/disable/auto |
| OUTPUTS | 3-Wire: 4-20 mA, 0-5 or 0-10 Vdc, field selectable |
| OUTPUT DRIVE | Current: 750Ω max  Voltage: 2000Ω min |
| PRESSURE CONNECTIONS | Barbed ports for 1/8” to 3/16 ID tubing |
| WIRING CONNECTIONS | Screw terminal block (14 to 22 AWG) |
| ALARM FUNCTION | Relay Output: N.O. contact, 2 Amps @ 120 Vac or 30 Vdc  Relay Trip Point: Upper and lower trip levels adjustable over the pressure range  Relay Delay: 0 to 10 minutes (menu selectable) |
| BACNET COMMUNICATION | Communications: 2 wires RS-485, BACnet® MS/TP protocol  Baud Rate: Locally set to 9600, 19200, 38400, or 76800  MAC Address Range: Locally set to 0-127 (factory default is 3) |
| OPERATING CONDITIONS | 0 to 50°C (32 to 122°F), 5 to 95 %RH, non-condensing |
| STORAGE TEMPERATURE | -30 to 60°C (-22 to 140°F) |
| ENCLOSURE | B: Grey Polycarbonate UL94-V0, IP65 (NEMA 4X)  F: Same as B, with thread adapter (1/2” NPT to M16) and cable gland fitting |
| CONDUIT CONNECTION | Access hole for 1/2” NPT conduit or cable gland |
| APPROVALS | CE, RoHS |
| COUNTRY OF ORIGIN | Canada |