

PX3 SERIES

Differential Pressure/Air Velocity Transducer



PX3

The PX3 transducer can measure either air pressure or velocity with the flip of a switch. The PX3 is available in three installation configurations: duct, panel or universal. Duct and panel models have two pressure and velocity options: 0-1" WC / 0-3,000 ft/min or 1-10" WC / 3,000-6,000 ft/min with four field-selectable sub-ranges. The universal model comes in one pressure/velocity range: 0-10" WC / 0-7,000 ft/min with seven field-selectable sub-ranges for pressure and eight for velocity. All variants are available with and without display. The PX3 has an IP65/NEMA 4 environmental rating and a 5-year limited warranty.

SPECIFICATIONS

| GENERAL | |
|---------------------|---|
| Media Compatibility | Dry air or inert gas |
| Input Power | Three-wire Volt mode: 24 Vac or 12-30 Vdc* Two-wire mA mode: 12-30 Vdc* |
| Output Power | Field-selectable: 2-wire, loop-powered 4-20 mA** (DC only, clipped and capped), 24 Vac/dc or 3-wire 0-5V/0-10V*** |

| PRESSURE RANGES | |
|-------------------|--|
| 01 Pressure Range | Pressure Mode: Unidirectional: 0.1/0.25/0.5/1.0 in. WC FS, switch selectable Bidirectional: $\pm 0.1/\pm 0.25/\pm 0.5/\pm 1.0$ in. WC FS, switch selectable Unidirectional: 25 Pa/50 Pa/100 Pa/250 Pa, FS, switch selectable Bidirectional: ± 25 Pa/ ± 50 Pa/ ± 100 Pa/ ± 250 Pa, FS, switch selectable Velocity Mode: 500/1,000/2,000/3,000 ft/min 2.5/5/10/15 m/s |
| 02 Pressure Range | Pressure Mode: Unidirectional: 1.0/2.5/5.0/10 in. WC FS, switch selectable Bidirectional: $\pm 1.0/\pm 2.5/\pm 5.0/\pm 10$ in. WC FS, switch selectable Unidirectional: 0.250 kPa/0.500 kPa/1.000 kPa/2.500 kPa, FS, switch selectable Bidirectional: ± 0.250 kPa/ ± 0.500 kPa/ ± 1.000 kPa/ ± 2.500 kPa, FS, switch selectable Velocity Mode: 3,000/4,000/5,000/6,000 ft/min 15/20/25/30 m/s |

Reduce field failures

Excellent tolerance to overpressure & vibration reduces field failures

High accuracy

High accuracy digital sensor with seven selectable pressure and eight velocity sub-ranges, maintains calibration and reduces callbacks

Maintenance free

High reliability sensor technology for long-term, maintenance-free operation

Reduce setup

Selectable ranges and scales reduce setup time and number of models to stock

Water-resistant housing

IP65/NEMA 4 housing allows for mounting in wash-down locations

Circuit protection

Circuit protection avoids damage due to incorrect input wiring

APPLICATIONS

- Duct static pressure (Pressure mode)
- Building or room pressure (Pressure mode)
- Filter status (Pressure mode)
- Air flow measurement (Velocity mode)

| | |
|-------------------|---|
| 05 Pressure Range | Pressure Mode: Unidirectional: 0.1/0.25/0.5/1.0/2.5/5/10 in. WC FS, switch selectable Bidirectional: $\pm 0.1/\pm 0.25/\pm 0.5/\pm 1.0/\pm 2.5/\pm 5/\pm 10$ in. WC FS, switch selectable Unidirectional: 25Pa/50Pa/100Pa/250Pa/0.5kPa/1kPa/2.5kPa FS, switch selectable Bidirectional: ± 25 Pa/50Pa/100Pa/250Pa/0.5kPa/1kPa/2.5kPa FS, switch selectable Velocity Mode: 500/1000/2000/3000/4000/5000/6000/7000 ft/min 2.5/5/10/15/20/25/30/35 m/s |
|-------------------|---|

| SENSOR | |
|------------------------|--|
| Response Time | Standard: T95 in 20 sec, Fast: T95 in 2 sec, DIP switch selectable |
| Mode | Unidirectional or bidirectional, DIP switch selectable |
| Display (option) | Pressure mode: Signed 3-1/2 digit LCD, indicates pressure, overrange indicator Velocity mode: Signed 4-1/2 digit LCD, indicates velocity, overrange indicator |
| Proof Pressure | 3 psid (20.6 kPa) |
| Burst Pressure | 5 psid (34.5 kPa) |
| Pressure Mode Accuracy | $\pm 1\%$ FS (combined linearity and hysteresis) |
| Velocity Mode Accuracy | ± 90 ft/min (± 0.45 m/s) plus 5% of measured value**** |
| Temperature Effect | 1" (250 Pa) models: 0.05%/°C; 10" (2.5 kPa) models: 0.01%/°C (Relative to 25 °C) 0 to 50 °C (32 to 122 °F) |
| Zero Drift (1-year) | 1" (250 Pa) models: 2.0% max.; 10" (2.5 kPa) models: 0.5% max. |



SPECIFICATIONS (CONT.)

| | |
|-----------------------|---|
| Zero Adjust | Pushbutton auto-zero and digital input (2-pos terminal block) |
| Operating Environment | 0 to 60 °C (32 to 140 °F) |
| Altitude of Operation | 0 to 3000 m |
| Pollution Deg. | 2 |
| Humidity Range | 100% RH, non-condensing |
| Mounting Location | For indoor use only. |
| Fittings | Brass barb; 0.24" (6.1 mm) o.d. |
| Environmental Rating | IP65, NEMA 4 |
| Flammability Rating | UL 94 5VA fire retardant ABS, plenum rated |

WARRANTY

| | |
|------------------|---------|
| Limited Warranty | 5 years |
|------------------|---------|

AGENCY APPROVALS



EMC Conformance: EN 61000-6-3 and A1 Class B, EN 61000-6-1.

* Class 2/II power source.

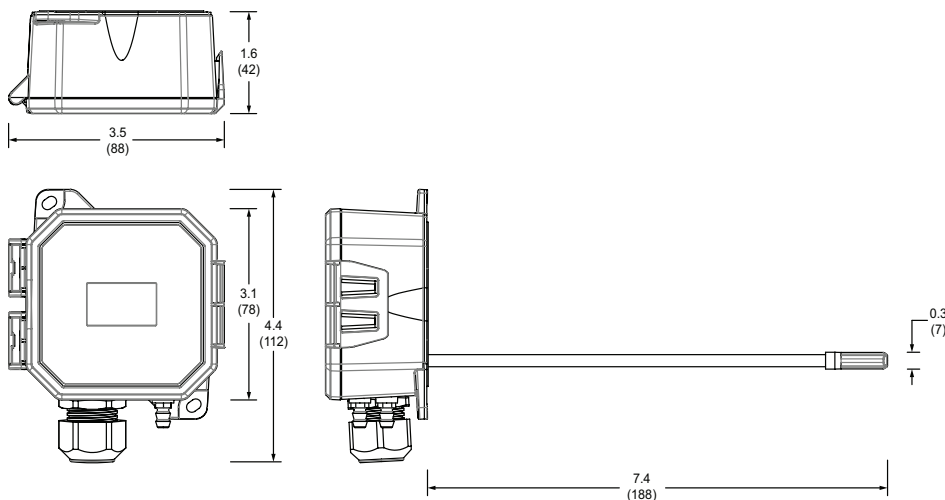
** Minimum input voltage for 4 to 20 mA operation: 250 Ω loop = 12 Vdc; 500 Ω loop = 19 Vdc.

*** Minimum load resistance for Volt operation: 5 kΩ.

**** For measured values between 200 and 7000 ft/min (1 and 35 m/s).

DIMENSIONAL DRAWING

in. (mm)

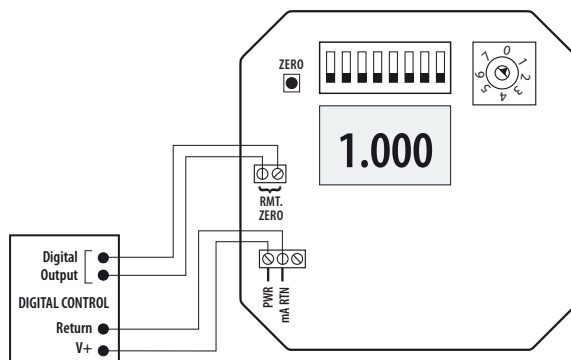


ORDERING INFORMATION

| Enclosure | Local Display | NIST Certificate | Range |
|--|-----------------------------------|--------------------------|--|
| PX3 <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| D = Duct P = Panel | L = LCD Display X = No Display | N = NIST X = None | 01 = Pressure: 0 to 1 in. WC / 0 to 250 Pa Velocity: 0 to 3000 ft/min / 0 to 15 m/s 02 = Pressure: 0 to 10 in. WC/0 to 2500 Pa Velocity: 0 to 6000 ft/min / 0 to 30 m/s |
| Example: PX3 <input type="checkbox"/> D <input type="checkbox"/> L <input type="checkbox"/> X <input type="checkbox"/> 01 | | | |

WIRING DIAGRAM

2-wire, 4-20 mA Current Loop Output



WIRING DIAGRAM

3-wire, 0-5 V/0-10 V Voltage Output

