PX3 SERIES

Differential Pressure/Air Velocity Transducer

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 ranges: 0-1 in. WC / 0-3,000 ft/min or 1-10 in. WC / 3,000-6,000 ft/min with four field-selectable sub-ranges. The universal model comes in one pressure/velocity range: 0-10 in. WC / 0-7,000 ft/min with seven field-selectable sub-ranges for pressure and eight for velocity. All variants are available with Bluetooth® wireless technology and optional display. Standard variants (without Bluetooth wireless technology) are available for Range 5. The PX3 has an IP65/NEMA 4 environmental rating and a 5-year limited warranty.

The Veris Sensors App provides the ability to connect to a device and configure a variety of field-selectable parameters remotely from a smartphone via Bluetooth wireless technology. The app allows users to create and store commonly used parameters that will reduce commissioning time and provide assurance that all parameters are properly configured with no call backs. The app can also create a trend log while connected, providing important data for troubleshooting purposes. iOS® users can download the app through the iOS App Store on their smart device. Android users can download the app through the Google Play™ store. For instructions on downloading and operating the app, see the Veris Sensors App User's Guide and Veris Sensors App Quick Start Guide available on the Veris website at www.veris.com.

Note: This product is intended for use in HVAC and building environmental control applications. It is not intended for direct medical monitoring of patients.

SPECIFICATIONS

GENERAL

Media Compatibility	Dry air or inert gas
Input Power[1]	Three-wire Volt mode: 24 Vac ±20% or 12-30 Vdc Two-wire mA mode: 12-30 Vdc
Output Power	Field-selectable: 2-wire, loop-powered 4-20 mA Minimum input voltage for 4 to 20 mA operation: 250 Ω loop = 12 Vdc; 500 Ω loop = 19 Vdc (DC only, clipped and capped), 24 Vac/dc or 3-wire 0-5V/0-10V Minimum load resistance for Volt operation: 5 kΩ

SELECTABLE RANGES

Range 1 Selectable Subranges	Pressure Mode: Unidirectional: 0.1/0.25/0.5/1 in. WC, switch selectable Bidirectional: ±0.1/±0.25/±0.5/±1 in. WC, switch selectable Unidirectional: 25/50/100/250 Pa, switch selectable Bidirectional: ±25/±50/±100/±250 Pa, switch selectable Velocity Mode: 500/1,000/2,000/3,000 ft/min 2.5/5/10/15 m/s

Wireless configuration

View and configure all field-selectable parameters via smartphone. No ladder necessary for duct mount applications.

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 field failures

Excellent tolerance to overpressure and vibration reduces field failures

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)

Range 2 Selectable Subranges	Pressure Mode: Unidirectional: 1.0/2.5/5/10 in. WC, switch selectable Bidirectional: ±1.0/±2.5/±5/±10 in. WC, switch selectable Unidirectional: 250/500/1,000/2,500 Pa, switch selectable Bidirectional: ±250/±500/±1,000/±2,500 Pa, switch selectable Velocity Mode: 3,000/4,000/5,000/6,000 ft/min 15/20/25/30 m/s
Range 5 Selectable Subranges	Pressure Mode: Unidirectional: 0.1/0.25/0.5/1/2.5/5/10 in. WC, switch selectable Bidirectional: ±0.1/±0.25/±0.5/±1/±2.5/±5/±10 in. WC, switch selectable Unidirectional: 25/50/100/250/500/1,000/2,500 Pa, switch selectable Bidirectional: ±25/±50/±100/±250/±500/±1,000/±2,500 Pa, switch selectable Velocity Mode: 500/1,000/2,000/3,000/4,000/5,000/6,000/7,000 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	1.44 psid (9,953 Pa)
Burst Pressure	4.33 psid (29,860 Pa)
Pressure Mode Accuracy[2]	±1% FS (combined linearity and hysteresis)
Velocity Mode Accuracy[3]	±90 ft/min (±0.45 m/s) plus 5% of measured value

Note: The Bluetooth word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. Any use of such marks is under license.

SPECIFICATIONS (CONT.)

TEMPERATURE EFFECT

Temperature Effect	0.00048 in. WC/°C (0.12 Pa/°C) relative to 25 °C, 0 to 50 °C (32 to 122 °F)
Zero Drift (1-year)[4]	+/-5.0 Pa (+/-0.020 in WC) max.
Zero Adjust	Pushbutton auto-zero and digital input (2-pos terminal block)
Operating Env.[5]	-20 to 60 °C (-4 to 140 °F)
Altitude of Operation	0 to 3,000 m
Humidity Range	100% RH, non-condensing
Mounting Location	For indoor or outdoor use (display will not function below 0 °C (32 °F))
Fittings	Brass barb; 0.24" (6.1 mm) o.d.
Bluetooth Frequency Range	2.402 to 2.480 GHz (Bluetooth version 4.2, enabled by DIP switch)
Max. Output Power	0 dBm
Environmental Rating	IP65, NEMA 4, RoHs, REACH, RoHs (China)
Flammability Rating	UL 94 5VA fire retardant polycarbonate, plenum rated

WARRANTY

Limited Warranty	5 years

AGENCY APPROVALS

Agency Approvals	EN 61000-6-3 and A1 Class B, EN 61000-6-1, EN 61326-1, UL/IEC/EN 61010-1, EN 300 328 V2.2.2, EN 301 489-1 V2.1.1, FCC 15/ICES 003, UKCA (UK), RCM (Australia)

1. Class 2/II power source.
2. Example: If 1 in. WC is the selected range in bi-directional mode, the measurement span ranges from -1 in. WC to +1 in. WC = 2 in. WC.
3. For measured values between 200 and 7000 ft/min (1 and 35 m/s).
4. Can be compensated for using the Zero Reset function.
5. Display will not function below 0 °C (32 °F).

ORDERING INFORMATION

Example:

PX3 | D | L | X | 0 | 2 | |

Example:

PX3 | U | L | N | 0 | 5 | |

*8-point calibration

*16-point calibration

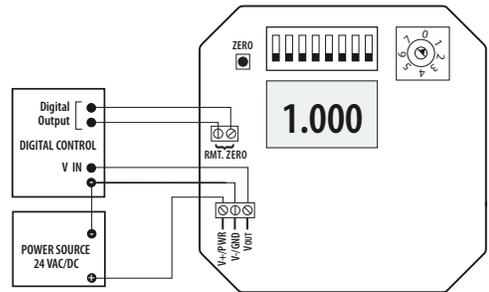## WIRING DIAGRAM
2-wire, 4-20 mA Current Loop Output
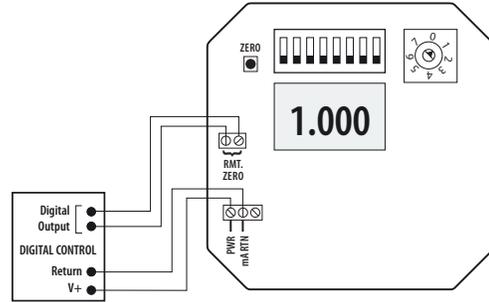
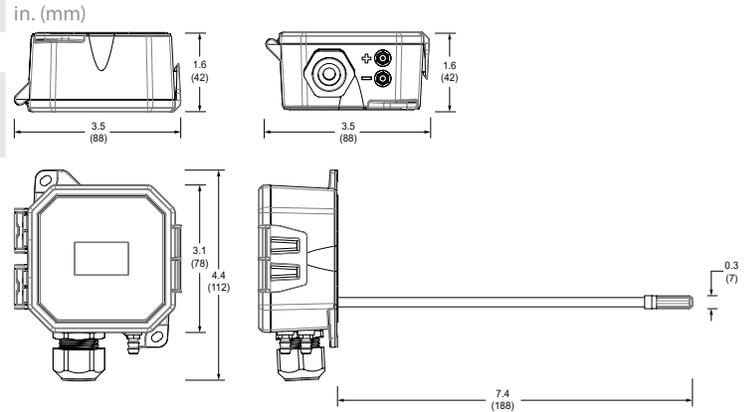## WIRING DIAGRAM
3-wire, 0-5 V/0-10 V Voltage Output

DIMENSIONAL DRAWING
in. (mm)

ACCESSORIES
VFXP Series Air Velocity Measurement Probe*
Velocity Pitot Tubes, 8-5/8", 12-5/8", 18-5/8" (AA18, AA19, AA20)*
Static-04 Pick-up - 4" Duct Static Pickup Probe (AA06)
Static-08 Pick up - 8" Duct Static Pickup Probe) (AA07)
Wall Plate Remote Pickup (AA56)

VFXP Series

AA18, AA19, AA20

AA06

AA07

AA56

*For use with the PX3P (panel) and PX3U (universal) models in Velocity mode only.

Note: The PX3P (panel) and the PX3U (universal) models used in velocity mode, require the use of a VFXP Series air velocity/measurement probe or AA18, AA19 or AA20 velocity pitot tubes; sold separately. When using the VFXP Series, additional tubing, adapters or clamps should be made available by the customer and may be necessary depending upon application. The PX3 Series barb fittings support 5mm tubing.