

Heavy Duty Pressure Transducers

PX3 Series, 1 bar to 50 bar | 15 psi to 700 psi

Table 1. Electrical Specifications

| Characteristic | Parameter |
|--|---|
| Supply voltage: ratiometric voltage output: 5 Vdc 3.3 Vdc current output: -40°C to 100°C >100°C to 125°C | 5 Vdc \pm 0.25 Vdc 3 Vdc \pm 0.25 Vdc 8 Vdc to 30 Vdc 8 Vdc to 25 Vdc |
| Over voltage and reverse voltage: ratiometric voltage output current output | \pm 16 Vdc \pm 35 Vdc |
| Current consumption: 5 Vdc supply 3.3 Vdc supply | 3.0 mA max. 1.6 mA to 2.1 mA |
| Short circuit protection ¹ | yes |
| Nominal output transfer function: 5 Vdc supply 3.3 Vdc supply 8 Vdc to 30 Vdc supply | 0.5 Vdc to 4.5 Vdc (ratiometric to supply) 0.33 Vdc to 2.97 Vdc (ratiometric to supply) 4 mA to 20 mA |

¹ Short circuit protection between output pin and ground, and output pin and supply point. Not applicable to 4 mA to 20 mA output products.

Table 2. Performance Specifications (At 25°C [77°F] and under unless otherwise noted.)

| Characteristic | Parameter |
|---|--|
| Operating temperature range ¹ | -40°C to 125°C [-40°F to 257°F] |
| Storage temperature range ¹ | -40°C to 125°C [-40°F to 257°F] |
| Compensated temperature range | -40°C to 125°C [-40°F to 257°F] |
| Total Error Band ² : -20°C to 85°C [-4°F to 185°F] <-20°C, >85°C [<-4°F, >185°F] | \pm 1.0 %FSS \pm 2.0 %FSS |
| Accuracy BFSL ³ | \pm 0.25 %FSS |
| Response time | <2 ms (10% to 90% step change in pressure) |
| Turn on time ⁴ | <7 ms |
| EMC rating ⁵ : surge immunity (all leads) electrostatic discharge radiated immunity fast transient burst immunity to conducted disturbances radiated emissions radiated immunity: ratiometric (voltage) output 4 mA to 20 mA (current) output | \pm 1000 V line to ground per IEC 61000-4-5 \pm 4 kV contact, \pm 8 kV air per IEC 61000-4-2 10 V/m (80 MHz to 1000 MHz) per IEC 61000-4-3 \pm 1 kV per IEC 61000-4-4 3 V per IEC 61000-4-6 40 dB μ V (30 MHz to 230 MHz), 47 dB μ V (230 MHz to 1000 MHz) per CISPR 11 200 V/m per ISO 11452-2 140 V/m per ISO 11452-2 |
| Insulation resistance ⁶ : ratiometric voltage output current output | >100 MOhm at 1500 Vdc >100 MOhm at 1000 Vdc |
| Dielectric strength | <1 mA at 1500 Vac (1 min) or 1800 Vac (1 s) |
| Load resistance ⁶ : ratiometric voltage output current output | >5 kOhm (V _{in} - 8) x 50 Ohm |
| Life | >10 million full scale pressure cycles over the calibrated pressure range |

¹ Dependent on seal material. See Figure 5.

² Total Error Band: The maximum deviation from the ideal transfer function over the entire compensated temperature and pressure range. Includes all errors due to offset, full scale span, pressure non-linearity, pressure hysteresis, pressure non-repeatability, thermal effect on offset, thermal effect on span, and thermal hysteresis.

³ Accuracy: The maximum deviation in output from a Best Fit Straight Line (BFSL) fitted to the output measured over the pressure range at 25°C [77°F]. Includes all errors due to pressure non-linearity, pressure hysteresis, and pressure non-repeatability.

⁴ Turn on time: Duration from power applied until first valid output for voltage output. Typical value for 4 mA to 20 mA output.

⁵ Tested using 1.5 m [59.1 in] long cable.



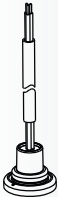
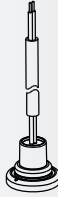




⁶ Tested in dry, non-ionized air.

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Figure 6. Nomenclature and Order Guide for Stainless Steel Versions Only

For example, **PX3AN1SS150PAAAX** defines a PX3 Series Heavy Duty Pressure Transducer, Metri-Pack 150, standard (UL V-O) electrical connector type, 1/4-18 NPT pressure port type, stainless steel housing body, silicone: -40°C to 125°C [-40°F to 257°F] seal material and temperature range, 150 psi pressure range, absolute pressure reference, ratiometric: 0.5 Vdc to 4.5 Vdc output transfer function, no special

| PX3 A N1 S S150P A A X | | | | | | | | | | Special |
|---|--|--|---|--|--|--|--|--|--|---------|
| Series | | | | | | | | | | X |
| PX3 Heavy Duty Pressure Transducer ¹ | | | | | | | | | | |
| Electrical Connector Type | | | | | | | | | | |
| A | Metri-Pack 150, Standard (UL V-0) ² | |  | | | | | | | |
| C | DIN (Male, EN 175301-803C) | |  | | | | | | | |
| | | PVC Cable ³ -40°C to 105°C [-40°F to 221°F] two or three 22 AWG wires | XLPE Cable ³ -40°C to 125°C [-40°F to 257°F] two or three 22 AWG wires | | | | | | | |
| 0.5 m [1.3ft] | K | L | | | | | | | | |
| 1.0 m [3.2 ft] | E | M | | | | | | | | |
| 2.0 m [6.6 ft] | F | N | | | | | | | | |
| 3.0 m [9.8 ft] | G | P | | | | | | | | |
| 5.0 m [16.4 ft] | H | Q | | | | | | | | |
|   | | Three-wire cable is required for ratiometric Output Transfer Functions AA , DA , AC and DC ; two-wire cable is required for Output Transfer Function CH . Three meter and five meter cables are only available with Output Transfer Function CH . | | | | | | | | |
| Pressure Port Type ⁴ | | | | | | | | | | |
| G1 | G1/4 A-G (ISO 1179-3) | |  | | | | | | | |
| M1 | M12 x 1.5 (ISO 6149-3) | |  | | | | | | | |
| N1 | 1/4-18 NPT (ANSI/ASME B1.20.1) | |  | | | | | | | |
| N2 | 1/8-27 NPT (ANSI/ASME B1.20.1) | |  | | | | | | | |
| Output Transfer Function | | | | | | | | | | |
| AA Ratiometric: 5.0 V, 10% to 90% Vs | | | | | | | | | | |
| DA Ratiometric: 5.0 V, 10% to 90% Vs (diagnostics on) ⁵ | | | | | | | | | | |
| AC Ratiometric: 3.3 V, 10% to 90% Vs | | | | | | | | | | |
| DC Ratiometric: 3.3 V, 10% to 90% Vs (diagnostics on) ⁵ | | | | | | | | | | |
| CH Current: 4 mA to 20 mA | | | | | | | | | | |
| Pressure Reference | | | | | | | | | | |
| A Absolute | | | | | | | | | | |
| S Sealed gage ⁶ | | | | | | | | | | |
| Pressure Range | | | | | | | | | | |
| bar | | | | | | | | | | |
| 001B | 1 bar | 016B | 16 bar | | | | | | | |
| 1.6B | 1.6 bar | 020B | 20 bar | | | | | | | |
| 002B | 2 bar | 025B | 25 bar | | | | | | | |
| 2.5B | 2.5 bar | 030B | 30 bar | | | | | | | |
| 004B | 4 bar | 035B | 35 bar | | | | | | | |
| 006B | 6 bar | 040B | 40 bar | | | | | | | |
| 008B | 8 bar | 046B | 46 bar | | | | | | | |
| 010B | 10 bar | 050B | 50 bar | | | | | | | |
| 012B | 12 bar | | | | | | | | | |
| psi | | | | | | | | | | |
| 015P | 15 psi | 250P | 250 psi | | | | | | | |
| 030P | 30 psi | 300P | 300 psi | | | | | | | |
| 050P | 50 psi | 500P | 500 psi | | | | | | | |
| 100P | 100 psi | 600P | 600 psi | | | | | | | |
| 150P | 150 psi | 667P | 667 psi | | | | | | | |
| 174P | 174 psi | 700P | 700 psi | | | | | | | |
| 200P | 200 psi | | | | | | | | | |
| Internal O-ring Material and Temperature Range ^{1,7} | | | | | | | | | | |
| H HNBR (Hydrogenated Nitrile Butadiene Rubber): -30°C to 125°C [-22°F to 257°F] | | | | | | | | | | |
| S Silicone: -40°C to 125°C [-40°F to 257°F] | | | | | | | | | | |
| Housing Body Material | | | | | | | | | | |
| S Stainless steel 9S30400) | | | | | | | | | | |

¹ Not all catalog listing combinations are shown. Custom configurations, such as varied cable lengths, end mating connectors, different O-ring materials, and different pressure ranges are available. Please contact Honeywell.

² Metri-Pack 150 mating connectors with shielded cable and three 22 AWG wires are available from Honeywell. Order part no. 3685301 for 1 m [3.2 ft] cable length and part no. 3685302 for 3 m [9.8 ft] cable length.

³ PVC Flame Retardant (FR) type cable is FT1 rated per IEC60332-1; XLPE non-flame retardant cable is FT2 rated per IEC60332-1.

⁴ See Table 6 for pressure port materials.

⁵ See page 3 for Diagnostics Mode information.

⁶ Sealed gage option only available in pressure ranges at or above 8 bar [119 psi].

¹ Not all catalog listing combinations are shown. Custom configurations, such as varied cable lengths, end mating connectors, different O-ring materials, and different pressure ranges are available. Please contact Honeywell.

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⁴ See Table 6 for pressure port materials.

⁵ See page 3 for Diagnostics Mode information.

⁶ Sealed gage option only available in pressure ranges at or above 8 bar | 100 psi.

⁷ See Table 6 for O-ring seal material media compatibility.

Mating Connector²

