# PX2 SERIES

**50069942**
*Issue J*

## Heavy Duty Pressure Transducers

PX2 Series, 1 bar to 70 bar | 100 kPa to 7 MPa | 15 psi to 1000 psi

## DESCRIPTION

Honeywell's PX2 Series Heavy Duty Pressure Transducers are a portfolio of configurable pressure sensors that use piezoresistive sensing technology with ASIC (Application Specific Integrated Circuit) signal conditioning in a stainless steel housing. The PX2 Series is fully calibrated and compensated for offset, sensitivity, temperature effects and non-linearity using the on-board ASIC. These transducers measure absolute, sealed gage, or vented gage pressure. The absolute versions have an internal vacuum reference and an output value proportional to absolute pressure, sealed gage versions have an internal pressure reference of one atmosphere at sea level, and vented gage versions measure pressure with respect to ambient pressure. They are RoHS compliant and are designed and manufactured according to ISO 9001 standards.

## VALUE TO CUSTOMERS

- Media compatibility: Common HFC (hydrofluorocarbon) refrigerants such as R410A and R134A, next generation low global warming potential (GWP) refrigerants such as R448A (Solstice® N40), R32 and R1234ZE, engine oil, petroleum-based hydraulic fluids, DOT 3 brake fluid, and dry air. For ammonia and other corrosive media, see Honeywell's SPT Series.
- Enhanced durability: The PX2 Series can operate in the rigorous environments commonly found in HVAC/R and air compressor applications. The sensor can survive at least 10 million pressure cycles and has an ingress protection rating up to IP69K.

## POTENTIAL APPLICATIONS

- Industrial: Refrigerant pressure monitoring in HVAC/R systems; air compressor system pressure
- Transportation: Air system monitoring; hydraulic oil pressure monitoring

The PX2 Series is not recommended for use with media involving water, saturated air such as steam and vapor, and ammonia.

## FEATURES

- Pressure range: 1 bar to 70 bar | 100 kPa to 7 MPa | 15 psi to 1000 psi
- Pressure reference: Absolute, sealed gage or vented gage
- Pressure port types: 7/16-20 UNF 1/4 in 45° Flare Female Schrader (SAE J512), 7/16-20 UNF 45° Flare Male (SAE J513), 7/16-20 UNF 37° Flare Male (SAE J514), G1/4 (ISO 1179-3), G1/8 (ISO 1179-3), M12 x 1.5 (ISO 6149-3), 1/4-18 NPT, 1/8-27 NPT, 9/16-18 UNF, (SAE J1926-3), or 7/16-20 UNF (SAE J1926-3)
- Electrical connector types: Metri-Pack 150 (UL 94 HB or V-0 options), Micro M12, DIN, Deutsch, or cable harness (1 m, 2 m, 3 m, or 5 m)
- Total Error Band: ±2.0 %FSS
- Operating and compensated temperature range: -40°C to 125°C [-40°F to 257°F]
- Response time: <2 ms
- Life: Minimum of 10 million cycles to operating pressure
- Output transfer function: Ratiometric, regulated or current
- Mechanical shock rating: 100 G per MIL-STD-202F, Method 213B, Cond. F




- Vibration rating: 20 G sweep, 10 Hz to 2000 Hz
- Ingress protection: Up to IP69K
- Radiated immunity protection: Up to 100 V/m (ISO 11452-2)
- Flame retardant options: UL 94 HB standard on all electrical terminations; UL 94 V-0 available upon request

**PORTFOLIO**

Honeywell offers a variety of heavy duty pressure transducers for potential use in aerospace, medical, transportation, agriculture, refrigeration, and industrial applications. To view the entire product portfolio, click here.



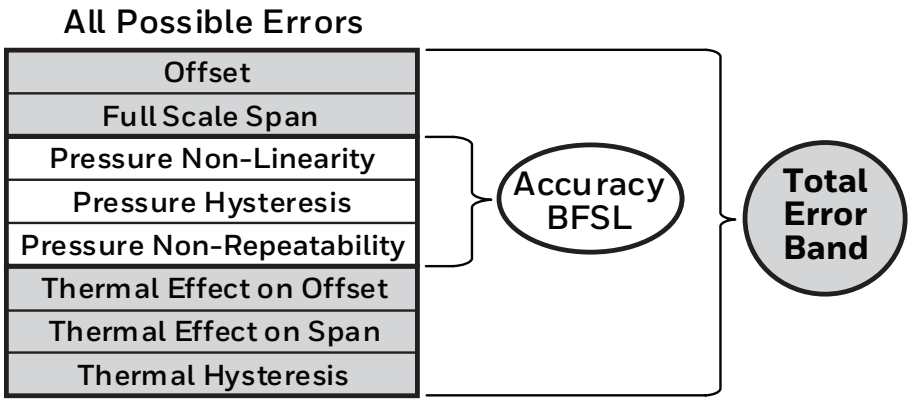
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**TABLE 1. PERFORMANCE SPECIFICATIONS[1]**

| CHARACTERISTIC | PARAMETER |
|---|---|
| Operating temperature range[2] | -40°C to 125°C [-40°F to 257°F] |
| Storage temperature range[3] | -40°C to 125°C [-40°F to 257°F] |
| Compensated temperature range[4] | -40°C to 125°C [-40°F to 257°F] |
| Overpressure minimum rating[5] | (See Table 3.) |
| Burst pressure minimum rating[6] | (See Table 3.) |
| Long term stability | ±0.5 %FSS[9] (1000 hr at 25°C [77°F]) |
| Accuracy[7] | ±0.25 %FSS[9] (See Figure 1.) |
| Offset error[8] | ±1 %FSS[9] |
| Total Error Band[10] | ±2 %FSS[9] (-40°C to 125°C [-40°F to 257°F]) (See Figure 1.) |
| Response time[11] | <2 ms |
| Turn on time[12] | <7 ms |
| Life[13] | minimum of 10 million cycles to operating pressure |

1 All specifications apply at 25°C and under operating conditions unless otherwise noted.
2 Operating Temperature Range: The temperature range over which the product will produce an output proportional to pressure but may not remain within the specified performance limits.
3 Storage Temperature Range: The temperature range over which the product may safely be exposed without excitation or pressure applied. Under these conditions the product will remain in specification after excursion to any temperatures within this range. Exposure to temperatures outside this range may cause permanent damage to the product.
4 Compensated Temperature Range: The temperature range (or ranges) over which the product will produce an output proportional to pressure within the specified performance limits.
5 Overpressure: The absolute maximum rating for pressure which may be safely applied to the product for it to remain in specification once pressure is returned to the operating pressure range. Exposure to higher pressure may cause permanent damage to the product.
6 Burst Pressure: The maximum pressure that may be applied to the product without causing escape of the pressure media. The product should not be expected to function after exposure to any pressure beyond the rated burst pressure. This rating is also the case burst rating of the product.
7 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. Includes all errors due to pressure non-linearity, pressure hysteresis, and non-repeatability.
8 Offset Error: the maximum deviation in the output signal obtained when the reference pressure is applied at 25°C relative to the ideal transfer function.
9 Full Scale Span (FSS): The algebraic difference between the output signal measured at the maximum (Pmax.) and minimum (Pmin.) limits of the pressure range.
10 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, repeatability, thermal effect on offset, thermal effect on span, and thermal hysteresis.
11 Response Time: The response time of the transducer is the maximum amount of time that the transducer will take for the transducer to output a change from 10% to 90% of full scale in response to a 0% to 100% full scale step input pressure range.
12 Turn On Time: Duration from power applied until first valid output.
13 Life may vary depending on the application in which transducer is used.

**FIGURE 1. TOTAL ERROR BAND (TEB)**

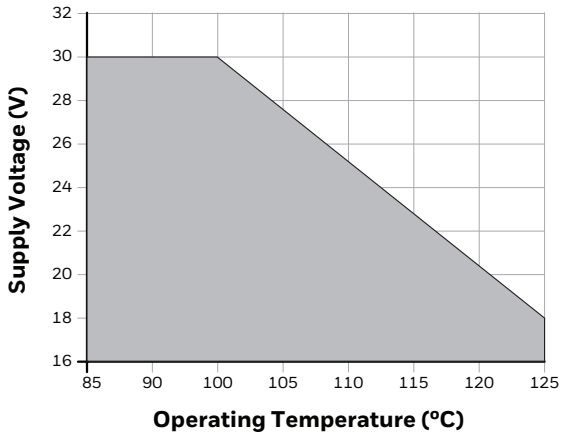


## TABLE 2. ELECTRICAL SPECIFICATIONS

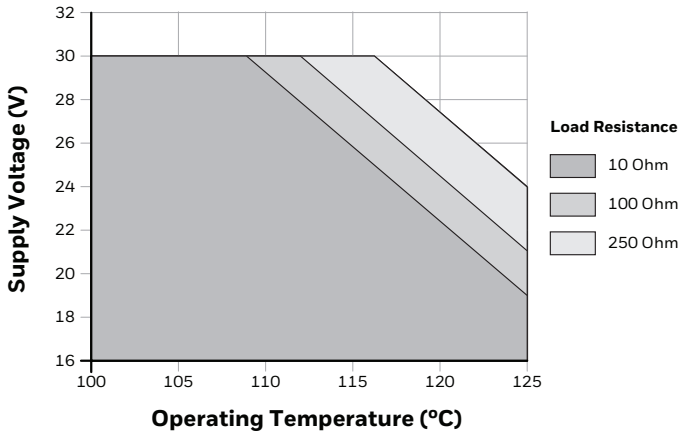
| CHARACTERISTIC | RATIOMETRIC OUTPUT | | | | CURRENT OUTPUT | REGULATED OUTPUT | | | |
|---|---|---|---|---|---|---|---|---|---|
| | OUTPUT TRANSFER FUNCTION ORDER CODE[1] | | | | | | | | |
| | AA | AB | AC | AD | CH | BC | BD | BE | BG |
| Output transfer function[1]: | | | | | | | | | |
| null output value | 10% of Vs | 5% of Vs | 10% of Vs | 5% of Vs | 4 mA | 1 V | 0.25 V | 0.5 V | 1 V |
| full scale output value | 90% of Vs | 95% of Vs | 90% of Vs | 95% of Vs | 4 mA | 6 V | 10.25 V | 4.5 V | 5 V |
| full scale span (FSS) | 80% of Vs | 90% of Vs | 80% of Vs | 90% of Vs | 16 mA | 5 V | 10 V | 4 V | 4 V |
| operating supply voltage, min.(Vs)[2] | 4.75 V | 4.5 V | 3.135 V | 3.135 V | 8 V | 9 V | 13 V | 8 V | 8 V |
| operating supply voltage, typ. (Vs)[2] | 5 V | 5 V | 3.3 V | 3.3 V | — | — | — | — | — |
| operating supply voltage, max. (Vs)[2] | 5.25 V | 5.5 V | 3.465 V | 3.465 V | 30 V[4] | 30 V[3] | 30 V[3] | 30 V[3] | 30 V[3] |
| Supply current (typ.) | 5 mA | | 4 mA | | — | 5.5 mA | | | |
| Output load (pull up or down): | | | | | | | | | |
| minimum | 2 kOhm | | | | — | 2 kOhm | | | |
| maximum | — | | | | (Vs - 8) x 50 Ohm[4] | — | | | |
| Absolute voltage ratings[5]: | | | | | | | | | |
| minimum[6] | -16 V | | | | -16 V | -16 V | | | |
| maximum[6] | 16 V | | | | 30 V | 30 V | | | |
| maximum applied to output pin (short circuit protection)[7] | Vs | | | | — | 12 V | | | |
| EMC rating[8]: | | | | | | | | | |
| CE compliance: | | | | | | | | | |
| electrostatic discharge | ±4 kV contact, ±8 kV air per IEC 61000-4-2 | | | | | | | | |
| radiated immunity | 10 V/m (80 MHz to 1000 MHz) per IEC 61000-4-3 | | | | | | | | |
| fast transient burst | ±1 kV per IEC61000-4-4 | | | | | | | | |
| immunity to conducted disturbances | 3 V per IEC61000-4-6 | | | | | | | | |
| radiated emissions | 40 dB 30 MHz to 230 MHz; 47 dB 230 MHz to 1000 MHz per CISPR 11 | | | | | | | | |
| ISO 11452-2 radiated immunity | 100 V/m 200 MHz to 2 GHz | | | | | 20 V/m 200 MHz to 2 GHz | | | |

1 Output transfer function options are shown in the Nomenclature and Order Guide. (See Figure 4.)
2 Transducer will not produce valid output when supply voltage is outside of operating range.
3 Applies at 25°C. See Figure 2 for Regulated Output Supply Voltage.
4 Applies at 25°C. See Figure 3 for Current Output Supply Voltage.
5 Absolute maximum ratings are the extreme limits the device can withstand without damage to the product. Voltages above these ratings may cause permanent damage. Exposure to absolute maximum conditions for extended periods may degrade device reliability.
6 Absolute voltage applies to potential across power and ground terminals.
7 Short circuit protection between output pin and ground, and output pin and supply pin.
8 All EMC ratings verified with the Metri-Pack 150 electrical connector type.

### FIGURE 2. REGULATED OUTPUT SUPPLY VOLTAGE




### FIGURE 3. CURRENT OUTPUT SUPPLY VOLTAGE



# HEAVY DUTY PRESSURE TRANSDUCERS, PX2 SERIES

**TABLE 3. PRESSURE RATINGS**

| bar | | | kPa | | | MPa | | | psi | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Operating Pressure | Over-pressure | Burst Pressure | Operating Pressure | Over-pressure | Burst Pressure | Operating Pressure | Over-pressure | Burst Pressure | Operating Pressure | Over-pressure | Burst Pressure |
| 1 | 5 | 8 | 100 | 500 | 800 | 1 | 3.1 | 5.1 | 15 | 70 | 115 |
| 1.6 | 5 | 8 | 160 | 1000 | 1700 | 1.6 | 5.2 | 8.6 | 30 | 150 | 250 |
| 2 | 10 | 17 | 250 | 1000 | 1700 | 2.5 | 6.9 | 10.3 | 50 | 250 | 400 |
| 2.5 | 10 | 17 | 400 | 1700 | 2700 | 4 | 6.9 | 10.3 | 100 | 450 | 750 |
| 4 | 17 | 27 | 600 | 3100 | 5100 | 4.6 | 6.9 | 10.3 | 150 | 450 | 750 |
| 6 | 31 | 51 | — | — | — | 6 | 13.8 | 20.6 | 200 | 750 | 1250 |
| 8 | 31 | 51 | — | — | — | 7 | 13.8 | 20.6 | 250 | 750 | 1250 |
| 10 | 31 | 51 | — | — | — | — | — | — | 300 | 1000 | 1500 |
| 16 | 52 | 86 | — | — | — | — | — | — | 500 | 1000 | 1500 |
| 25 | 69 | 103 | — | — | — | — | — | — | 600 | 1000 | 1500 |
| 34 | 69 | 103 | — | — | — | — | — | — | 667 | 1000 | 1500 |
| 40 | 69 | 103 | — | — | — | — | — | — | 750 | 1500 | 2250 |
| 46 | 69 | 103 | — | — | — | — | — | — | 800 | 1500 | 2250 |
| 60 | 138 | 206 | — | — | — | — | — | — | 850 | 2000 | 3000 |
| 70 | 138 | 206 | — | — | — | — | — | — | 1000 | 2000 | 3000 |

**TABLE 4. PRESSURE REFERENCE TYPES**

| PRESSURE REFERENCE | DESCRIPTION |
|---|---|
| Absolute | Output is proportional to the difference between applied pressure and a built-in fixed reference to vacuum (zero pressure), where the minimum operating pressure is set to absolute zero pressure (perfect vacuum). |
| Sealed gage[1] | Output is proportional to the difference between applied pressure and a built-in fixed reference to 1 atmA, where the minimum operating pressure is set to 14.7 psiA (1 atmA). |
| Vented gage[2] | Sensor measures pressure relative to ambient pressure. Output is proportional to the difference between applied pressure and atmospheric (ambient) pressure, where the minimum operating pressure is set to atmospheric pressure. |

[1] Sealed gage option only available in pressure ranges at or above 100 psi.

[2] Vented gage option only available in pressure ranges between 100 psi and 667 psi.

**TABLE 5. ENVIRONMENTAL AND MECHANICAL CHARACTERISTICS**

| CHARACTERISTIC | PARAMETER |
|---|---|
| Mechanical shock | 100 G per MIL-STD-202F, Method 213B, Cond. F (at 25°C) |
| Vibration | 20 G sweep, 10 Hz to 2000 Hz (at 25°C) |
| Enclosure rating | per electrical connector type selection (See Table 6.) |
| Wetted materials:<br>port<br>substrate<br>adhesives<br>electronics | <br>304 stainless steel<br>alumina ceramic<br>epoxy<br>glass, silicon |
| External materials:<br>housing<br>connector:<br>UL 94 HB (standard)<br>UL 94 V-0 (optional)<br>cable jacket | <br>304 stainless steel<br><br>PBT 30% GF, black<br>PBT 30% GF, natural (beige)<br>TPE |
| Installation torque | per pressure port type (See Table 7.) |

## CAUTION
### PRODUCT DAMAGE DUE TO MECHANICAL ISSUES

- Ensure torque specifications are determined for the specific application. Values provided are for reference only. (Mating materials and thread sealants can result in significantly different torque values from one application to the next.)
- When using mating parts made of stainless steel, use a thread sealant with anti-seize properties to prevent thread galling. Ensure the sealant is rated for the application.
- Use appropriate tools (such as an open ended wrench or deep well socket) to install transducers.
- Always hand-start transducers into the hole to prevent cross threading and damage.
- Ensure that torque is not applied to the electrical connector.
- Ensure that the proper mating electrical connector with a seal is used to connect the transducer. Improper or damaged seals can compromise ingress protection, leading to short circuits.

**Failure to comply with these instructions may result in product damage.**

## CAUTION
### PRODUCT DAMAGE DUE TO PARTICULATES

- Ensure that a filter is used upstream of the transducer to keep media flow free of larger particulates and increased humidity. All PX2 Series transducers are dead-ended devices; particulate accumulation and condensing moisture may affect sensor output.
- It is recommend that the transducer be positioned with the port facing downwards; any particulates in the system are less likely to enter and settle within the pressure transducer if it is in this position.
- Ensure that the media does not create a residue when dried. Build-up inside the transducer may affect transducer output; rinsing of a dead-ended transducer is potentially difficult and has limited effectiveness in removing residue.

**Failure to comply with these instructions may result in product damage.**

# HEAVY DUTY PRESSURE TRANSDUCERS, PX2 SERIES

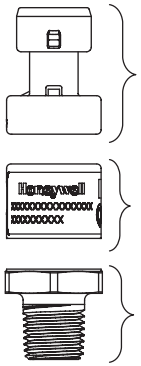
## FIGURE 4. NOMENCLATURE AND ORDER GUIDE

For example, **PX2AN1XX150PABDX** defines a PX2 Series Heavy Duty Pressure Transducer, Metripak 150, standard, electrical connector type, 1/4-18 NPT pressure port type, 150 psi pressure range, absolute pressure reference, regulated: 0.25 Vdc to 10.25 Vdc output transfer function.

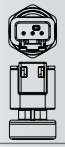
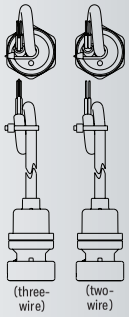
| PX2 | A | N1 | XX[7] | 150P | A | BD | X[7] |
|---|---|---|---|---|---|---|---|
| Series | Electrical Connector Type | Pressure Port Type | | Pressure Range | Pressure Reference | Output Transfer Function | |

### Series

| | |
|---|---|
| PX2 | Heavy Duty Pressure Transducer[1] |




### Electrical Connector Type

| | | |
|---|---|---|
| A | Metri-Pack 150, Standard (UL 94 HB)[2] (For UL 94 V-0 version, see order code J below.) |  |
| B | Micro M12 (IEC 61076-2) |  |
| C | DIN (EN 175301-803C) |  |
| D | Deutsch (DTM04-3P) |  |
| E | Cable harness, 1 meter cable length[3] |  (three-wire) (two-wire) |
| F | Cable harness, 2 meter cable length[3] | |
| G | Cable harness, 3 meter cable length[3,4] | |
| H | Cable harness, 5 meter cable length[3,4] | |
| J | Metri-Pack 150 (UL 94 V-0)[2] |  |

### Pressure Port Type

| | | |
|---|---|---|
| F1 | 7/16-20 UNF 1/4 in 45° Flare Female Schrader (SAE J512) |  |
| F2 | 7/16-20 UNF 45° Flare Male (SAE J513) |  |
| F3 | 7/16-20 UNF 37° Flare Male (SAE J514) |  |
| G1 | G1/4 (ISO 1179-3) |  |
| G2 | G1/8 (ISO 1179-3) |  |
| M1 | M12 x 1.5 (ISO 6149-3) |  |
| N1 | 1/4-18 NPT |  |
| N2 | 1/8-27 NPT |  |
| S1 | 9/16-18 UNF (SAE J1926-3) |  |
| S2 | 7/16-20 UNF (SAE J1926-3) |  |

### Pressure Range

| bar | Pa | psi |
|---|---|---|
| 001B 1 bar | 100K 100 kPa | 015P 15 psi |
| 1.6B 1.6 bar | 160K 160 kPa | 030P 30 psi |
| 002B 2 bar | 250K 250 kPa | 050P 50 psi |
| 2.5B 2.5 bar | 400K 400 kPa | 100P 100 psi |
| 004B 4 bar | 600K 600 kPa | 150P 150 psi |
| 006B 6 bar | 001G 1 MPa | 200P 200 psi |
| 008B 8 bar | 1.6G 1.6 MPa | 250P 250 psi |
| 010B 10 bar | 2.5G 2.5 MPa | 300P 300 psi |
| 016B 16 bar | 004G 4 MPa | 500P 500 psi |
| 025B 25 bar | 4.6G 4.6 MPa | 600P 600 psi |
| 040B 40 bar | 006G 6 MPa | 667P 667 psi |
| 046B 46 bar | 007G 7 MPa | 750P 750 psi |
| 060B 60 bar | | 01KP 1000 psi |
| 070B 70 bar | | |

### Pressure Reference

| | |
|---|---|
| A | Absolute |
| S | Sealed gage[5] |
| G | Vented gage[6] |

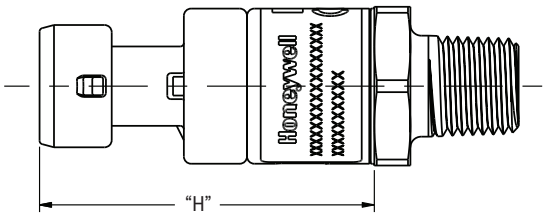
### Output Transfer Function

| | |
|---|---|
| AA | Ratiometric 5.0 V: 10 %Vs to 90 %Vs |
| AB | Ratiometric 5.0 V: 5 %Vs to 95 %Vs |
| AC | Ratiometric 3.3 V: 10 %Vs to 90 %Vs |
| AD | Ratiometric 3.3 V: 5 %Vs to 95 %Vs |
| BC | Regulated: 1 Vdc to 6 Vdc |
| BD | Regulated: 0.25 Vdc to 10.25 Vdc |
| BE | Regulated: 0.5 Vdc to 4.5 Vdc |
| BG | Regulated: 1 Vdc to 5 Vdc |
| CH | Current: 4 mA to 20 mA |


Metri-Pack 150 mating connector[2]

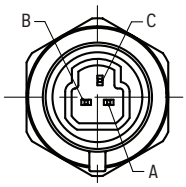
[1] Not all catalog listing combinations are available. Custom products are available. Please contact Honeywell.
[2] Metri-Pack 150 mating connectors with shielded cable and three 22 AWG wire are available from Honeywell. Order part no. 3685301 for 1 m [3.2 ft] cable length and part no. 3685302 for 3 m [9.8 ft] cable length.
[3] Three-wire cable is required for ratiometric and regulated outputs; two-wire cable is required for current output.
[4] Three meter and five meter cables are only available with Output Transfer Function CH = Current, 4 mA to 20 mA.
[5] Sealed gage option only available in pressure ranges at or above 100 psi.
[6] Vented gage option only available in pressure ranges between 100 psi and 667 psi (not available on cable harness configurations).
[7] Reserved for future use.

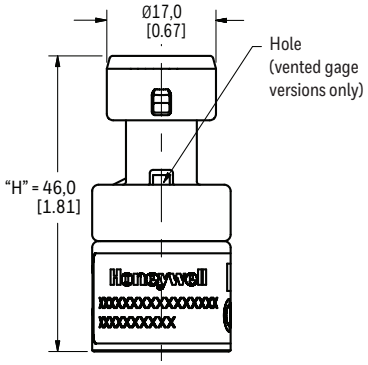
## TABLE 6. ELECTRICAL CONNECTOR TYPE DIMENSIONS (FOR REFERENCE ONLY: MM/[IN].)

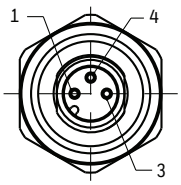


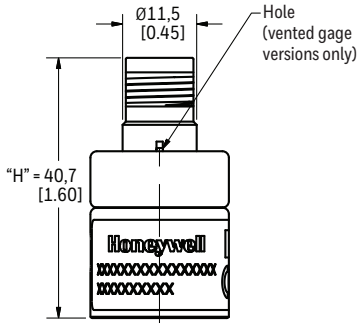

| A<br>METRI-PACK 150, STANDARD<br>(UL 94 HB)<br><br>J<br>METRI-PACK 150<br>(UL 94 V-0) | B<br>MICRO M12<br>(IEC 61076-2) | C<br>DIN<br>(EN 175301-803C) |
|---|---|---|
| **Connector:** DELPHI 12078088<br>**Mating Connector:** DELPHI 12110192<br>**IP Rating[1]:** IP65 (all versions) | **Connector:** IEC 61076-2-101<br>**Mating Connector:** 4 POS TYPE D<br>**IP Rating[1]:** IP65/IP67 (absolute, sealed gage versions) , IP65 (vented gage versions) | **Connector:** EN 175301-803C<br>**Mating Connector:** EN 175301-803C DIN 43650C 8MM<br>**IP Rating[1]:** IP65 (all versions) |

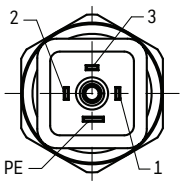
| Pin | Voltage Output | Current Output | Pin | Voltage Output | Current Output | Pin | Voltage Output | Current Output |
|---|---|---|---|---|---|---|---|---|
| A | GND | RTN | 1 | V+ | supply | 1 | GND | RTN |
| B | V+ | supply | 3 | GND | RTN | 2 | V+ | supply |
| C | Vout | NC | 4 | Vout | NC | 3 | Vout | NC |
| | | | | | | PE | NC | NC |

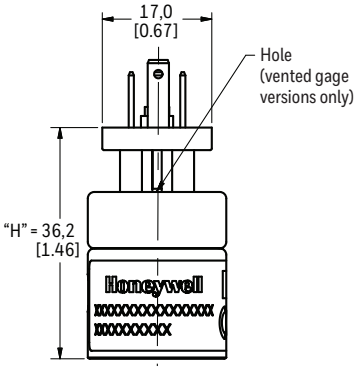


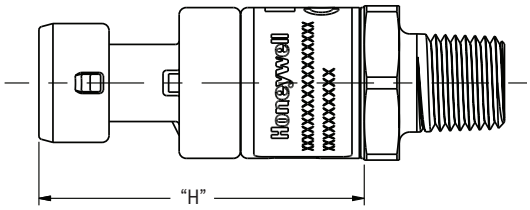



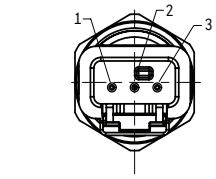

[1] IP rating is determined by the electrical connection chosen.

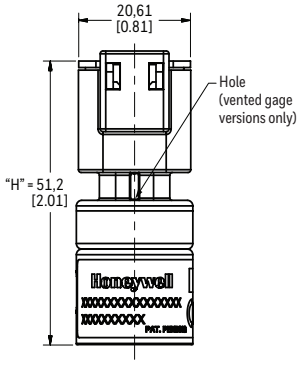
## TABLE 6. ELECTRICAL CONNECTOR TYPE DIMENSIONS (CONTINUED)

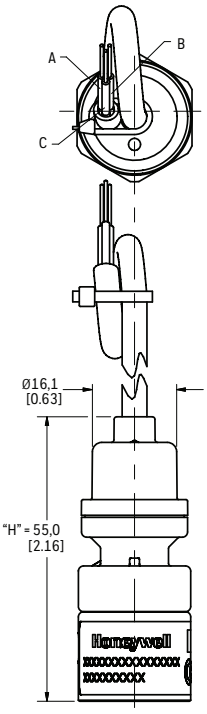


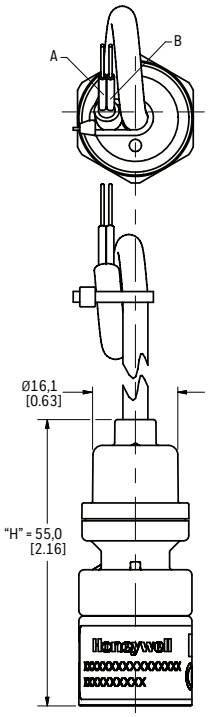

| D<br>DEUTSCH<br>(DTM04-3P) | E CABLE HARNESS, 1 METER[2]<br>F CABLE HARNESS, 2 METER[2]<br>G CABLE HARNESS, 3 METER[2,3]<br>H CABLE HARNESS, 5 METER[2,3] |
|---|---|
| **Connector:** Deutsch DTM04-3P<br>**Mating Connector:** DTM06-3S<br>**IP Rating[1]:** IP65, IP67, IP69K (absolute, sealed gage versions), IP65 (vented gage versions) | **Connector:** 24 AWG with TPE Jacket<br>**Mating Connector:** Flying leads<br>**IP Rating[1]:** IP65, IP67, IP69K (absolute, sealed gage versions) |

| Pin | Voltage Output | Current Output | Wire Color | Voltage Output | Wire Color | Current Output |
|---|---|---|---|---|---|---|
| 1 | GND | RTN | red | V+ | red | supply |
| 2 | Vout | NC | black | GND | black | RTN |
| 3 | V+ | supply | white | Vout | | |



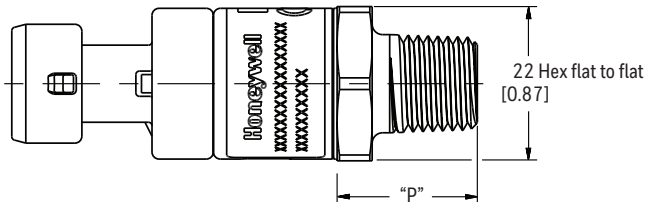




[1] IP rating is determined by the electrical connector type chosen.
[2] Three-wire cable is required for ratiometric and regulated outputs; two wire cable is required for current output.
[3] Three meter and five meter cables are only available with Output Transfer Function **CH** = Current, 4 mA to 20 mA.

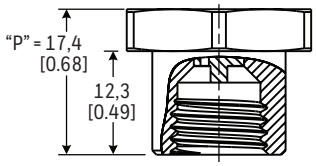
# HEAVY DUTY PRESSURE TRANSDUCERS, PX2 SERIES

## TABLE 7. PRESSURE PORT TYPE DIMENSIONS (FOR REFERENCE ONLY: MM/[IN].)[1]



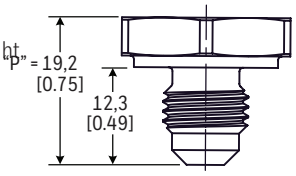

### F1 7/16-20 UNF 1/4 in 45° Flare Female Schrader (SAE J512)

**Seal:** 45° cone
**Mating geometry:** SAE J512
**Installation torque[2]:** 17 N m [12.5 ft-lb]



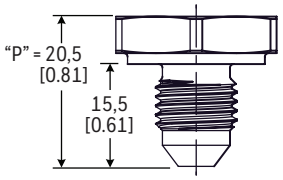

### F2 7/16-20 UNF 45° Flare Male (SAE J513)

**Seal:** 45° cone
**Mating geometry:** SAE J513
**Installation torque[2]:** 1/4 Turn from finger tight



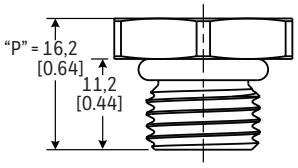

### F3 7/16-20 UNF 37° Flare Male (SAE J514)

**Seal[3,4]:** 37° cone
**Mating Geometry:** SAE J514
**Installation Torque[2]:** 16 N m [11.8 ft-lb]



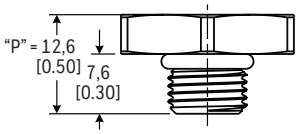

### G1 G1/4 ( ISO 1179-3)

**Seal[3,4]:** O-ring
**Mating geometry:** ISO 1179-1
**Installation torque[2]:** 50 N m [38.9 ft-lb]



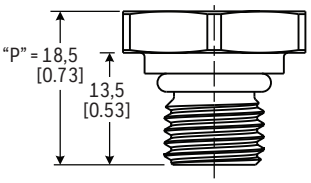

### G2 G1/8 (ISO 1179-3)

**Seal[3,4]:** O-ring
**Mating geometry:** ISO 1179-1
**Installation torque[2]:** 25 N m [18.4 ft-lb]



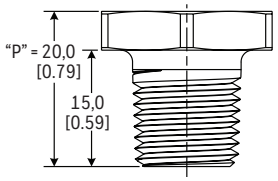

### M1 M12 X 1.5 (ISO 6149-3)

**Seal[2,3]:** O-ring
**Mating geometry:** ISO 6149-1
**Installation torque[2]:** 25 N m [18.4 ft-lb]



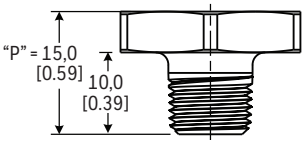

### N1 1/4–18 NPT

**Seal:** pipe thread
**Mating geometry:** ANSI B1.20.1
**Installation torque[2]:** 2 to 3 turns from finger tight



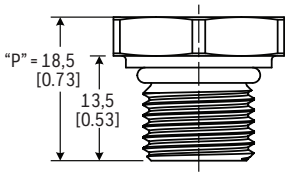

### N2 1/8–27 NPT

**Seal:** pipe thread
**Mating geometry:** ANSI B1.20.1
**Installation torque[2]:** 2 to 3 turns from finger tight



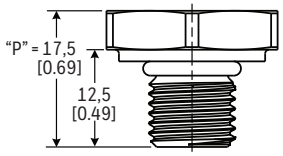

### S1 9/16–18 UNF (SAE J1926-3)

**Seal[3,4]:** O-ring
**Mating geometry:** SAE J1926-1
**Installation torque[2]:** 30 N m [22.1 ft-lb]




### S2 7/16–20 UNF (SAE J1926-3)

**Seal[3,4]:** O-ring
**Mating geometry:** SAE J1926-1
**Installation torque[2]:** 18 N m [12.3 ft-lb]




[1] See **CAUTION "PRODUCT DAMAGE DUE TO MECHANICAL ISSUES"** on page 5.
[2] Straight thread maximum torque is validated to 150% of installation torque.
[3] Seals for pressure port type order codes **S1**, **S2**, **M1**, **G1** and **G2** are included and assembled to the sensors.
[4] O-ring material is nitrile 70 durometer -30°C to 125°C [-22°F to 257°F].

## ADDITIONAL MATERIALS

The following associated literature is available at sensing.honeywell.com:

- Product range guide
- Installation instructions
- Application notes
- Technical notes
- CAD models

## FOR MORE INFORMATION

Honeywell Sensing and Internet of Things services its customers through a worldwide network of sales offices and distributors. For application assistance, current specifications, pricing or the nearest Authorized Distributor, visit sensing.honeywell.com or call:

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## PERSONAL INJURY

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**Failure to comply with these instructions could result in death or serious injury.**

## ⚠ WARNING
## MISUSE OF DOCUMENTATION

- The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.

**Failure to comply with these instructions could result in death or serious injury.**

**Honeywell**
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