

PX01/PXM01/PX02/PXM02 Series



High-Accuracy Transducers and Barometers - Standard and Metric Models

0 V DC to 5 V DC and 0 V DC to 10 V DC Output (5E/10E)

4 mA to 20 mA Output (I)

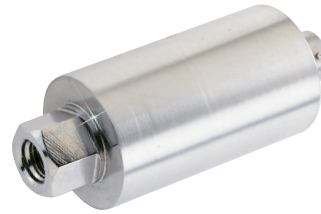
mV/V Output (V)

Standard Models: 2 PSI to 30,000 PSI

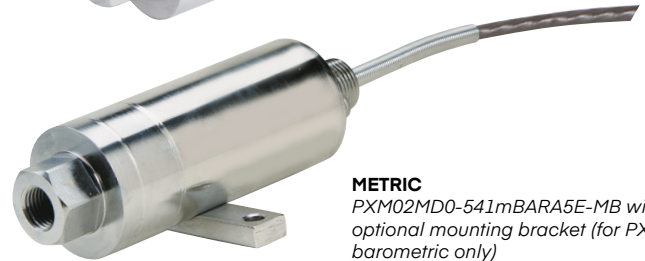
Metric Model Ranges: 160 mbar to 400 bar

- Two Accuracy Levels: $\pm 0.05\%$ or 0.15% Linearity (PX01/PX02)
- 5-Point NIST-Traceable Calibration Provided
- All Stainless Steel Construction
- Hermetically Sealed Design for Harsh Environments (Not Gage Units)
- Available in Gage, Absolute, Sealed Gage, Barometric, PSI, and Metric Ranges
- Optional Pressure Ports to Fit Most Industrial Applications
- Integral Shunt Calibration (5E/10E and mV/V models)
- PX02 Barometer Ranges Available
- Pre-Wired Cable Assemblies Available

OMEGA's PX01/PXM01/PX02/PXM02 Series transducers and barometers are high-accuracy industrial devices. Their all stainless steel construction and hermetically sealed case make them suitable for harsh environments. A high operating range, a broad compensated range, and excellent temperature compensation that gives stable readings in applications with fluctuating temperatures and harsh applications. NPT and 7/16-20 O-ring seal fittings are available for industrial and hydraulic applications.



STANDARD
PX02K1-26A5E (twist-lock style)



METRIC
PXM02MD0-541mBARA5E-MB with optional mounting bracket (for PX02 barometric only)

mV/V Performance Specifications	PX01 mV/V	PX02 mV/V
Excitation Voltage:	10 V DC typical (15 V DC max.)	
Full Scale Output (< 500 psi):	3 mV/V $\pm 0.25\%$	
Full Scale Output (≥ 500 psi):	2.75 mV/V $\pm 0.25\%$	
Input Resistance (Ω):	350 ± 10	
Output Resistance (Ω):	350 ± 10	
Zero Balance (% F.S.O.):	1.0	
Linearity (% F.S.O.) (< 500 psi):	± 0.10	± 0.15
Linearity (% F.S.O.) (≥ 500 psi):	± 0.05	± 0.15
Hysteresis (% F.S.O.):	± 0.05	± 0.1
Repeatability (% F.S.O.):	± 0.05	± 0.1
Operating Temperature Range:	-73 °C to 163 °C (-100 °F to 325 °F)	
Compensated Temperature Range:	16 °C to 71 °C (60 °F to 160 °F)	
Span Temperature Error (% Rdg/ °F Max.):	± 0.0015	± 0.003
Zero Temperature Error (% F.S.O./ °F Max.):	± 0.0015	± 0.003
CE Compliance:	Exempt	

PX01/02 5E/10E/I/Barometric Performance Specifications	Voltage Output		Current Output	
	PX01	PX02	PX01	PX02
Excitation Voltage:	16 V DC to 38 V DC		10 V DC to 40 V DC	
Full Scale Output (F.S.O.):	0 V DC to 5 V DC (5E) or 0 V DC to 10 V DC (10E) $\pm 10\%$ ADJ		4 mA to 20 mA $\pm 10\%$ ADJ	
Zero Balance (% F.S.O.):	0 V DC $\pm 10\%$ ADJ		+4 mA +10%/-2% ADJ	
Linearity (% F.S.O.) (excluding Barometric):	± 0.05	± 0.15	± 0.05	± 0.15
Hysteresis (% F.S.O.) (excluding Barometric):	± 0.05	± 0.1	± 0.05	± 0.1
Repeatability (% F.S.O.) (excluding Barometric):	± 0.05	± 0.05	± 0.05	± 0.05
Accuracy (Linearity, Hysteresis, & Repeatability Combined) (% F.S.O.) (Barometric Only):	N/A	± 0.25	N/A	± 0.25
Operating Temperature Range:	-46 °C to 121 °C (-50 °F to 250 °F)		-46 °C to 121 °C (-50 °F to 250 °F)	
Compensated Temperature Range (excluding Barometric):	16 °C to 71 °C (60 °F to 160 °F)		16 °C to 71 °C (60 °F to 160 °F)	
Compensated Temperature Range (Barometric only)	N/A	-17 °C to 65 °C (0 °F to 150 °F)	N/A	-17 °C to 65 °C (0 °F to 150 °F)
Span Temperature Error (% F.S.O./ °F Max.):	± 0.002	± 0.003	± 0.003	± 0.005
Zero Temperature Error (% F.S.O./ °F Max.):	± 0.0015	± 0.003	± 0.003	± 0.005
Span Temperature Error (% F.S.O./ °F Max.) (Barometric):	N/A	± 0.005	N/A	± 0.005
Zero Temperature Error (% F.S.O./ °F Max.) (Barometric):	N/A	± 0.005	N/A	± 0.005
CE Compliance:	EN61326 Compliant (Industrial) with < 3 m cable			

Common Specifications	
Proof Pressure (% Of Capacity):	150
Burst Pressure (% Of Capacity):	300
Wetted Parts:	17-4 PH SST
Shunt (5E/10E Only):	80 % ± 5 % F.S.O.
Shunt (mV/V) < 500 PSI:	80 % ± 5 % F.S.O. W/ 36.5k Ω Resistor
Shunt (mV/V) ≥ 500 PSI:	80 % ± 5 % F.S.O. W/ 40.2k Ω Resistor
Weight:	388 grams MAX (425 grams with -MB option)
Electrical Connection:	See Part Number Builder section
Sensing Element:	4-Active Arm Strain-Gauge Bridge

-I Wiring Code

Twist-Lock	Cable	DIN	Signal
A	Red	1	+ Input
B	Black	2	- Input
C	-	3	N/C
D	-	GND	N/C
E	-	-	N/C
F	-	-	N/C

-5E/10E Wiring Code

Twist-Lock	Cable	DIN	Signal
A	Red	1	+ Input
B	Green	2	+ Output
C	Black	3	Common
D	White	GND	Shunt*
E	Orange	-	N/C
F	Blue	-	N/C

-mV/V Wiring Code

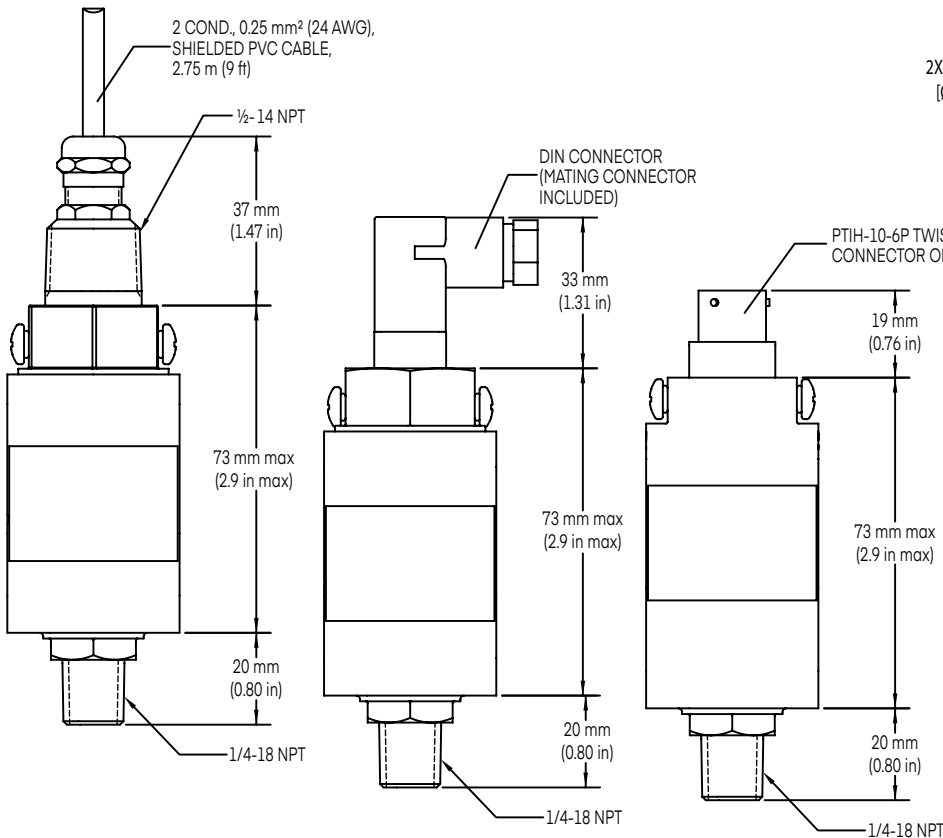
Twist-Lock	Cable	DIN	Signal
A	Green	2	+ Output
B	White	3	- Output
C	Black	GND	- Input
D	Red	1	+ Input
E	Orange	-	SHUNT*
F	Blue	-	SHUNT*

*Enable shunt by shorting shunt to common.

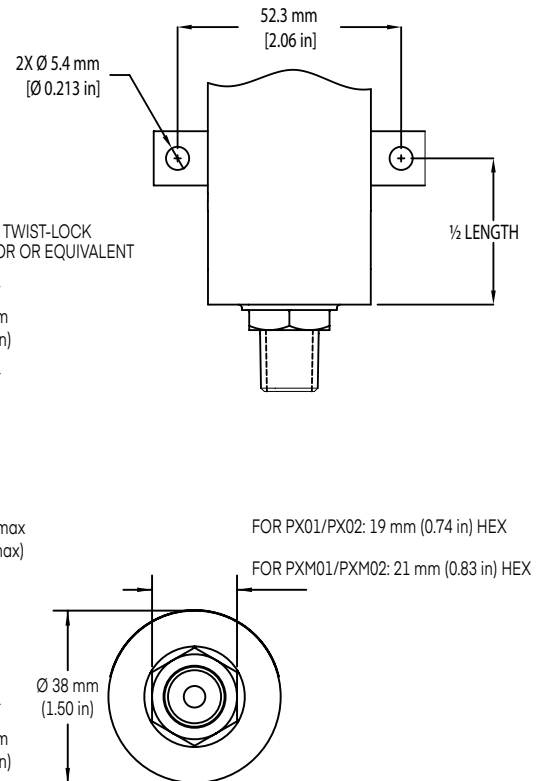
*Enable internal shunt by shorting SHUNT signals together

Dimensions for PX01/PXM01/PX02/PXM02

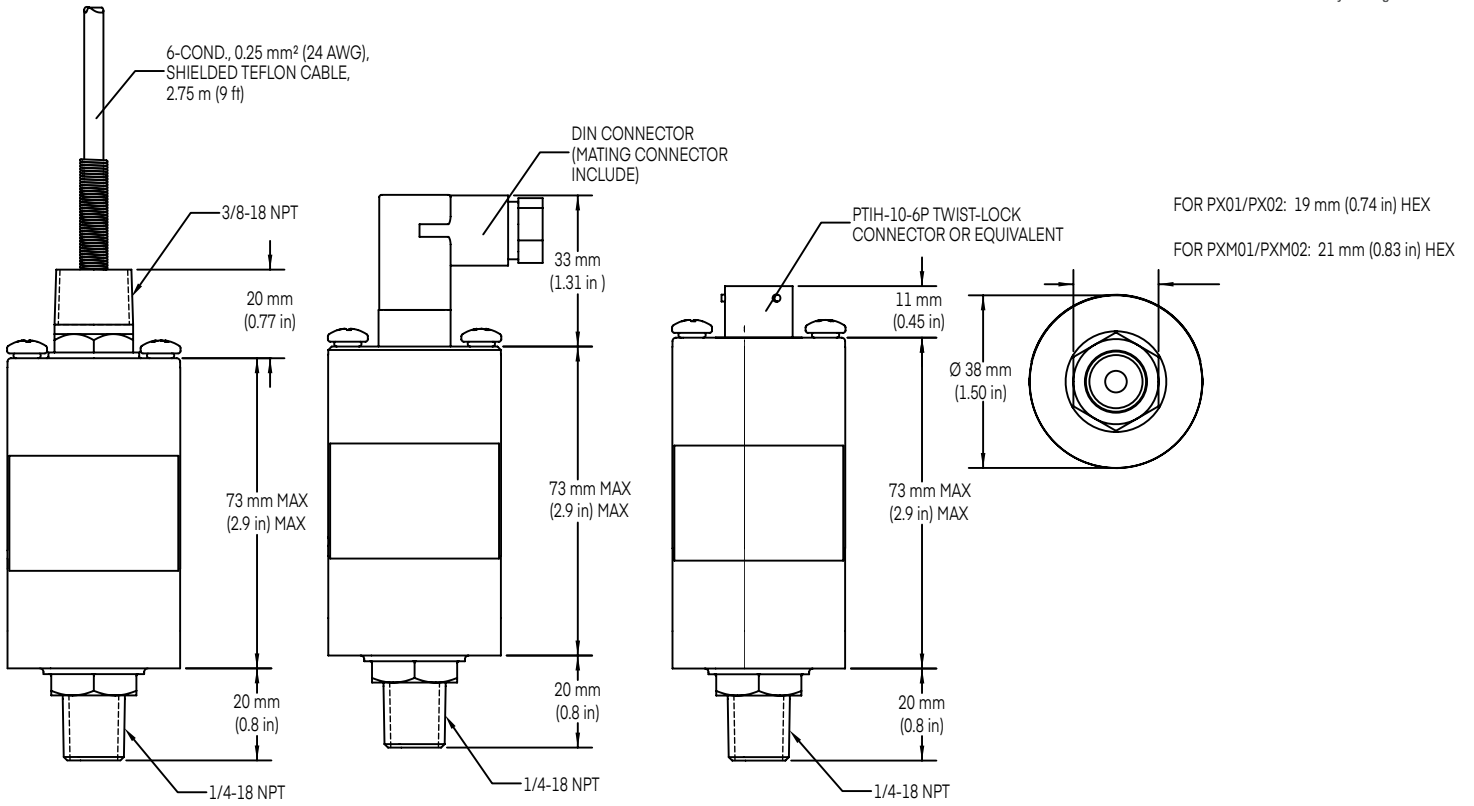
PX01/PXM01/PX02/PXM02-I Dimensions



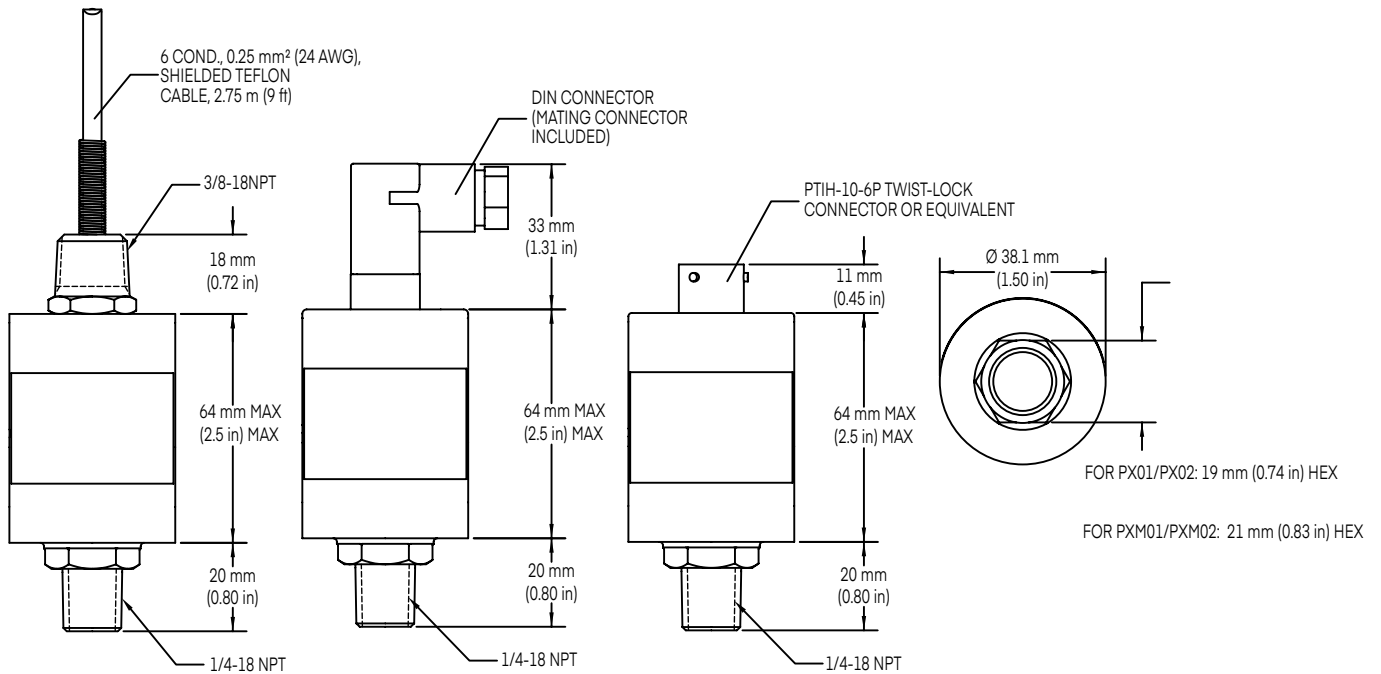
Optional Mounting Bracket Dimensions



PX01/PXM01/PX02/PXM02-5E/10E Dimensions



PX01/PXM01/PX02/PXM02-V Dimensions

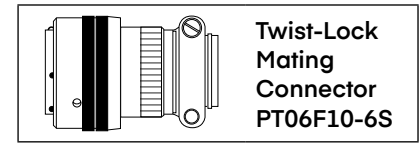


Part Number Builder for PX01/PXM01/PX02/ PXM02

To order a custom configuration:

1. Select model series
2. Select a pressure port
3. Select electrical connection
4. Select a pressure range
5. Select pressure units
6. Select output
7. Select options

For additional options including extended compensated temperatures, visit us online.



SERIES

PX01: Imperial Standard
PXM01: Metric
PX02: Imperial Standard
PXM02: Metric

PRESSURE PORT

Imperial (Standard)
Models < 10,000 psi
C: ¼-18 NPT-M
D: ¼-18 NPT-F
J: 7/16-20 UNF-M
K: 7/16-20 UNF-F
Models ≥ 10,000 psi
S: ¼ HP tube fitting

Metric
MA: G½B Male
MB: G½B Female
MC: G¼B Male
MD: G¼B Female

ELECTRICAL CONNECTION

0: 2.7 m (9 ft) cable (std)* + add cost/ft over 2.7 m (9 ft)*
1: PTIH-10-6P twist-lock connector (or equal), mating connector (sold separately) order PT06F10-6S
6: mini DIN connector, shunt cal only available on 5E/10E

RANGE

PSI		BAR	
-002	-750	-160mBAR	-250BAR
-005	-1K	-400mBAR	-400BAR
-010	-1.5K	-001BAR	
-015	-2K	-1.60BAR	inHG**
-020	-3K	-2.50BAR	-16: 16 to 32
-025	-3.5K	-004BAR	-26: 26 to 32
-050	-5K	-006BAR	-28: 28 to 32
-075	-7.5K	-010BAR	
-100	-10K†	-016BAR	hPa**
-150	-20K†	-025BAR	-542MBAR:
-200	-30K†	-040BAR	542 to 1084
-250		-060BAR	-880MBAR:
-300		-100BAR	880 to 1084
-500		-160BAR	-948MBAR:
			948 to 1084

OUTPUT

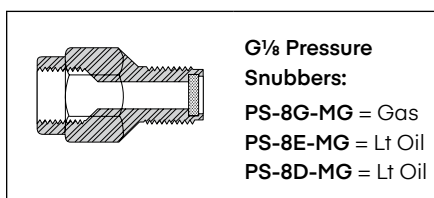
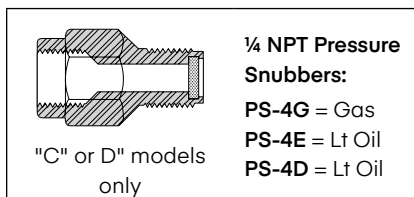
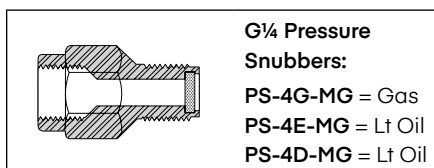
5E: 0 V DC to 5 V DC
10E: 0 V DC to 10 V DC
I: 4 mA to 20 mA
V: mV/V

UNITS

S: Sealed Gauge
G: Gauge
A: Absolute

OPTIONS

- OL: Overload stops + additional cost
- OX: Cleaned for oxygen use + additional cost + 2 weeks
- ()ft: optional cable length in feet + additional cost/ft over 9 feet*
- ()m: optional cable length in meters + additional cost/m over 2.7 m*
- MB: Mounting bracket**



Part Number Builder Notes

* Configurations over 3 m may require additional customer EMC testing

** For PX02 Barometric only

† Supplied with ¼ HP tube fitting

002 PSI and 005 PSI ranges not available with V (mV/V) option

PSI range example: -002 = 2 PSI, -100 = 100 PSI, etc.

Note: 5E/10E replaces legacy 5T/10T voltage options, which are no longer manufactured. Note that there are pinout differences.

Accessories

Model No.	Description
PT06F10-6S	Mating connector for PX01/PXM01 transducers with twist-lock connector
CA-6TE24-11-009	Twist-Lock Cable Assembly (TFE) (5E/10E) 9 ft
CA-6PC24-11-009	Twist-Lock Cable Assembly (PVC) (5E/10E) 9 ft
CA-6TE24-1-009	Twist-Lock Cable Assembly (TFE) (I) 9 ft
CA-6PC24-1-009	Twist-Lock Cable Assembly (PVC) (I) 9 ft
CA-6TE24-3-009	Twist-Lock Cable Assembly (TFE) (mV/V) 9 ft
CA-6PC24-3-009	Twist-Lock Cable Assembly (PVC) (mV/V) 9 ft

Note: Configurations over 3 m may require additional customer EMC testing

Ordering Examples:

PXM01C1-100GV, 100 PSI gage pressure transducer with 1/4-18 NPT male fitting, twist-lock connector and mV/V output.

PX01J1-015AI, 15 PSI absolute pressure transducer with 7/16-20 UNF male fitting, twist-lock connector and a 4 mA to 20 mA output.

PX01C1-100G5E, 100 PSI gage pressure transducer with 1/4-18 NPT male fitting, twist-lock connector and 0 V DC to 5 V DC output.

PX01J1-015A5E, 15 PSI absolute pressure transducer with 7/16-20 UNF male fitting, twist-lock connector and 0 V DC to 5 V DC output.

PXM01MB0-010BARS, 10 bar sealed gage pressure transducer with G $\frac{1}{8}$ B female connection, 2.7 m (9 ft) cable termination, and 4 mA to 20 mA output.

PXM01MC1-010BARA10E, 10 bar absolute pressure transducer with G $\frac{1}{4}$ B male connection, twist-lock connector and 0 V DC to 10 V DC output.

PXM01MB0-010BARSV, 10 bar sealed gage pressure transducer with G $\frac{1}{8}$ B female connection and 2.7 m (9 ft) cable termination.

PX02C1-100G5E, 100 PSI gage pressure transducer with 1/4-18 NPT male fitting, twist-lock connector and 0 V DC to 5 V DC output.

PX02K0-1KS5E, 1000 PSI sealed gage pressure transducer with 7/16-20 UNF female fitting, 2.7 m (9 ft) cable and 0 V DC to 5 V DC output.

PX02J1-015A5E, 15 PSI absolute pressure transducer with 7/16-20 UNF male fitting, twist-lock connector and 0 V DC to 5 V DC output.

PXM02MB0-010BARS5E, 10 bar sealed gage pressure transducer with G $\frac{1}{8}$ B female connection, 2.7 m (9 ft) cable termination.

PXM02MD1-010BARA10E, 10 bar absolute pressure transducer with G $\frac{1}{4}$ B female connection, twist-lock connector

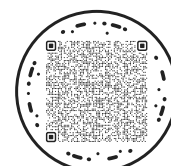
PX02K1-26AI-MB, 26 inHg to 32 inHg calibrated electronic barometer with 7/16-20 UNF internal connection, 4 mA to 20 mA output, twist connector and optional mounting bracket.

PXM02MD1-880MBARAI-MB, 880 hPa to 1084 hPa calibrated electronic barometer with G $\frac{1}{4}$ female pressure port, 4 mA to 20 mA output, twist-lock connector and optional mounting bracket.

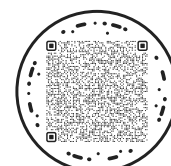
PT06F10-6S, mating connector (sold separately).



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PX01 PXM01



PX02 PXM02