

XPM4 Miniature Pressure Transducer



- Absolute, sealed and gauge ranges 5 to 200 bars [75 psi to 3 000 psi]
- Titanium device
- Cable or connector output
- For static and dynamic applications
- Linearity up to $\pm 0.25\%$ F.S.

DESCRIPTION

The XPM4 is a miniature transducer designed to measure static and dynamic pressure under a wide variety of conditions, including hostile environments. The all-titanium construction and flush diaphragm protect the sensor against most corrosive environments.

The XPM4 incorporates Measurement-Specialties' cutting-edge SanShift™ technology, which virtually eliminates zero shifts caused by installation torque.

The XPM4's sensing element is a fully temperature compensated Wheatstone bridge configuration made with high stability micro-machined silicon strain gauges which optimize performance, especially at low ranges and high frequencies. All models come with a cable output strengthened by a strain relief spring or with an electrical connector (optional).

With many years of experience as a designer and manufacturer of sensors, Measurement-Specialties often works with customers to design or customize sensors for specific uses and testing environments.

To meet your needs we also offer complete turnkey systems. The matched components (sensor, power, amplifier and digital display) are formatted, calibrated and ready for immediate use.

FEATURES

- Flush Diaphragm, All-Titanium Construction
- Low Installation Torque Sensitivity
- M4x1 thread
- Linearity up to $\pm 0.35\%$ F.S.
- For Static and Dynamic Applications

APPLICATIONS

- Aerospace
- Explosion test benches
- Oven monitoring equipments
- Robotics and effectors
- Laboratory and research

STANDARD RANGES

F.S. Ranges in bar	5	10	20	35	50	100	200
F.S. Ranges in psi	75	150	300	500	750	1500	3000

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PERFORMANCE SPECIFICATIONS

Ambient Temperature: 20±1 ° C (unless otherwise specified)

PARAMETERS	
Operating Temperature Range (OTR)	-40 to 120 ° C [-40 to 248 ° F]
Compensated Temperature Range (CTR)	0 to 60 ° C [32 to 140 ° F]
Zero Shift in CTR	<2.5% F.S./60 ° C [108 ° F] (<7% for 5 bar [75 psi] model)
Sensitivity Shift in CTR	<2% of reading /60 ° C [108 ° F]
Range (F.S.)	See standard ranges table
Tightening Torque	
Nominal (zero and sensitivity shift <1%)	1.8 N.m [15 Lbf.in]
Maximal	3 N.m [25 Lbf.in]
Over-Range	
Without Damage	2 x F.S.
Without Destruction	5 x F.S.
Accuracy	
Linearity	±0.35% F.S. (±0.5% for 5 bar [75 psi] model)
Hysteresis	±0.25% F.S.
Repeatability	±0.2% F.S.

Electrical Characteristics

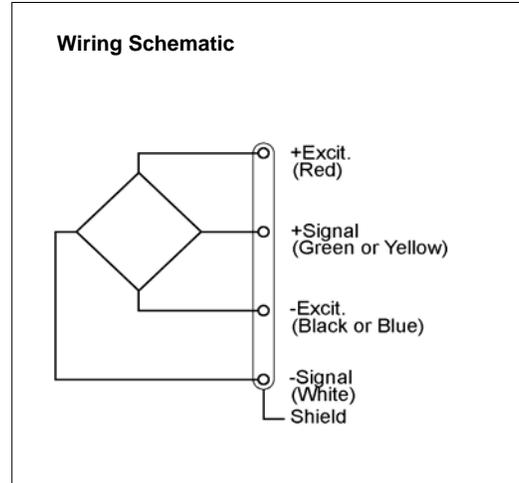
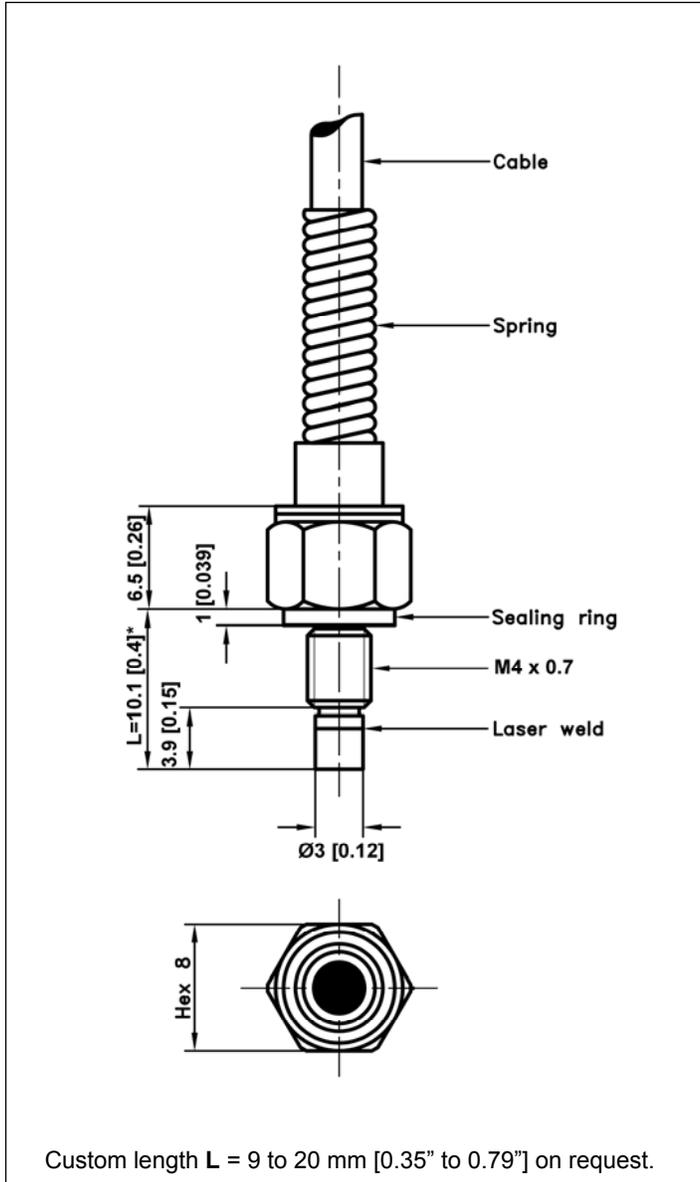
Model	XPM4
Supply Outage	10Vdc
F.S. Output	100mV typical (30mV for 5 bar [75 psi] model)
Zero Offset	<±10mV
Input Impedance/Consumption	1500 Ω
Output Impedance	800 Ω
Insulation under 50Vdc	≥100MΩ

Notes

1. Electrical Termination: Shielded Ø3 mm Silastene cable with 4 Teflon wires (AWG30), standard length 2.0 m [6.6 ft] with strain relief spring
2. Material: Body and flush diaphragm in titanium; laser welded
3. Protection Index: IP50
4. Resonance Frequency: 200-750kHz depending on F.S.

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DIMENSIONS & WIRING SCHEMATIC (IN METRIC AND IMPERIAL)



Dimensions in mm [inch]

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OPTIONS

A : Absolute
G : Gauge
S : Sealed Gauge
HA : Accuracy (CNL&H) $\leq \pm 0.35\%$ F.S. ($\leq \pm 0.5\%$ for 5 bar [75 psi] model)
SI : Sensitivity shift in CTR $\leq 1\%$ of reading / 60 ° C [90 ° F] (except 5 bar [75 psi] model)
ZI : Zero shift in CTR $\leq 1.5\%$ F.S. / 60 ° C [140 ° F] (except 5 bar [75 psi] model)
ET1 : CTR -20 to 100 ° C [-4 to 212 ° F]
ET3 : CTR -40 to 150 ° C [-40 to 302 ° F] OTR=CTR
SC : Connector output, prewired, cable length 2 m [6.6 ft]
P5 : IP65 protection
P7 : IP67 protection
LC"X" : Additional Cable length in ft

ORDERING INFO

XPM4 - 35BA - /ET1/LC "X"



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