

# XPM6 Miniature pressure sensor



- Sealed and gauge ranges  
100 to 1000 bars [1500 to 15000 psi]
- Stainless steel housing
- High level output in option
- For static and dynamic applications
- Linearity  $\pm 0.25\%$  F.S.

## DESCRIPTION

The **XPM6** is a miniature transducer designed to measure static and dynamic pressure under a wide variety of conditions, including hostile environments. It is made of stainless steel and is available in ranges from 0-100 to 0-1000 bar [1500 to 15 000 psi]. For protection against thermal flash/explosive testing up to 1000 ° C [1832 ° F] the option MH allows inserting extra protection into the "H" shape diaphragm.

The **XPM6** incorporates Measurement Specialties' cutting edge SanShift™ technology, which virtually eliminates zero shifts caused by installation torque.

The **XPM6**'s sensing element is a fully temperature compensated Wheatstone bridge made with high stability micro-machined silicon strain gauges.

With many years of experience as a designer and manufacturer of sensors, Measurement Specialties, Inc. has the expertise to customize and/or design sensors for specific uses and testing environments. To meet your needs we also offer complete turnkey systems. Our conditioning electronics can power the sensor, amplify the electronic signal, and display the data digitally. A turnkey measurement system arrives with matched components, formatted, calibrated and ready for your immediate use.

## FEATURES

- M6x1 thread
- Flush Diaphragm
- For Static and Dynamic Applications
- High Level Tension Output Available
- Low Installation Torque Sensitivity

## APPLICATIONS

- Explosion test benches
- Extreme Miniature Devices
- Robotics and actuators
- Breaking system pressure
- Laboratory and research

## STANDARD RANGES

Range in bar	0-100	0-200	0-500	0-1000
Range in psi	0-1500	0-3000	0-7500	0-15000

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## CHARACTERISTICS

All values are typical at temperature 20±1°C

Parameters	
Operating Temperature Range (OTR)	-40 to 150 ° C [-40 to 302 ° F] Without A1 option
	-40 to 120 ° C [-40 to 248 ° F] With A1 option
Compensated Temperature Range (CTR)	0 to 60 ° C [32 to 140 ° F]
Zero Shift in CTR	<2.5% F.S./50 ° C [/100 ° F]
Sensitivity Shift in CTR	<2% of reading /50 ° C [/100 ° F]
Range (F.S.)	See standard ranges table
<b>Tightening Torque</b>	
Nominal (zero and sensitivity shift <1%)	5 N.m [44 lbf.in]
Maximal	10 N.m [88 lbf.in]
<b>Over-Range</b>	
Without Damage	2x F.S
Without Destruction	3xF.S.
<b>Accuracy</b>	
Linearity	±0.25% F.S.
Hysteresis	±0.25% F.S
Repeatability	±0.2% F.S

### Electrical Characteristics

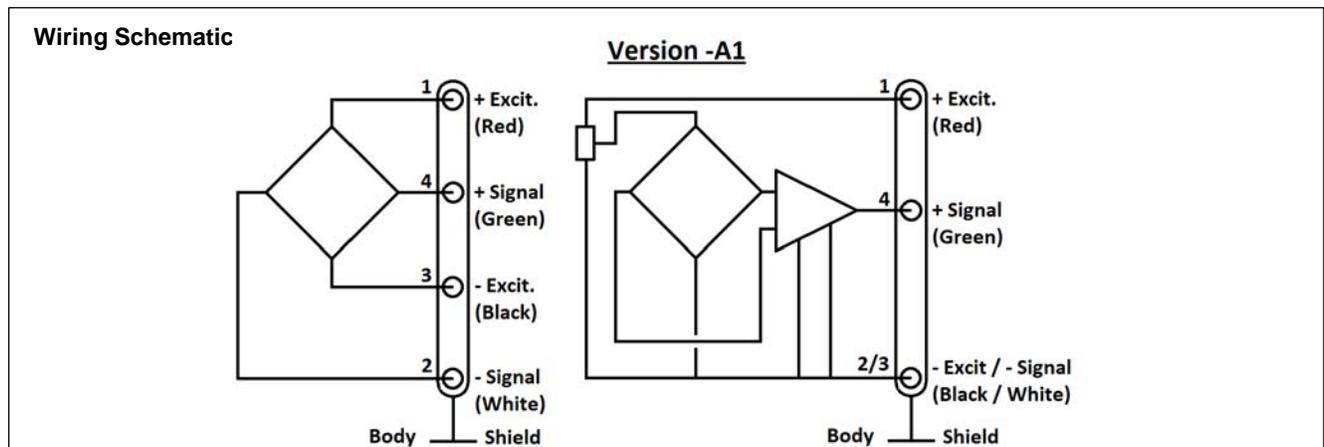
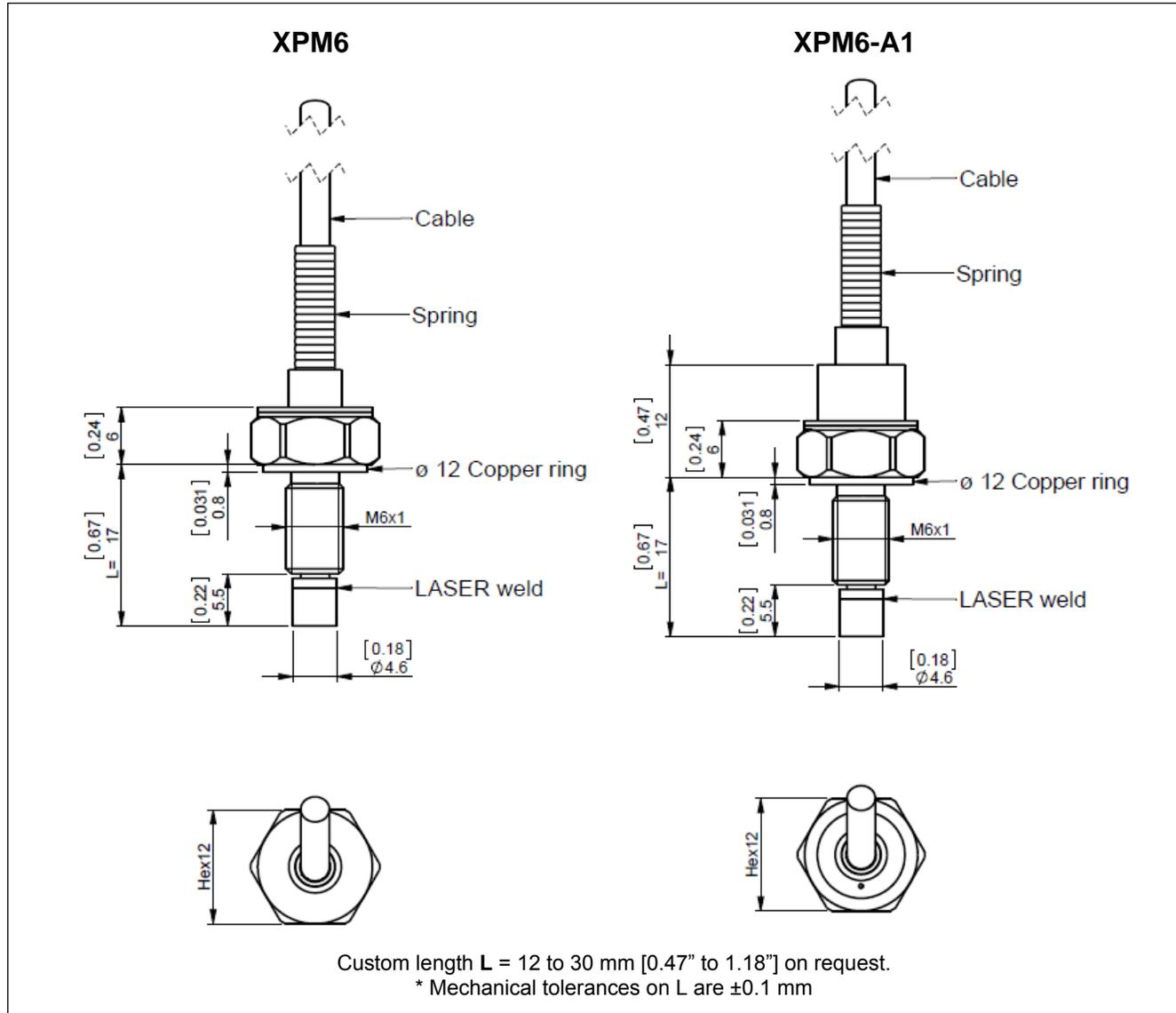
Model	XPM6	XPM6-A1
Supply Voltage	10 Vdc	10 to 30 Vdc
F.S. Output <sup>6</sup>	100 mV	4 V ±5% F.S.
Zero Offset <sup>6</sup>	<±10 mV	0.5 V ±5% F.S.
Input Impedance	1500 Ω	<25 mA
Output Impedance	800 Ω	1 kΩ <sup>7</sup>
Insulation under 50Vdc	≥100 MΩ	≥100 MΩ

### Notes

1. Electrical Termination: Shielded Ø3 mm cable with 4 wires (AWG30), standard length 2.0 m [6.6 ft] with strain relief spring
2. Material: Body and flush diaphragm in stainless steel; laser welded
3. Protection Index: IP50
4. Resonance Frequency: 200-750 kHz depending on range
5. Ø12 mm copper ring, supplied with the sensor
6. Standard output signal, custom outputs < 4V F.S. available on request
7. Output impedance standard, available <100Ω on request.
8. CE conformance according to EN 61010-1, EN 50081-1, EN 50082-1

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## DIMENSION & WIRING SCHEMATIC (IN METER AND IMPERIAL)

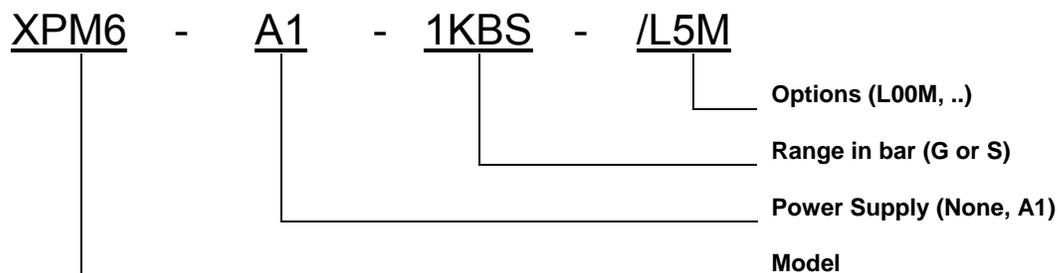


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## OPTIONS

<b>G</b> : Gauge
<b>S</b> : Sealed Gauge
<b>A1</b> : Amplified Tension output with unipolar power supply
<b>MH</b> : "H" Diaphragm for thermal flash/explosive testing
<b>HA</b> : Accuracy (CNL&H) $\leq \pm 0.25\%$ F.S.
<b>SI</b> : Sensitivity shift in CTR $\leq 1\%$ of reading / 50 ° C [ / 100 ° F ]
<b>ZI</b> : Zero shift in CTR $\leq 1.5\%$ F.S. / 50 ° C [ / 100 ° F ]
<b>ET1</b> : CTR -20 to 100 ° C [-4 to 212 ° F]
<b>ET3</b> : CTR -40 to 150 ° C [-40 to 302 ° F] OTR=CTR (not available with A1 options)
<b>L00M</b> : special cable length, replace "00" with total length in meters

## ORDERING INFORMATION



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