

## FEATURES

- Stainless steel
- 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
- Brake Systems
- Laboratory and research

## XPM6

### Miniature pressure sensor

#### SPECIFICATIONS

- Ranges 20 to 1000 bar [300 to 15k psi]
- Sealed and gauge pressure reference
- Stainless steel housing
- Linearity  $\pm 0.25\%$  F.S.
- Very low mass, approximately 10 grams without cable (dependent on options)

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 standard ranges from 0-20 to 1000 bars [300 up to 15000 psi].

The **XPM6's** sensing element is a fully temperature compensated Wheatstone bridge made with high stability micro-machined silicon strain gauges. Also available is option MH, which provides protection up to 1000°C [1832°F] for thermal flashes or explosive testing by the addition of extra protection into the diaphragm.

The **XPM6** incorporates a specific feature, which virtually eliminates zero shifts caused by installation torque.

A **PT1000** temperature probe is optionally available as a custom design.

On request, instruction documents can be provided to ease the selection and use of our sensors and provide helpful tips.

## STANDARD RANGES

Full Scale (FS)		Pressure Reference		Resonant Frequency	Sensitivity "FSO"	Overpressure (rated pressure)	Burst Pressure (rated pressure)
bar	psi	Gauge	Sealed		(non amplified)		
20	300	•	•	179 kHz	100 mV	2 x FS	3 x FS
35	500	•	•	195 kHz	100 mV	2 x FS	3 x FS
50	750	•	•	227 kHz	100 mV	2 x FS	3 x FS
70	1k	•	•	276 kHz	100 mV	2 x FS	3 x FS
100	1.5k		•	325 kHz	100 mV	2 x FS	3 x FS
200	3k		•	455 kHz	100 mV	2 x FS	3 x FS
350	5k		•	585 kHz	100 mV	2 x FS	3 x FS
500	7.5k		•	764 kHz	100 mV	2 x FS	3 x FS
1000	15k		•	926 kHz	100 mV	2 x FS	3 x FS

**Notes :**

1. The suggested frequency of use is 20% of the resonant frequency
2. The bandwidth for versions with A1 electronics is 3kHz.
3. Sensor characterized with a 10 VDC supply voltage as standard
4. The sensitivity "FSO" has a tolerance of -30% to +50%.

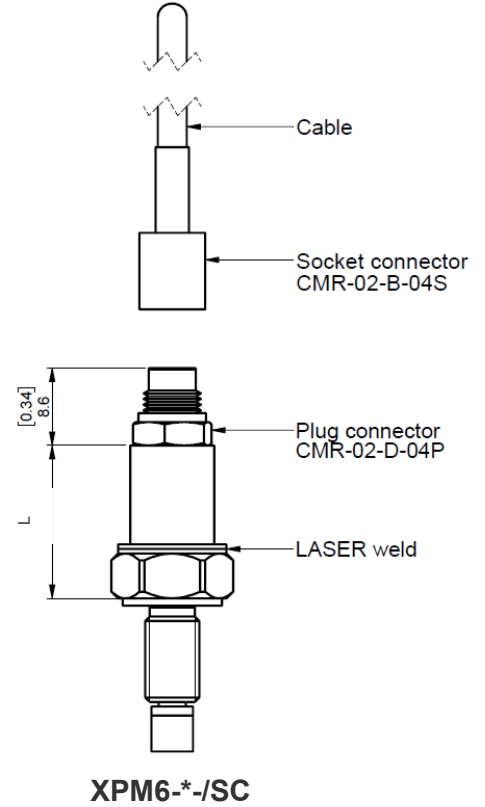
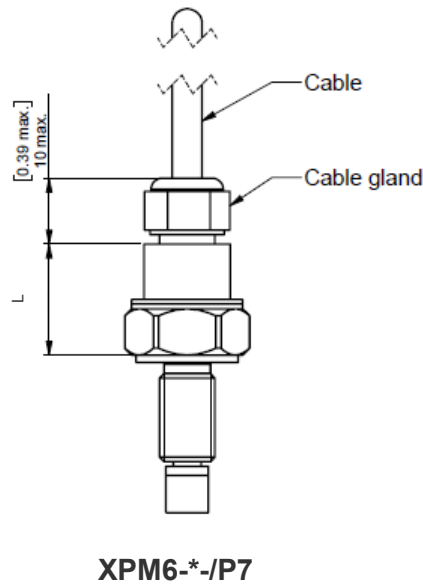
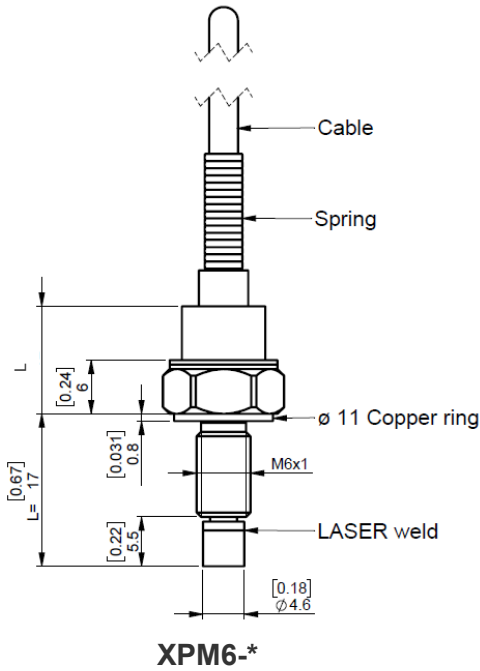
## PERFORMANCE SPECIFICATIONS (all values are typical at ambient temperature 23±3°C)

Parameters	Non amplified	Amplified (A1 opt.)	Notes
Power supply	10 Vdc regulated	10 to 30 Vdc	
Sensitivity "FSO"	See previous table	4 V ±0.2 V	Signal 0.5 V - 4.5 V for A1 option
Zero Offset	±10 mV	0.5 V ±0.2 V	
Non Linearity	±0.25%FS		
Hysteresis	±0.25%FS		
Repeatability	±0.2%FS		
Operating Temperature (OTR)	-40 to 150°C (-40 to 302°F)	-40 to 120°C (-40 to 248°F)	MH option allows thermal flash / explosive testing up to 1000°C
Compensated Temperature (CTR)	0 to 60°C (32 to 140°F)	0 to 60°C (32 to 140°F)	
Thermal Zero Shift in CTR (TZS)	<±2.5%FS/50°C		
Thermal Sensitivity Shift in CTR (TSS)	<±2% of reading /50°C		
Input Impedance or consumption	1500 Ω nom.	< 30 mA	
Output Impedance	800 Ω nom.	1000 Ω	
Ingress Protection	IP50 IP67 (consult factory for IP68)		Standard or SC P7 or P7/SC
Media – Pressure Port	Fluids compatible with stainless steel		

Insulation under 50Vdc ≥100MΩ

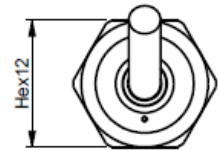
CE certification according to EN 61010-1, EN 50081-1, EN 50082-1.

**DIMENSIONS (metric & [imperial])**



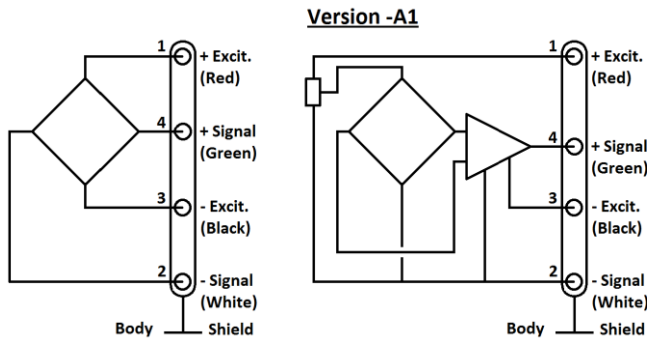
Custom length **L** = 12 to 30 mm [0.47" to 1.18"] on request.  
\* Mechanical tolerances on **L** are ±0.1 mm

Version:	Non-Amplified			Amplified A1		
Option:	standard	P7	SC	standard	P7	SC
L (mm)	6	6	11	12	12	17



Weight: The standard configuration without cable and sealing ring is < 10g

**WIRING SCHEMATICS**



**ADDITIONAL INFORMATION**

1. Recommended Tightening Torque: 5 Nm [44 lbf.in] to 10 Nm [88 lbf.in]
2. Sealing: One FKM sealing ring is supplied with the sensor (operating static temperature -30 to 150°C)
3. Electrical connection: Standard = 2m of shielded cable ø3mm with 4 wires AWG30, Silicon jacket  
SC option = Integral connector ref. OMNETICS CMR-02D-04P supplied with mating plug CMR-02-B-04S wired with 2m of cable (FMC-COM-4B-L2M)

**OPTIONS**

<b>Temp. Compensation</b> <i>(other compensation range are available on request)</i>	<b>Z04:</b> CTR -40 to 90 °C [-40 to 194 °F]
	<b>Z35:</b> CTR 20 to 120 °C [68 to 248 °F]
	<b>Z36:</b> CTR 20 to 150 °C [68 to 302 °F] (not available with A1 options)
<b>Transient therm. Protection</b>	<b>MH:</b> "H" Diaphragm for thermal flash/explosive testing up to 1000°C
<b>Waterproofing</b>	<b>P7:</b> IP67 protection for cable gland output or SC option (available only for Sealed versions)
<b>Removable cable</b>	<b>SC:</b> Connector output with prewired mating connector, cable length 2 m [6.6 ft]
<b>Cable Length</b>	<b>L00M:</b> special cable length = L5M / L10M / L15M / L20M, total length in meters (standard length 2,0 m [6,6 ft])

Note: ETxx options are now replaced by Zxx options.

**ORDERING INFORMATION**

<b>XPM6</b>	-	-	-	<b>1KB</b>	<b>G</b>	-	<b>/Z35/P7/L5M</b>
Model	-	Output signal	-	Pressure Range	Pressure reference	-	Options
<b>XPM6</b>		(none): bridge (mV/V) <b>A1:</b> 0,5 to 4,5V		<b>20B</b> <b>35B</b> <b>50B</b> <b>70B</b> <b>100B</b> <b>200B</b> <b>350B</b> <b>500B</b> <b>1KB</b>	<b>G:</b> gauge <b>S:</b> sealed		<b>/Z04</b> <b>/Z35</b> <b>/Z36</b> <b>/MH</b> <b>/P7</b> <b>/SC</b> <b>/L00M</b>

The sensor ordering codes uses only bar as units because **XPM6** uses metric threads. Psi value correspondence is noted as information.

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