

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.

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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		

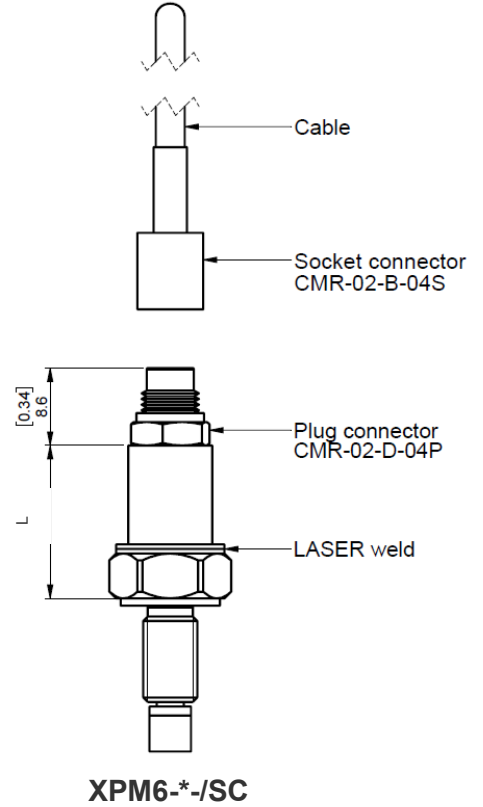
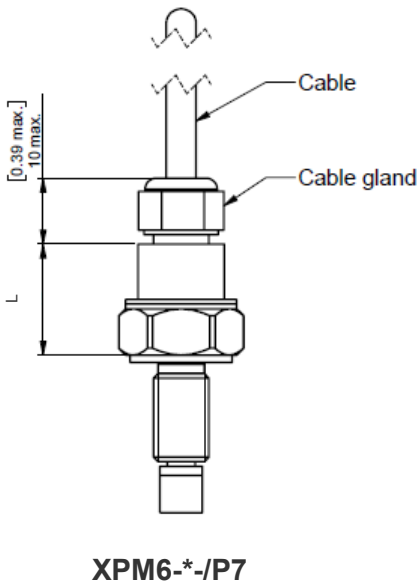
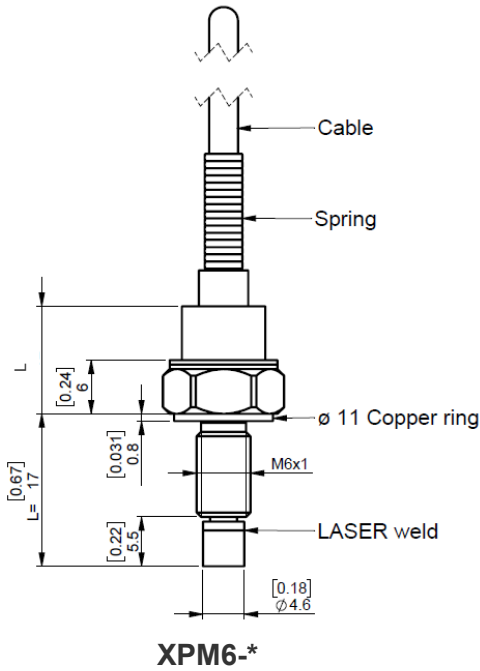
Insulation under 50Vdc ≥100MΩ

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

XPM6

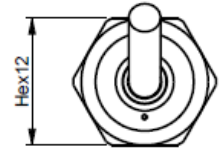
Miniature pressure sensor

DIMENSIONS (metric & [imperial])



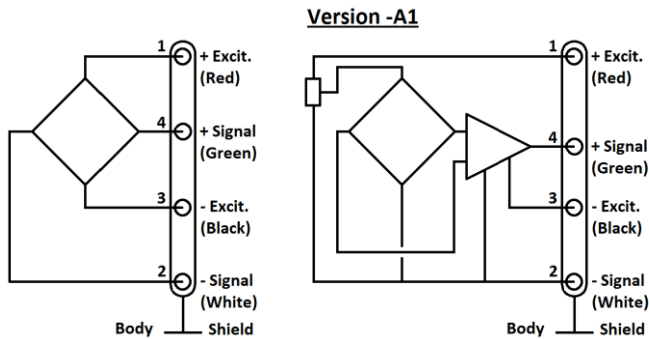
Custom length L = 12 to 30 mm [0.47" to 1.18"] on request.
 * Mechanical tolerances on L are ±0.1 mm

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)

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OPTIONS

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

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

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