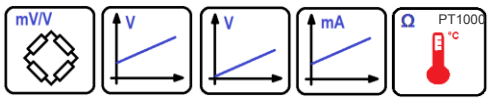

XPM10

M10x1 Low Mass Miniature pressure sensor

SPECIFICATIONS

- Ranges 1 to 350 bar [15 psi to 5,000 psi]
- Absolute, sealed and gauge ranges
- Amplified output available
- Linearity up to ±0.25% F.S
- Very low mass, approximately 20 grams without cable (dependent on options)

FEATURES

- Stainless steel
- M10x1 thread
- Flush Diaphragm
- For Static and Dynamic Applications
- High Level Tension Output Available
- Low Installation Torque Sensitivity

APPLICATIONS

- Hydraulic regulation process
- Explosion test benches
- Brake Systems
- Laboratory and research

The XPM10 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 or titanium and is available in standard ranges from 0-1 to 350 bars [15 up to 5000 psi].

The XPM10 incorporates a specific feature, which minimizes zero shifts caused by installation torque.

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

The XPM10 may integrate different electronics for amplified outputs: A1 0.5-4.5V, A2 ±5V, A3 4-20mA.

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	Burst Pressure
bar	psi	Gauge	Absolute	Sealed		(non amplified)	(rated pressure)	(rated pressure)
1	15	•	•	•	32 kHz	50 mV	2 x FS	5 x FS
2	30	•	•	•	32 kHz	100 mV	2 x FS	5 x FS
5	75	•	•	•	35 kHz	100 mV	2 x FS	5 x FS
10	150	•	•	•	50 kHz	100 mV	2 x FS	5 x FS
20	300	•	•	•	69 kHz	100 mV	2 x FS	5 x FS
35	500	•	•	•	79 kHz	100 mV	2 x FS	5 x FS
50	750	•	•	•	109 kHz	100 mV	2 x FS	5 x FS
100	1.5K			•	154 kHz	100 mV	2 x FS	5 x FS
200	3K			•	218 kHz	100 mV	2 x FS	5 x FS
350	5K			•	288 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, A2 and A3 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°C)

Parameters	Non amplified	Amplified A1	Amplified A2	Amplified A3	Notes
Power supply	10 Vdc regulated	10 to 30 Vdc	±12 to ±18 Vdc	10 to 26 Vdc	A3 version uses a 2 wires circuit
Sensitivity "FSO"	Previous table	4 V ±0.2 V	5 V ±0.25 V	16 ±0.4 mA	
Zero Offset	<±10 mV	0.5 V ±0.2 V	0 V ±0.25 V	4 ±0.4 mA	
Non Linearity	±0.5%FS ±0.25%FS				FS ≤ 2 bar or 30 psi FS ≥ 5 bar or 75 psi
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 250°F)		-20°C to 80°C (-4°F to 176°F)	
Compensated Temperature (CTR)	0 to 60°C (32 to 140°F)				
Thermal Zero Shift in CTR	±3%FS/50°C ±2%FS/50°C				FS = 1 bar or 15 psi FS ≥ 2 bar or 30 psi
Thermal Sensitivity Shift in CTR	±2% of reading /50°C				
Input Impedance or consumption	500 Ω to 1500 Ω	< 30 mA			
Output Impedance	500 Ω to 800 Ω	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.

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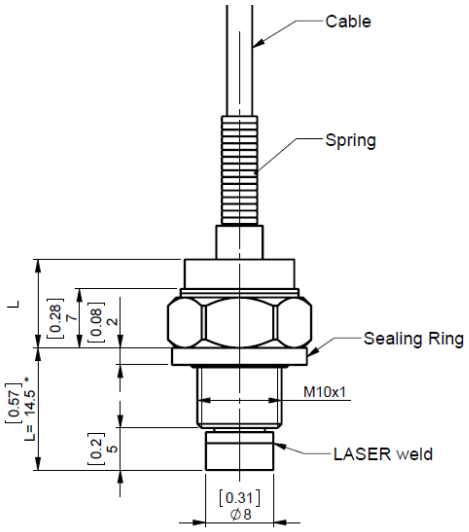
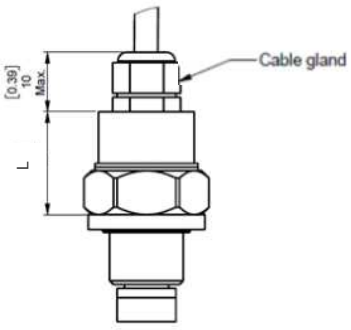
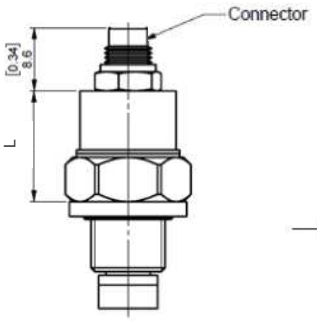
DIMENSIONS (metric & [imperial])

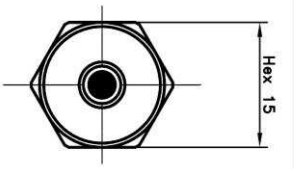


XPM10-*



XPM10-*-/P7





XPM10-*-/SC

Version:	Non-Amplified			Amplified A1/A2			Amplified A3		
Option:	standard	P7	SC	standard	P7	SC	standard	P7	SC
L (mm)	*7*	*11.5*	*11.5*	*10.5*	*14*	*15*	*23.5*	*23.5*	*28*

Weight: The standard configuration without cable and sealing ring is < 20g

WIRING SCHEMATICS

Functions (non-amplified)	Wire / Pin
+SUPPLY	**Red** / 1
+OUTPUT	**Green** / 4
-OUTPUT	White / 2
-SUPPLY	**Black** / 3
Shield	Body

0-5V Functions (A2)	Wire / Pin
+SUPPLY	**Red** / 1
+OUTPUT	**Green** / 4
-0V / COM	White / 2
-SUPPLY	**Black** / 3
Shield	Body

0.5-4.5V Functions (A1)	Wire / Pin
+SUPPLY	**Red** / 1
+OUTPUT	**Green** / 4
-OUTPUT	White / 2 (common with - supply)
-SUPPLY	**Black** / 3 (common with - output)
Shield	Body

4-20mA Functions (A3)	Wire / Pin
+SUPPLY / +OUTPUT	**Red** / 1
-SUPPLY / -OUTPUT	Black / 3
Shield	Body

ADDITIONAL INFORMATIONS

1. Recommended Tightening Torque: 4 to 10 Nm (44 to 88 lbf.in) for FS ≤5 bar or 75 psi
   10 to 15 Nm (88 to 132 lbf.in) for FS ≥ 5 bar or 75 psi
2. Sealing: One FKM sealing ring Ø 16x2 is supplied with sensor. (Operating static temperature -30°C to 200°C)
3. Electrical connection: Standard = 2m of shielded sable 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 *(other compensation range are available on request)*	**Z04**: CTR -40 to 90 °C [-40 to 194 °F] (not available with A3 and P7 options)
	Z35: CTR 20 to 120 °C [68 to 248 °F] (not available with A3 options)
	Z36: CTR 20 to 150 °C [68 to 302 °F] (not available with A1, A2 and A3 options)
Waterproofing	**P7**: IP67 protection for cable gland output or SC option (available only for Absolute and Sealed Gauge 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

XPM10	**-**	**A1**	**-**	**20B**	**G**	**-**	**/Z35/P7/L5M**
Model	-	Output signal	-	Pressure Range	Pressure reference	-	Options
XPM10		(blank): non-amplified **A1**: 0,5 to 4,5V **A2**: 0 to 5V **A3**: 4 to 20 mA		**1B** **2B** **5B** **10B** **20B** **35B** **50B** **100B** **200B** **350B**	**A**: Absolute **G**: Gauge **S**: Sealed		/**Z04** /**Z35** /**Z36** /**P7** /**SC** /**L00M**

The sensor ordering codes uses only bar as units because **XPM10** uses metric threads. Psi value correspondence is noted as information.

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