

FEATURES

- Flush diaphragm
- M5x0.8 or 10-32UNF-2A thread
- Cable or integral connector
- Many options available

APPLICATIONS

- Corrosive liquids and gases
- Braking system pressure
- Onboard equipment monitoring
- Mil-Aero

XP5

Miniature pressure sensor

SPECIFICATIONS

- Ranges 0.5 to 350 bar [7 psi to 5 000 psi]
- Absolute, sealed and gauge
- Titanium construction
- For static and dynamic applications
- Linearity up to $\pm 0.25\%$ FSO

The **XP5** serie is designed in titanium for pressure measurement in dynamic and static operations even in harsh environments.

The **XP5** features TE CONNECTIVITY's cutting edge SanShift™ technology which eliminates zero shifts caused by installation torque.

This rugged sensor is constructed of titanium to enable reliable operation including harsh environments. The **XP5**'s core sensing technology consists of a temperature compensated Wheatstone bridge composed of high stability micro-machined silicon strain gauges.

An on-board amplifier is optionally available (**A1**) for ranges from 5 to 350 bar [75 to 5,000 psi].

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	Burst Pressure
bar	psi	Gauge	Abso.	Sealed		(non amplified)	(rated pressure)	(rated pressure)
0.5	7	•	•	•	90 kHz	2.5 mV/V	8 x FS	20 x FS
1	15	•	•	•	90 kHz	5 mV/V	4 x FS	10 x FS
2	30	•	•	•	90 kHz	10 mV/V	2 x FS	5 x FS
5	75	•	•	•	130 kHz	10 mV/V	2 x FS	5 x FS
10	150	•	•	•	160 kHz	10 mV/V	2 x FS	5 x FS
20	300	•	•	•	190 kHz	10 mV/V	2 x FS	5 x FS
35	500	•	•	•	250 kHz	10 mV/V	2 x FS	5 x FS
50	750	•	•	•	300 kHz	10 mV/V	2 x FS	5 x FS
70	1K	•	•	•	320 kHz	10 mV/V	2 x FS	5 x FS
100	1.5K			•	380 kHz	10 mV/V	2 x FS	5 x FS
200	3K			•	540 kHz	10 mV/V	2 x FS	5 x FS
350	5K			•	760 kHz	10 mV/V	2 x FS	3 x FS

Notes

- 1: Useful frequency is 20% of Resonant Frequency. Bandwidth 3 kHz for amplified model (A1 option)
- 2: FSO is indicated as nominal value with tolerances -50% to +100%.

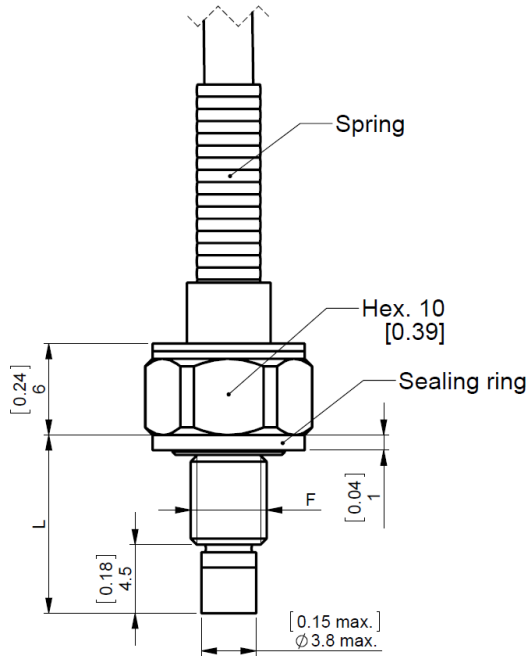
PERFORMANCE SPECIFICATIONS (all values are typical at temperature 23±3°C)

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 - 4.5 V for A1 option
Zero Offset	±1 mV/V	0.5 V ±0.2 V	
Non Linearity	±0.5%FS ±0.25%FS		FS ≤ 2 bar or 30 psi FS ≥ 5 bar or 75 psi
Hysteresis	±0.5%FS ±0.25%FS		FS ≤ 2 bar or 30 psi FS ≥ 5 bar or 75 psi
Operating Temperature Range (OTR)	-40 to 120°C (-40 to 250°F)		
Compensated Temperature Range(CTR)	0 to 60°C (32 to 140°F)		
Thermal Zero Shift in CTR (TZS)	±6%FS/50°C ±4%FS/50°C ±2%FS/50°C		FS ≤ 1 bar or 15 psi FS = 2 bar or 30 psi FS ≥ 5 bar or 75 psi
Thermal Sensitivity Shift in CTR (TSS)	±4% of reading /50°C ±2% of reading /50°C		FS ≤ 2 bar or 30 psi FS ≥ 5 bar or 75 psi
Input Impedance / consumption	1500 Ω nom. 1000 Ω nom.	< 30 mA	FS ≤ 5 bar or 75 psi FS ≥ 10 bar or 150 psi
Output Impedance	500 Ω nom. 1000 Ω nom.	1000 Ω	FS ≤ 5 bar or 75 psi FS ≥ 10 bar or 150 psi
Ingress Protection	IP50 IP67		Standard or SC option P7 option
Media – Pressure Port	Liquids and Gases compatible with Titanium		

Insulation under 50Vdc ≥100MΩ

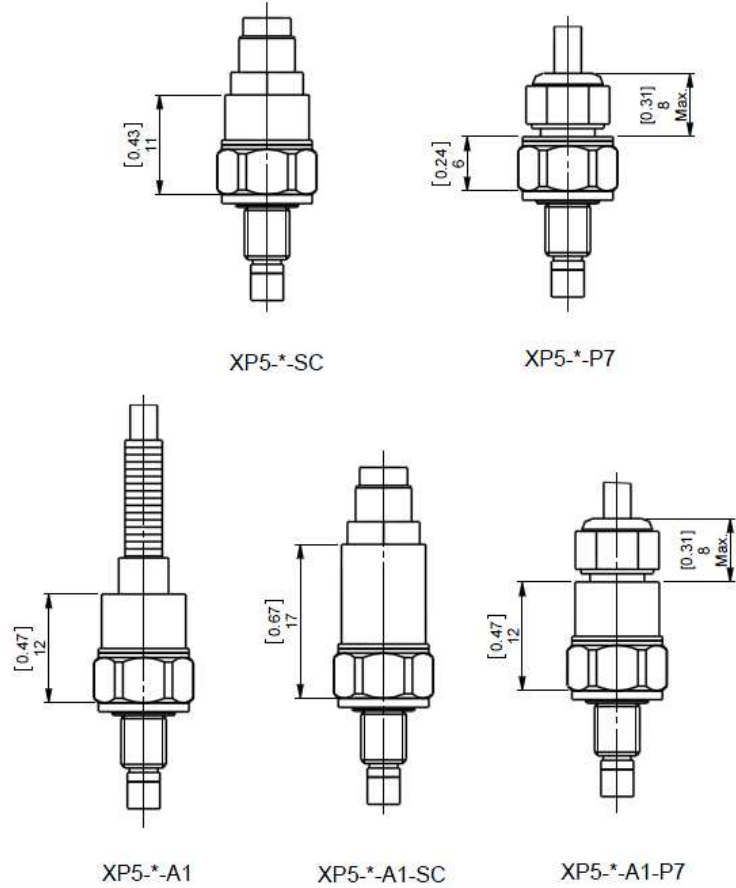
CE conformance according to EN 61010-1, EN 50081-1, EN 50082-1.

DIMENSIONS & WIRING SCHEMATIC



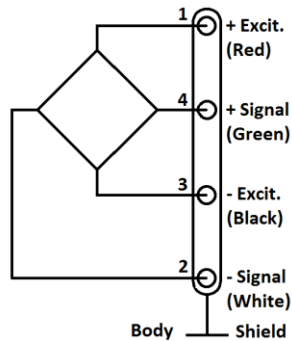
Dimensions **XP5-M & XP5-X**

	XP5-M	XP5-X
F (Thread)	M5x0.8-6g	10-32UNF-2A
L (mm)	11.7	12.1
L (in)	[0.46]	[0.48]

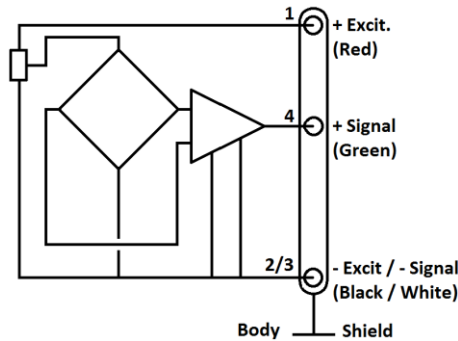


WIRING AND CONNECTOR OPTION

Not Amplified



Version A1



Notes:

1. Recommended Tightening Torque: 1 Nm (FS ≤2 bar or 30 psi) ; 1.8 Nm (FS ≥ 5 bar or 75 psi)
2. Sealing: One FKM sealing ring is supplied with the sensor (operating 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)

XP5

Miniature pressure sensor

OPTIONS

A1 : Amplified Output (only available for ranges from 5 to 350 bar [75 to 5,000 psi])
Z02 : Compensation Temperature Range -40 to 60°C [-40 to 140°F]
Z35 : Compensation Temperature Range 20 to 120°C [70 to 250°F]
Z36 : Compensation Temperature Range 20 to 150°C [70 to 300°F] CTR=OTR (not compatible with A1 option)
SC : Connector output, mating plug supplied with 2 m cable [6.6 ft]
P7 : IP67 protection / -20°C to 150°C [0°F to 300°F] (not compatible with gauge model)
L00M : special cable length, replace "00" with total length in meters (L5M ; L10M ;...). Note: standard length 2 m [6.6 ft])

ORDERING INFORMATION

XP5	-	M	-	A1	-	20B	G	-	/LSM
Model	-	Mounting thread	-	Output signal	-	Pressure Range	Pressure reference	-	Options
XP5		M : M5x0.8 X : 10-32UNF-2A		(none) : bridge (mV/V) A1 : 0,5 to 4,5V		0.5B 1B 2B 5B 10B 20B 35B 50B 70B 100B 200B 350B	7P 15P 30P 75P 150P 300P 500P 750P 1KP 1.5KP 3KP 5KP		A : absolute G : gauge S : sealed Z02 Z35 Z36 SC P7 L00M

Psi range models only supplied with imperial thread

Bar range models only supplied with metric thread.

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