

## 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  $\pm 0.25\%$  FS

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

The **XP5** threaded construction virtually 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			Resonance Frequency <sup>1</sup>	Sensitivity "FSO" <sup>23</sup>	Overpressure (rated pressure)	Burst Pressure (rated pressure)
bar	psi	Gauge	Abso.	Sealed		(unamplified)		
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

1: Useful frequency is 20% of Resonance Frequency. Bandwidth 3 kHz for amplified model (A1 option)

2: Unamplified version are calibrated with 10Vdc power supply as standard.

3: Sensitivity "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	A1	Notes
Power supply	1-10 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	±10 mV	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		

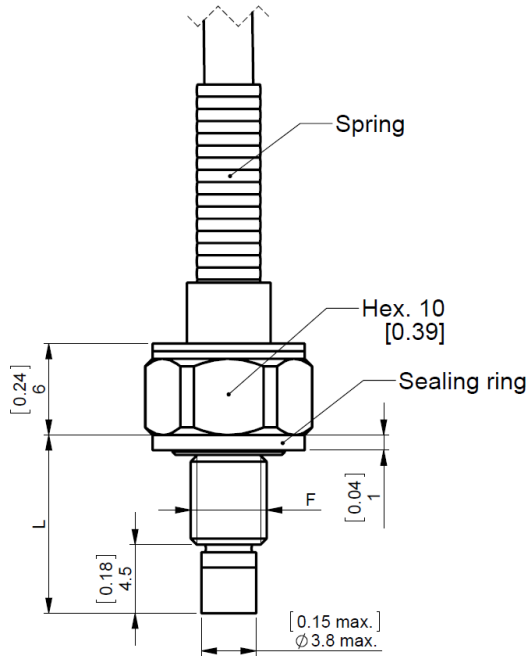
Insulation under 50Vdc ≥100MΩ

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

# XP5

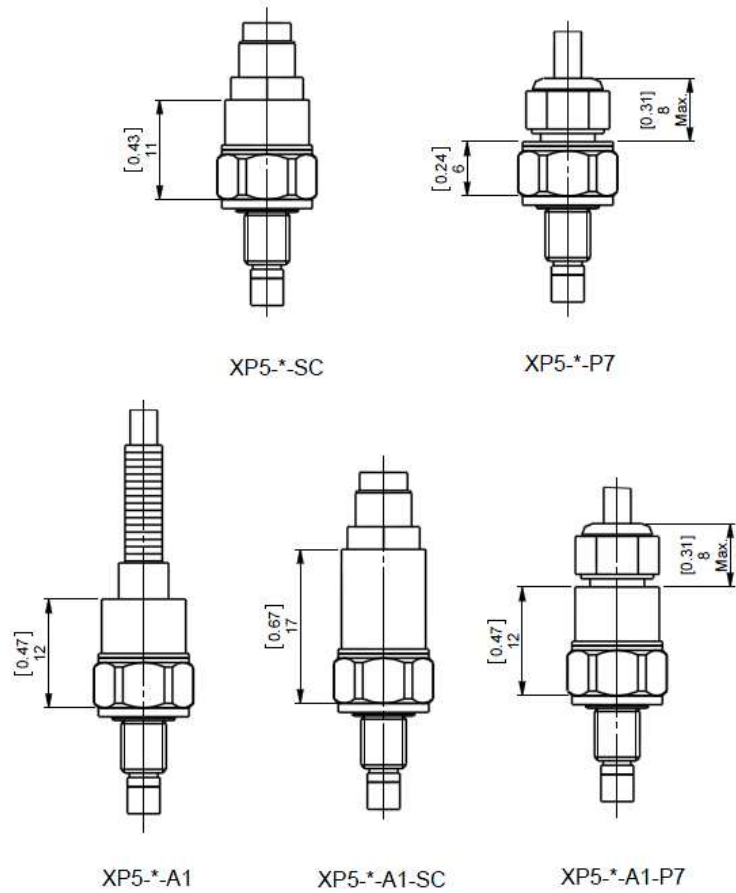
Miniature pressure sensor

## DIMENSIONS & WIRING SCHEMATIC



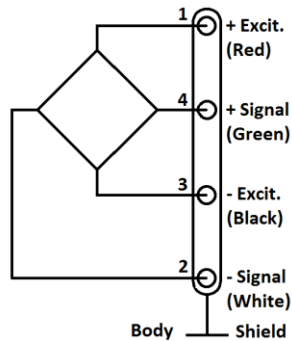
Dimensions **XP5-M & XP5-X**

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

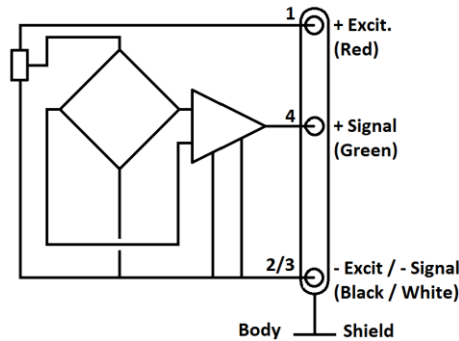


## WIRING AND CONNECTOR OPTION

**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. Comtronic 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**

<b>Z02</b> : Compensation Temperature Range -40 to 60°C [-40 to 140°F]
<b>Z35</b> : Compensation Temperature Range 20 to 120°C [70 to 250°F]
<b>Z36</b> : Compensation Temperature Range 20 to 150°C [70 to 300°F] CTR=OTR (not compatible with A1 option)
<b>SC</b> : Connector output, mating plug supplied with 2 m cable [6.6 ft]
<b>P7</b> : IP67 protection / -20°C to 150°C [0°F to 300°F ] (not compatible with gauge model)
<b>V00</b> : Non-standard power supply calibration, replace "00" with value in Volt (standard 10Vdc, unamplified sensor only)
<b>L00M</b> : special cable length, replace "00" with total length in meters (L5M ; L10M ;...). Note: standard length 2 m [6.6 ft])

**ORDERING INFORMATION**

<b>XP5</b>	-	<b>M</b>	-	<b>A1</b>	-	<b>20B</b>	<b>G</b>	-	<b>/L5M</b>
Model	-	Mounting thread	-	Output signal	-	Pressure Range	Pressure reference	-	Options
<b>XP5</b>		<b>M</b> : M5x0.8 <b>X</b> : 10-32UNF-2A		(none) : bridge (mV/V) <b>A1</b> : 0,5 to 4,5V		<b>0.5B</b> <b>1B</b> <b>2B</b> <b>5B</b> <b>10B</b> <b>20B</b> <b>35B</b> <b>50B</b> <b>70B</b> <b>100B</b> <b>200B</b> <b>350B</b>	<b>7P</b> <b>15P</b> <b>30P</b> <b>75P</b> <b>150P</b> <b>300P</b> <b>500P</b> <b>750P</b> <b>1KP</b> <b>1.5KP</b> <b>3KP</b> <b>5KP</b>	<b>A</b> : absolute <b>G</b> : gauge <b>S</b> : sealed	<b>Z02</b> <b>Z35</b> <b>Z36</b> <b>SC</b> <b>P7</b> <b>V05</b> <b>L00M</b>

Psi range models only supplied with imperial thread

Bar range models only supplied with metric thread.

Amplified Output **A1** are only available for ranges from 5 to 350 bar [75 to 5,000 psi]