

## 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%.

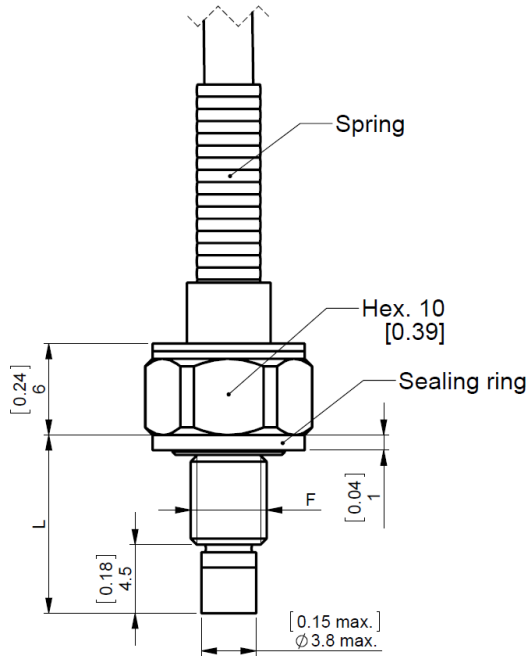
## PERFORMANCE SPECIFICATIONS (all values are typical at temperature 23±3°C)

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

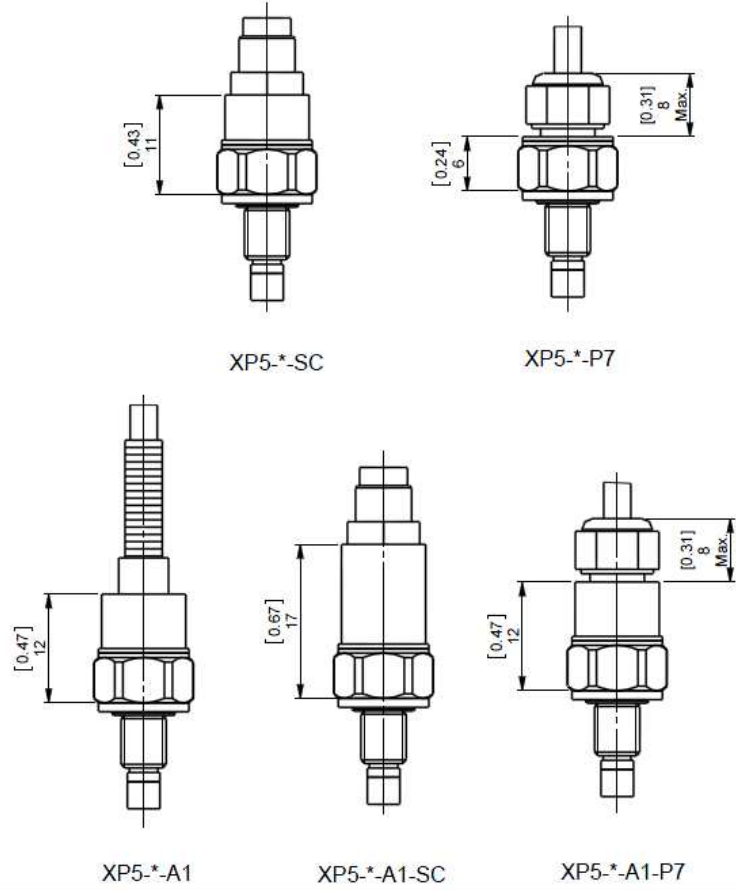
CE conformance according to EN 61010-1, EN 50081-1, EN 50082-1.

**DIMENSIONS & WIRING SCHEMATIC**



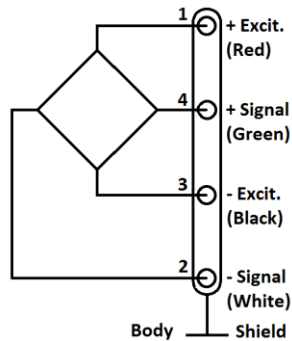
**Dimensions XP5-M & XP5-X**

	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]

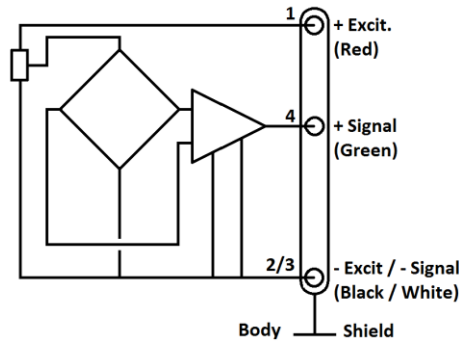


**WIRING AND CONNECTOR OPTION**

**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

XP5	-	M	-	A1	-	20B	G	-	/L5M
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 V05 L00M

**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]

### NORTH AMERICA

Measurement Specialties, Inc.,  
a TE Connectivity Company  
Phone: 800-522-6752  
Email: [customercare.frm@te.com](mailto:customercare.frm@te.com)

### EUROPE

Measurement Specialties (Europe), Ltd.,  
a TE Connectivity Company  
Phone: 800-440-5100  
Email: [customercare.lcsb@te.com](mailto:customercare.lcsb@te.com)

### ASIA

Measurement Specialties (China), Ltd.,  
a TE Connectivity Company  
Phone: 0400-820-6015  
Email: [customercare.shzn@te.com](mailto:customercare.shzn@te.com)

### TE.com/sensorsolutions

Measurement Specialties, Inc., a TE Connectivity company.

Measurement Specialties, TE Connectivity, TE Connectivity (logo) and EVERY CONNECTION COUNTS are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2015 TE Connectivity Ltd. family of companies All Rights Reserved.