XPC10

High temperature miniature pressure sensor

SPECIFICATIONS

- **Ranges10 to 500 bar [150 to 7 500 psi]**
- **Absolute, sealed and gauge**
- **High temp. from -40 up to 220 ºC [-40 to 428 °F]**
- **Stainless steel construction**
- **For static and dynamic applications**
- **Linearity up to ±0.25% F.S.**

FEATURES

- Low Installation Torque Sensitivity
- M10x1 or 3/8-24UNF thread
- Specific threads lengths on request
- Integrated Amplifier optional
- Titanium body on request
- Optional IP67 Ingress Protection

APPLICATIONS

- Aerospace
- Test benches
- Oven monitoring equipment
- Cooling regulation systems

The **XPC10** is a miniature pressure transducer specifically designed to measure static and dynamic pressures in temperatures from -40 to 220 °C [-40 °F to 428 °F] (unamplified models).

Made of stainless steel, the rugged **XPC10** is suitable for corrosive liquids and gases in a wide variety of harsh environments.

The **XPM10** threaded construction virtually eliminates zero shifts caused by installation torque.

The core technology of the **XPC10** consists of a foil strain gage wired in a Wheatstone bridge circuit to provide excellent temperature stability. An on-board amplifier is optionally available.

A **PT1000** temperature probe is optionally available for all ranges as a custom design.

On request, Instruction documents can be provided to ease the selection and use of our sensors and provide helpful tips.

STANDARD RANGES

Ranges (FS)		Pressure Reference			Resonance Frequency [12]	Sensitivity "FSO" [3]	Overpressure	Burst Pressure
bar	psi	Gauge	Abso.	Sealed		(non amplified)	(rated pressure)	(rated pressure)
10[1]	150[1]	•	•	•	34 kHz	1.2 mV/V	1.5 x FS	3 x FS
20	300	•	•	•	50 kHz	1.2 mV/V	1.5 x FS	3 x FS
35	500	•	•	•	70 kHz	1.2 mV/V	1.5 x FS	3 x FS
50	750	•	•	•	80kHz	1.2 mV/V	1.5 x FS	3 x FS
70	1K	•	•	•	95 kHz	1.2 mV/V	1.5 x FS	3 x FS
100	1.5K			•	110 kHz	1.2 mV/V	1.5 x FS	3 x FS
200	3K			•	155 kHz	1.2 mV/V	1.5 x FS	3 x FS
350	5K			•	220 kHz	1.2 mV/V	1.5 x FS	3 x FS
500	7.5K			•	250 kHz	1.2 mV/V	1.5 x FS	3 x FS

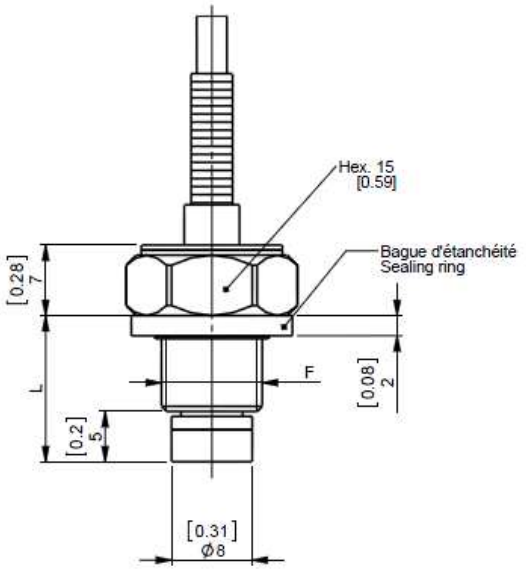
1. Lower pressure range 5 bar [75 psi] on request as custom design.
2. Useful frequency is 20% of Resonance Frequency. Bandwidth is 5kHz for all A1 amplified version.
3. Sensors are calibrated with 10Vdc power supply as standard.

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

Parameters	Non amplified [1]	A1	Notes
Power supply	1 to 10 Vdc regulated	10 to 30 Vdc	
Sensitivity "FSO"	See previous table	4 V ±0.2 V	Signal 0.5 - 4.5V for A1 option
Zero Offset	±1 mV	0.5 V ±0.2 V	
Combined Non-Linearity & Hysteresis	±0.5%FS ±0.3%FS ±0.25%FS		FS ≤ 10 bar 10 bar < FS < 100 bar 100 bar ≤ FS
Operating Temperature (OTR)	-40 to 220°C (-40 to 428°F)	-40°C to 120°C (-40°F to 250°F)	
Compensated Temperature (CTR)	0 to 150°C (32 to 300°F)	0 to 80°C (32°F to 170°F)	
Thermal Zero Shift in CTR (TZS)	< ±1%FS/50°C		
Thermal Sensitivity Shift in CTR (TSS)	< ±1% of reading /50°C		
Input Impedance or consumption	500 Ω nom.	< 50 mA	
Output Impedance	350 Ω nom.	1000 Ω	
Ingress Protection	IP50 IP67		Standard or SC option P7 option
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.

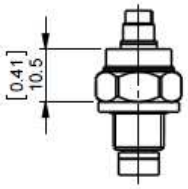
DIMENSIONS & WIRING SCHEMATIC



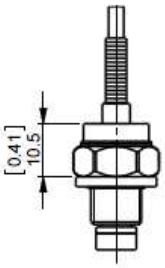
XPC10

Dimensions **Metric** & **Imperial**

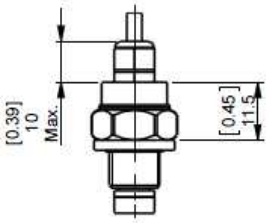
	XPC10-M	XPC10-X
F (thread)	M10x1	3/8-24UNF
L (mm)	14.5	13.1
L (in)	[0.57]	[0.52]



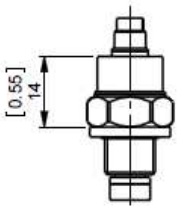
XPC10-*-SC



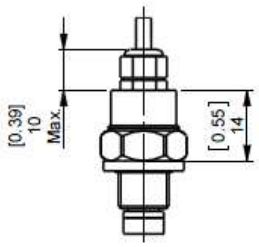
XPC10-*-A1



XPC10-*-P7



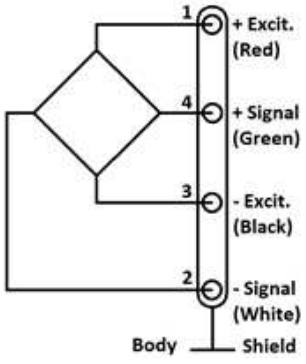
XPC10-*-A1-SC



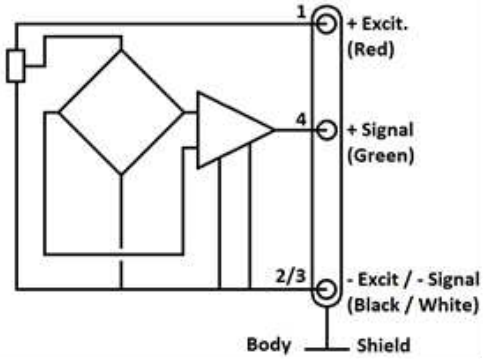
XPC10-*-A1-P7

WIRING AND CONNECTOR OPTION

Not Amplified



Version A1



Notes:

1. Recommended Tightening Torque: 5 to 8 Nm (44 to 88 lbf.in)
2. Sealing: One Self-centred "FKM" sealing ring Ø 16x2 is supplied with the sensor. Operating temperature is -30°C to 200°C [-20°F to 390°F] static; down to -40°C to 220°C [-40°F to 428°F] for short durations.
3. Electrical connection: Standard = 2m of shielded sable 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)

OPTIONS

ZI : Zero shift in CTR <0.75% F.S. / 50 °C [/100 °F]
Z02 : CTR -40 to 60 °C [-40 to 140 ° F]
Z35 : CTR 20 to 120 °C [70 to 250 ° F]
Z38 : CTR +20°C à +200°C [70 to 390°F] (not compatible with A1 and P7 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)
V00: Non-standard power supply calibration, replace “00” with value in Volt (standard 10Vdc, unamplified sensor only)
L00M : special cable length, replace “00” with total length in meters (standard length 2,0 m [6,6 ft])

ORDERING INFORMATION

XPC10	-	M	-	A1	-	20B		G	-	/L5M
Model	-	Mounting thread	-	Output signal	-	Pressure Range		Pressure reference	-	Options
XPC10		**M :** M10x1 **X** : 3/8-24UNF		**(**none**)** : bridge (mV) **A1** : 0,5 to 4,5V		**10B** **20B** **35B** **50B** **70B** **100B** **200B** **350B** **500B**	**150P** **300P** **500P** **750P** **1KP** **1.5KP** **3KP** **5KP** **7.5KP**	**A** : absolute **G** : gauge **S** : sealed		**ZI** **Z02** **Z35** **Z38** **SC** **P7** **L00M**

Psi range models only supplied with imperial thread
Bar range models only supplied with metric thread.

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