

PM5 Series

Miniature pressure sensor



- Absolute, sealed and gauge ranges
- 1 to 350 bar [15 psi to 5000 psi]
- Titanium construction
- Amplified output available
- For static and dynamic applications
- Linearity & Hysteresis up to $\pm 0.25\%$ FSO

Description

These miniature pressure sensors are designed to make static and dynamic measurements of pressure. The All-Titanium construction makes these flush membrane sensors suitable for use in applications where corrosive pressure media may be present. Integrated electronics makes it possible to offer an optional voltage output signal.

Characteristics

Flush diaphragm
M5x0.8
Titanium construction
Miniature design

Applications

Corrosive liquids and gases
Onboard equipment monitoring
Braking systems
Mil-Aero

Standard Ranges

Pressure (FS in bar)	Pressure (FS in PSI)	Absolute	Gauge	Sealed	Linearity	Hysteresis	Resonant Frequency
1	15	•	•	•	$\pm 0.5\%$	$\pm 0.5\%$	90 kHz
2	30	•	•	•	$\pm 0.5\%$	$\pm 0.5\%$	90 kHz
5	75	•	•	•	$\pm 0.25\%$	$\pm 0.25\%$	130 kHz
10	150	•	•	•	$\pm 0.25\%$	$\pm 0.25\%$	160 kHz
20	300	•	•	•	$\pm 0.25\%$	$\pm 0.25\%$	190 kHz
35	500	•	•	•	$\pm 0.25\%$	$\pm 0.25\%$	250 kHz
50	750	•	•	•	$\pm 0.25\%$	$\pm 0.25\%$	300 kHz
100	1500	•	•	•	$\pm 0.25\%$	$\pm 0.25\%$	380 kHz
200	3000	•	•	•	$\pm 0.25\%$	$\pm 0.25\%$	540 kHz
350	5000	•	•	•	$\pm 0.25\%$	$\pm 0.25\%$	760 kHz

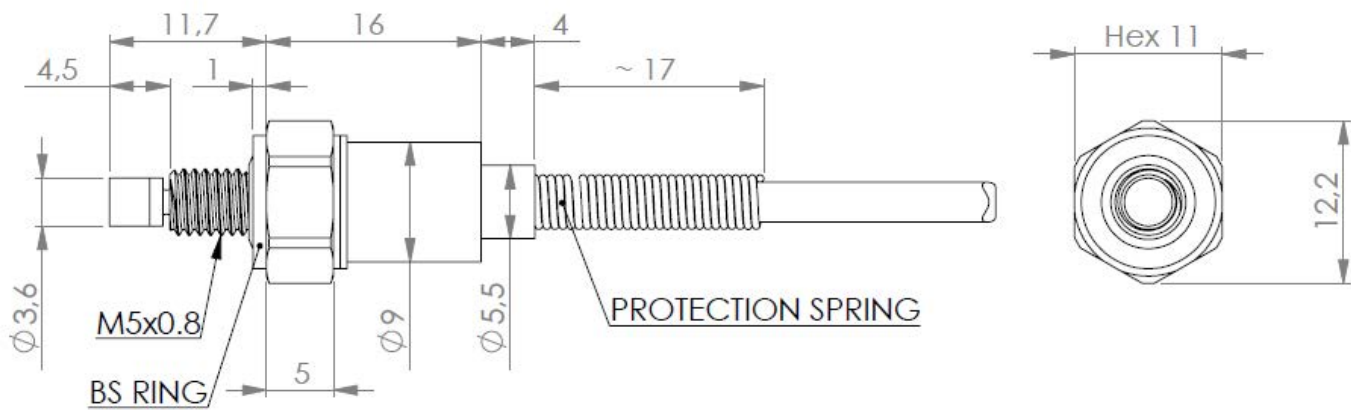
Specification

Model	mV output	Amplified output - 4V
Over Pressure	2 Times rated pressure	
Burst Pressure	5 Times rated pressure	
Material	Titanium Tav6	
Power Supply	10 Vdc regulated	10 – 32 Vdc
Full Scale Output (FS)	30 mV ($\leq 2\text{bar}$) / 100mV ($> 2\text{bar}$)	4.5 Vdc $\pm$ 200 mV
Input Impedance/Consumption	1500 Ω nominal	< 30 mA
Output Impedance	500 – 800 Ω	1 k Ω
Zero Offset At 20 °C	$\pm$ 10 mV	0.5 Vdc $\pm$ 200 mV
Insulation	> 100 M Ω @ 50 Vdc	
Operating Temperature	-40 °C to 120 °C	
Compensated Temperature	0 °C to 60 °C (See options for other compensated temperatures)	
Thermal Zero Shift	< $\pm$ 2.5% FS / 60°C / < $\pm$ 5% $\leq$ 2bar	
Thermal Sensitivity Shift	< $\pm$ 2.5% FS / 60 °C / < $\pm$ 5% $\leq$ 2bar	
Repeatability	$\pm$ 0.2%	
Bandwidth (-3dB)	See above Resonant Frequency	3kHz
Electrical Connection	2m length 4 conductor AWG28 Silicone shielded cable (See options for other cable length)	
Mechanical Connection	M5x0.8	
Ingress Protection	IP50 (See options for other IP ratings)	
Seal	British Standard (BS) Ring OD: 100mm W: 1mm (seal included)	
Mounting Torque	5 Nm nominal, 10 Nm Max	

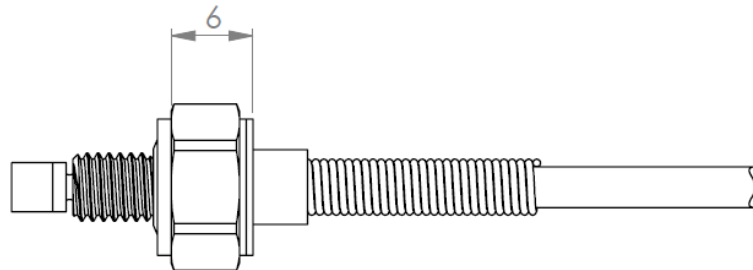
All values are typical at temperature 20 $\pm$ 1°C

Dimension & Wiring Schematic (mm)

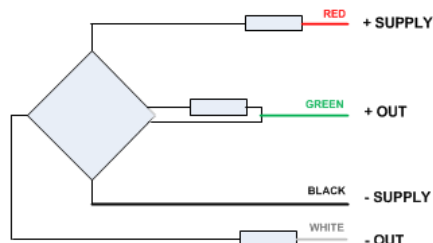
Amplified output



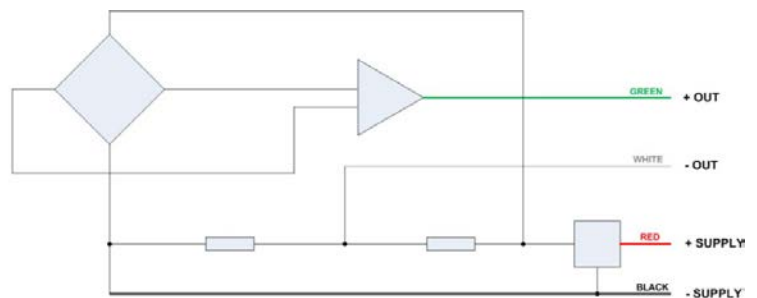
mV output



mV output



Amplified output



Options

L00M: special length, replace "00" with total length in metres (2 metres standard)
L00F: special length, replace "00" with total length in ft
C1: Compensated temperature -40° to 60°C
C2: Compensated temperature -40° to 120°C (mV output only)
Cx: Special compensation temperature, pls contact factory
P67: IP67 rating (only available for absolute or sealed type)
P65: IP65 rating (only available for absolute or sealed type)

Order information

P	S	M5C	350	B	mV	/L5M
Model	Pressure reference	Model	Pressure range (Bar/Psi)	Unit	Output signal	Options
P	A, R, S	M5C	1/15	B: Bar	mV: mV	L00M
	A, R, S		2/30	P: PSI	4V: Amplified output	L00F
	A, R, S		5/75			C1
	A, R, S		10/150			C2
	A, R, S		20/300			P67
	A, R, S		35/500			
	A, R, S		50/750			
	S		100/1500			
	S		200/3000			
	S		350/5000			

A: Absolute, R: Gauge (Relative), S: Sealed Gauge

Example: **PSM5C5KP4V/5MC1P67**

- Sealed
- Metric M5 Thread
- Cable output
- 5 000 Psi
- 4V FS output
- 5m cable length
- Compensated temperature: -40°C to 60°C
- Index of protection: IP67