

Semi Flush Miniature Pressure Sensor



Features

- ➔ Operating from -40 to +125°C
- ➔ Thin film technology
- ➔ Semi flush miniature sensor
- ➔ High natural frequency up to 120kHz

Applications

- ➔ Automotive - on vehicle
- ➔ Aerospace
- ➔ Research laboratory
- ➔ Automation & Robotics

The PSF160 series is designed for highly dynamic pressure measurements. Thanks to a semiflush construction, the pressure diaphragm is exposed, in direct contact with the medium, with reduced dead volume. Being all titanium, it is compatible with most media including corrosive fluids used in industry. Unamplified (mV/V output) or equipped with the latest signal conditioning technologies from EFE (0-5 and 0.5-4.5Vdc outputs), it is able to measure very dynamic pressure spikes. Its thin film sensitive element ensures high performances and stability over wide temperature range. Models with built-in electronics (power supply : 8-30Vdc), being low consumption (< 10mA) and with high bandwidth capabilities are particularly adapted to embedded applications.

Technical specifications

Pressure ranges (FS)	-1/+4bar ; -1/+9bar ; 5bar ; 10bar ; 20bar ; 40bar ; 70bar ; 250bar ; -14.5/+60PSI ; -14.5/+140PSI ; 70PSI ; 150PSI ; 300PSI ; 500PSI ; 1000PSI ; 3000PSI
Type	Absolute ; Gage
Type (for ranges > 40 bar)	Sealed Gage
Safe overload	150% FS
Burst pressure	300% FS
Power supply	8 to 16Vdc
Consumption	< 10mA
Insulation	> 1000 MOhms under 50Vdc at ambient temperature
Output at -100%FS (only for ± range)	0.5Vdc
Output at 0%FS (except ranges ±)	0.5Vdc
Output at 100%FS	4.5Vdc
Zero and sensitivity settings tolerances	±50mV

Technical Specifications

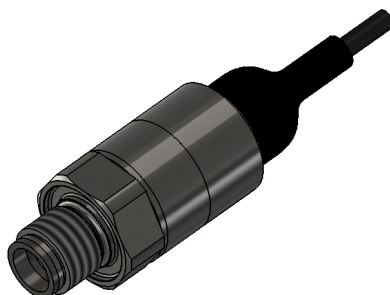
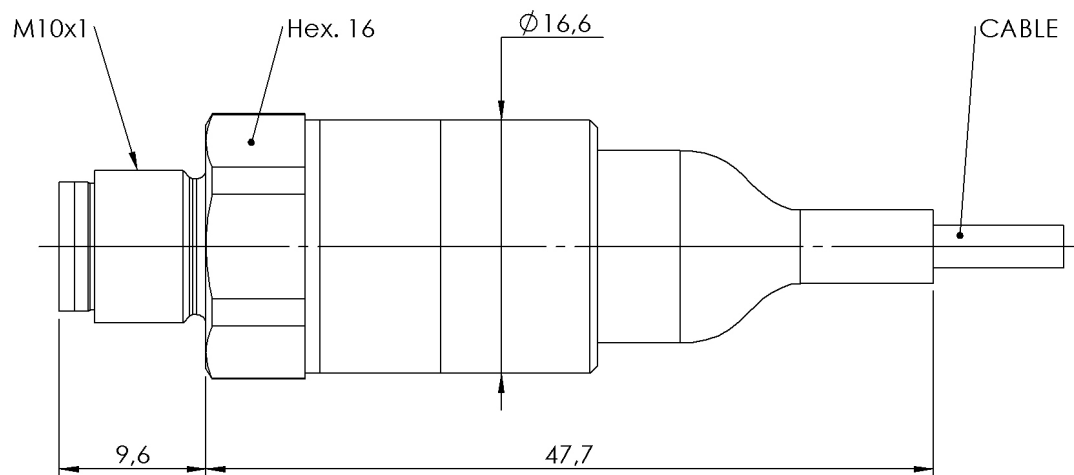
Non linearity and hysteresis combined	±0.25% FS Option : ±0.1% FS
Non repeatability	±0.02% FS typ.
Signal bandwidth	1000Hz @ -3dB Option : Special Adjustment up to 5000Hz @ -3dB
Compensated temperature range	0 to +60°C Option : -25 to +85°C ; -25 to +125°C ; -40 to +125°C
Operating temperature range	-40 to +125°C
Combined thermal zero & sensitivity shifts	±0.02% FS/°C
Constant acceleration in linear vibrations	± 0.02% FS/g (frequency 20-2000Hz, 50g max.)
Mechanical shock	100g ½ sinus 1ms
Electrical protection	Protected against polarity inversion
EMC protection	Compliant to EN61000
Electrical connection	AWG26, Viton Jacketed Shielded Cable Ø3mm, 4 wires
Mechanical connection	M10x1-4h male semi-flush with integrated O-ring
Material(s) of wetted parts	Titanium TA6V (3.7165)
Weight	< 20g without cable
Enclosure protection	IP65 for absolute & sealed gage version



Codification

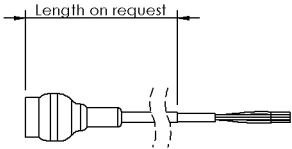
Semi Flush Miniature Pressure Sensor	PSF16	7	T	10bar	A	17	08/1m	A	1	1	B
Output Signal											
0.5-4.5Vdc unregulated power supply		7									
Material											
Titanium			T								
Range											
Example				10bar							
Type											
Absolute					A						
Gage					G						
Sealed Gage					SG						
Mechanical connection											
M10x1-4h male semi-flush with integrated O-ring						17					
Electrical connection											
AWG26, Viton Jacketed Shielded Cable Ø3mm, 4 wires							08/1m				
Compensated temperature range											
0 to +60°C								A			
-25 to +85°C								B			
-25 to +125°C								C			
-40 to +125°C								D			
Non linearity and hysteresis combined											
±0.25% FS									1		
±0.1% FS									2		
Combined thermal zero & sensitivity shifts											
±0.02% FS/°C									1		
Options											
Special Adjustment up to 5000Hz @ -3dB											B





DIMENSIONS : mm



	#26 AWG, 4 CONDUCTOR SHIELDED VITON CABLE		
	VOLTAGE OUTPUT	CONDUCTOR	
	+ EXCITATION	RED	
	+ SIGNAL	GREEN / YELLOW	
	NC	WHITE	
	0 VOLT	BLUE / BLACK	
	SENSOR HOUSING	SHIELD	



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