

Sub-Miniature Pressure Sensor for Harsh Environment



Features

- ➔ Available with 0,5-4,5Vdc output
- ➔ Operating from -40 to +140°C
- ➔ Ultra light : < 10 grams
- ➔ Large Bandwidth

Applications

- ➔ Automotive - on vehicle
- ➔ Aerospace
- ➔ Test benches
- ➔ Off-shore & Marine

The PHE100 series is designed to operate in the harshest environments, including wide temperature operating temperature, mechanical shocks and vibrations. It is well adapted to embedded measurements, on vehicles, aircrafts, satellites, robots, missiles or on test benches for any equipment where space and mass are at a premium. With pressure ranges available from -1 up to 250 bar, its stainless steel construction makes it usable with most fluids used in industry, even corrosive ones. The PHE100 is manufactured with the ruggedized and proprietary sensitive elements and components developed by EFE. Its manufacturing process, including traceable controls and special burn-in, gives the best insurance of high performances and stability in the most challenging applications.

Technical specifications

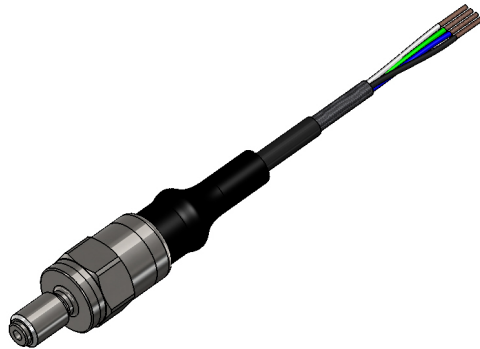
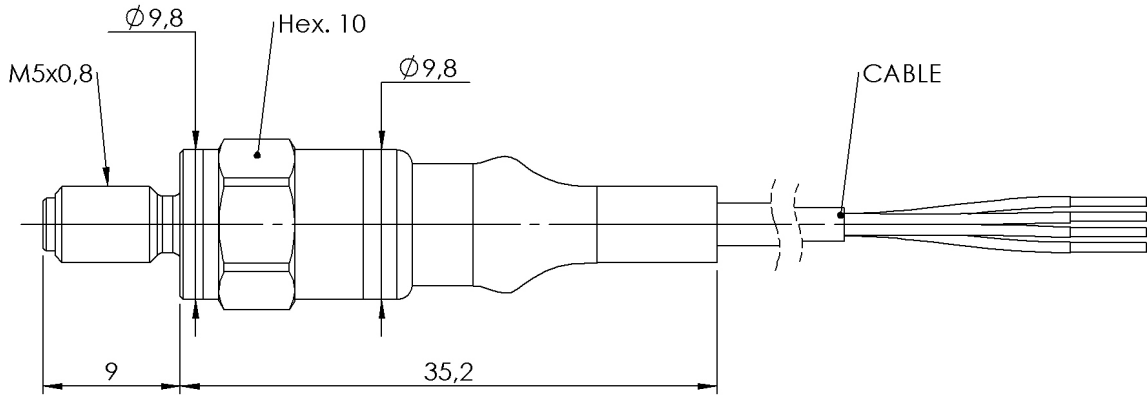
Pressure ranges (FS)	-1/+4bar ; -1/+9bar ; 5bar ; 10bar ; 20bar ; 40bar ; 70bar ; 250bar ; -14.5/+60PSI ; -14.5/+140PSI ; 70PSI ; 150PSI ; 300PSI ; 500PSI ; 1000PSI ; 3000PSI
Type	Absolute ; Gage
Type (for ranges > 40 bar)	Sealed Gage
Safe overload	150% FS
Burst pressure	300% FS
Output impedance	> 3000 Ohms typ.
Input impedance	> 3500 Ohms typ.
Power supply	10Vdc stabilized and regulated
Consumption	< 10mA
Insulation	> 1000 MOhms under 50Vdc at ambient temperature
Output at -100%FS (only for ± range)	Proportional to +100%FS
Output at 0%FS	0mV/V

Technical Specifications


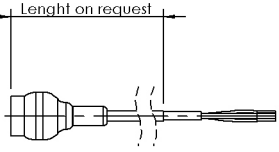
Output at 100%FS	1.5mV/V nom.
Zero and sensitivity settings tolerances	±3% FS
Non linearity and hysteresis combined	±0.25% FS typical (±0.35% FS max.)
Non repeatability	±0.02% FS typ.
Compensated temperature range	-40 to +125°C Option : -40 to +140°C
Operating temperature range	-40 to +140°C
Combined thermal zero & sensitivity shifts	±0.02% FS/°C Option : ±0.01% FS/°C
Constant acceleration in linear vibrations	± 0.02% FS/g (frequency 20-2000Hz, 50g max.)
Mechanical shock	100g ½ sinus 1ms
Electrical protection	Not protected against polarity inversion
EMC protection	Compliant to EN61000
Electrical connection	AWG26, Viton Jacketed Shielded Cable Ø3mm, 4 wires
Mechanical connection	M5x0.8-6g male
Material(s) of wetted parts	Stainless Steel 316L ; Stainless Steel 17-4PH ; Stainless steel 15-5PH
Weight	10g without cable
Enclosure protection	IP65 for sealed gage version

Codification

Sub-Miniature Pressure Sensor for Harsh Environment	PHE10	1	S	40bar	G	05	08/1m	D	3	1
Output Signal										
mV/V		1								
Material										
Stainless Steels			S							
Range										
Example				40bar						
Type										
Gage					G					
Sealed Gage					SG					
Mechanical connection										
M5x0.8-6g male						05				
Electrical connection										
AWG26, Viton Jacketed Shielded Cable Ø3mm, 4 wires							08/1m			
Compensated temperature range										
-40 to +125°C								D		
-40 to +140°C								F		
Non linearity and hysteresis combined										
±0.25% FS typical (±0.35% FS max.)									3	
Combined thermal zero & sensitivity shifts										
±0.02% FS/°C										1
±0.01% FS/°C										2



DIMENSIONS : mm

	#26 AWG, 4 CONDUCTOR SHIELDED VITON CABLE		
	mV/V OUTPUT	CONDUCTOR	
	+ EXCITATION	RED	
	+ SIGNAL	GREEN / YELLOW	
	- SIGNAL	WHITE	
	- EXCITATION	BLUE / BLACK	
	SENSOR HOUSING	SHIELD	

Agent :



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