L'Essor Français Electronique

PHE107

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 vehicule
- Aerospace
- Test benchs
- 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 vehicules, aircrafts, satellites, robots, missiles or on test benches for any equipement 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

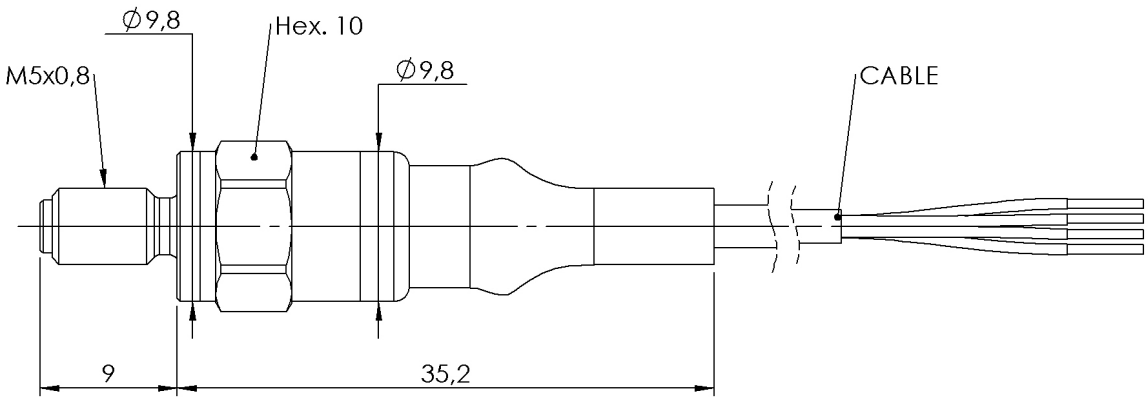
Pressure ranges (FS)	-1/+4bar ; -1/+9bar ; 5bar ; 10bar ; 20bar ; 40bar ; 70bar ; 250bar ; -14.5/+60PSI ; -14.5/+140PSI ; 70PSI ; 150PSI ; 300PSI ; 500PSI ; 1000PSI ; 3000PSI
Type	Absolute ; Gage
Type (for ranges > 40 bar)	Sealed Gage
Safe overload	150% FS
Burst pressure	300% FS
Power supply	8 to 16Vdc
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

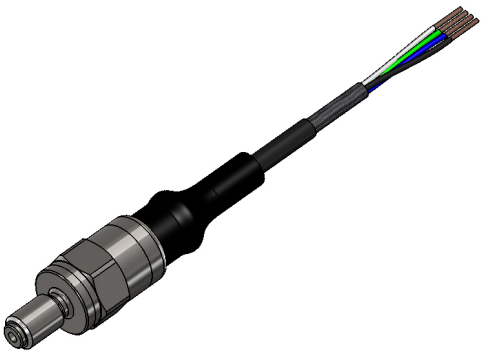
Technical Specifications

Non linearity and hysteresis combined	±0.25% FS typical (±0.35% FS max.)
Non repeatability	±0.02% FS typ.
Signal bandwidth	1000Hz @ -3dB Option : Special Adjustment up to 3000Hz @ -3dB
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

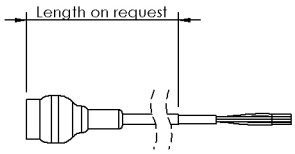
	PHE10	7	S	40bar	G	05	08/1m	D	3	1	B
Sub-Miniature Pressure Sensor for Harsh Environment											
Output Signal											
0.5-4.5Vdc unregulated power supply		7									
Material											
Stainless Steels			S								
Range											
Example				40bar							
Type											
Gage					G						
Sealed 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	
Options											
Special Adjustment up to 3000Hz @ -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



Agent :

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