

## Sub Miniature Pressure Sensor for Harsch Environment



### Features

- ➔ Available with 0,5-4,5Vdc output
- ➔ Operating from -40 to +140°C
- ➔ Ultra light sensor : 3 grams
- ➔ Large Bandwidth

### Applications

- ➔ Automotive - on vehicle
- ➔ Aerospace
- ➔ Military
- ➔ Motorsport

The PHE860 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 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 PHE860 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

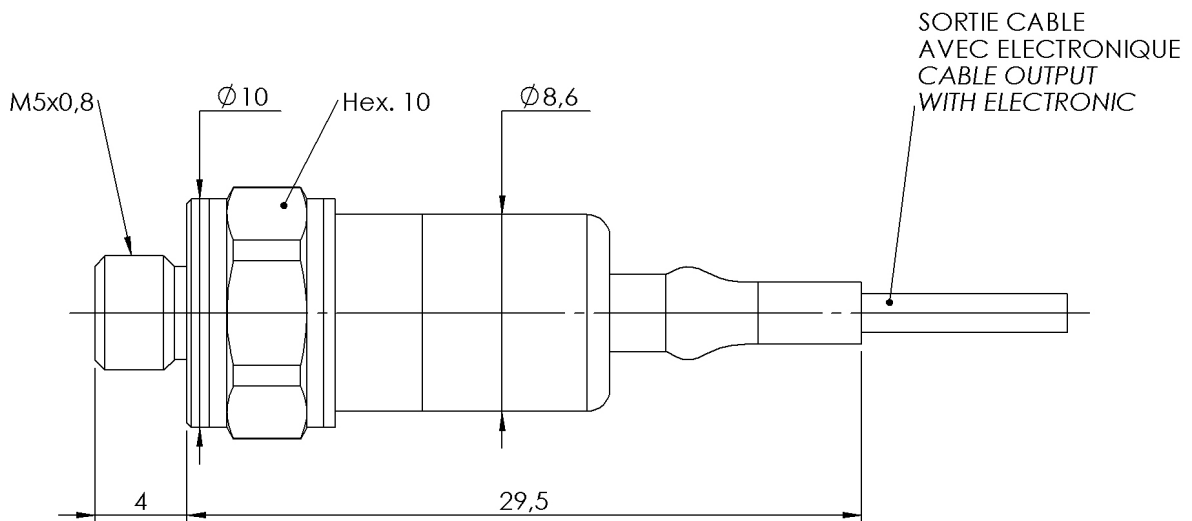
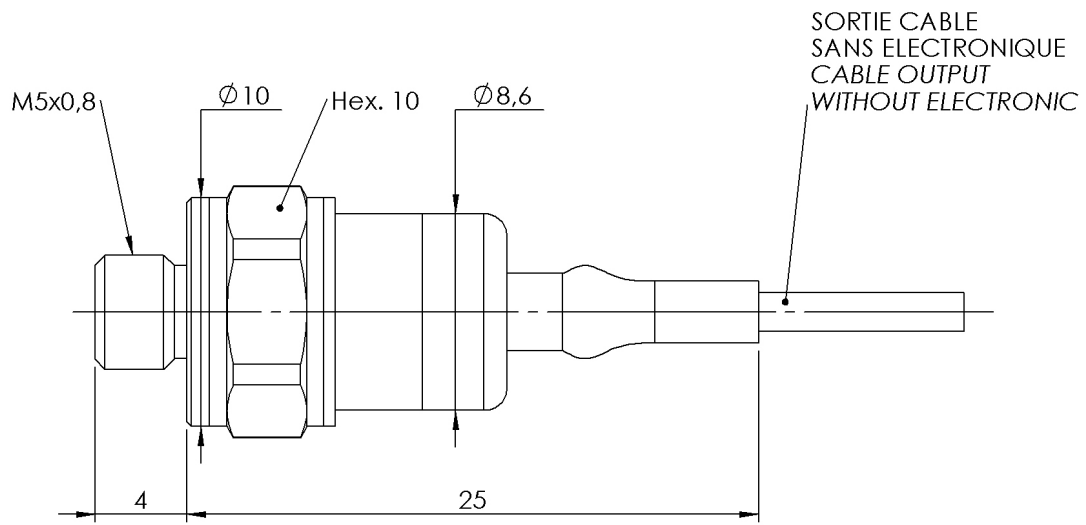
Pressure ranges (FS)	-1/+4bar ; -1/+9bar ; 5bar ; 10bar ; 20bar ; 40bar ; 70bar ; 250bar ; -14.5/+60PSI ; -14.5/+140PSI ; 70PSI ; 150PSI ; 300PSI ; 500PSI ; 1000PSI ; 3000PSI
Type	Absolute ; Gage
Type (for ranges > 40 bar)	Sealed Gage
Safe overload	150% FS
Burst pressure	300% FS
Output impedance	> 3000 Ohms typ.
Input impedance	> 3500 Ohms typ.
Power supply	5 to 15Vdc
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	AWG32 4 wires Ø1.6mm Shielded Teflon Cable & Polyolefine Sleeve Option : AWG32, 4 wires Ø1.6mm shielded Teflon cable and Viton sleeve
Mechanical connection	M5x0.8-6g male 4mm length
Material(s) of wetted parts	Stainless Steel 316L ; Stainless Steel 17-4PH ; Stainless steel 15-5PH
Weight	3g without cable
Enclosure protection	IP65 for sealed gage version

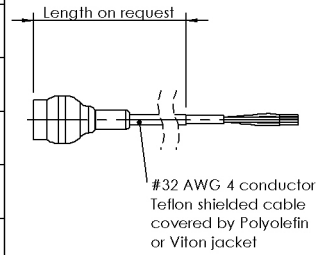
## Codification

Sub Miniature Pressure Sensor for Harsch Environment	PHE86	1	S	10bar	G	27	17/1m	D	3	1
Output Signal										
mV/V		1								
Material										
Stainless Steels			S							
Range										
Example				10bar						
Type										
Gage					G					
Sealed Gage					SG					
Mechanical connection										
M5x0.8-6g male 4mm length						27				
Electrical connection										
AWG32 4 wires Ø1.6mm Shielded Teflon Cable & Polyolefine Sleeve							17/1m			
AWG32, 4 wires Ø1.6mm shielded Teflon cable and Viton sleeve							18/1m			
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

4 CONDUCTOR TEFLON CABLE	
mV/V OUTPUT	CONDUCTOR
+ EXCITATION	RED
+ SIGNAL	GREEN
- SIGNAL	WHITE
- EXCITATION	BLACK
SENSOR HOUSING	SHIELD



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