

Sub-Miniature Pressure and Temperature Transducer



Features

- ➔ Pressure & temperature combined
- ➔ Sub miniature and light sensor
- ➔ Temperature output
- ➔ Built-in electronic 0.5-4.5Vdc

Applications

- ➔ Automotive - on vehicle
- ➔ Aerospace
- ➔ Test benches
- ➔ Automotive

The PCM120 series pressure sensors allow a combined pressure and temperature measurements at a same location. Wetted parts being all titanium, they are compatible with all common and hostile pressure media used in aerospace and automotive. Miniature dimensions, low mass and ruggedized design make PCM120 series pressure sensors well adapted to embedded applications on vehicules, aircrafts, missiles, satellites, etc. The pressure transducer utilizes EFE thin film technology and a platinum RTD senses media temperature. The pressure and temperature devices are designed to operate independently. Output for pressure is an amplified 0.5-4.5Vdc while temperature signal is directly the one from PT1000 sensor.

Technical specifications

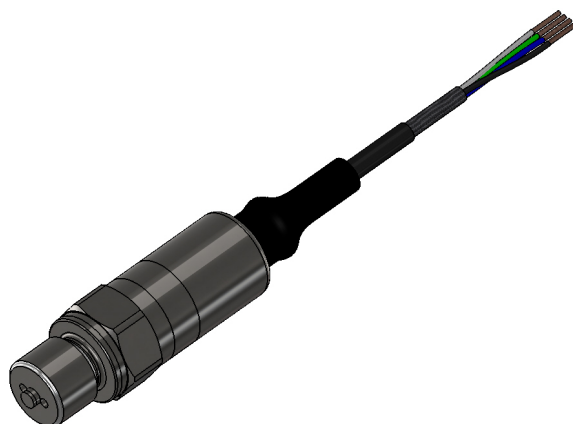
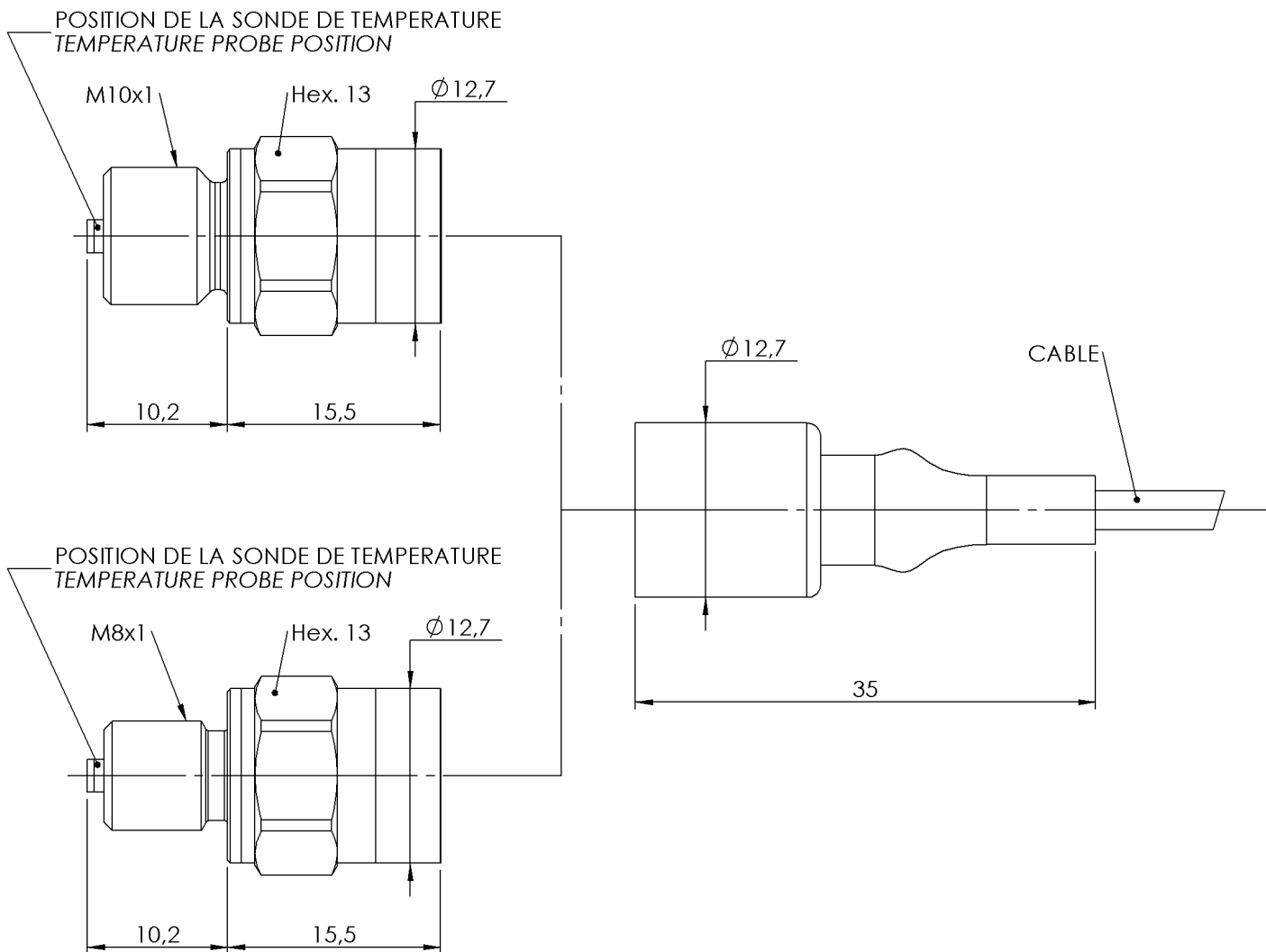
Pressure ranges (FS)	-1/+4bar ; -1/+9bar ; 5bar ; 10bar ; 20bar ; 40bar ; 70bar ; 250bar ; -14.5/+60PSI ; -14.5/+140PSI ; 70PSI ; 150PSI ; 300PSI ; 500PSI ; 1500PSI ; 3000PSI
Type	Absolute ; Gage
Type (for ranges > 40 bar)	Sealed Gage
Safe overload	150% FS
Power supply	8 to 16Vdc
Consumption	< 10mA
Insulation	> 1000 MOhms under 50Vdc at ambient temperature
Output at -100%FS (only for ± range)	0.5Vdc
Output at 0%FS (except ranges ±)	0.5Vdc
Thermal probe	PT1000 Class A - direct output from the probe (Ohms) Option : PT100 Class A - direct output from the probe (Ohms)
Non linearity and hysteresis combined	±0.25% FS Option : ±0.1% FS

Technical Specifications

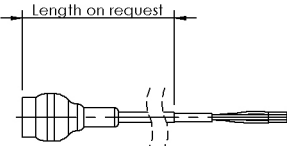
Signal bandwidth	1000Hz @ -3dB Option : Special Adjustment up to 3000Hz @ -3dB
Compensated temperature range	0 to +60°C Option : -25 to +85°C ; -25 to +125°C ; -40 to +125°C
Operating temperature range	-40 to +125°C
Combined thermal zero & sensitivity shifts	±0.02% FS/°C Option : ±0.01% FS/°C
Constant acceleration in linear vibrations	± 0.02% FS/g (frequency 20-2000Hz, 50g max.)
Mechanical shock	100g ½ sinus 1ms
Electrical protection	Protected against polarity inversion
EMC protection	Compliant to EN61000
Electrical connection	AWG26 Shielded Teflon Cable Ø3.4mm ±0.2, 5 wires
Mechanical connection	M10x1-4h male with thermal probe ; M8x1-6g male with thermal probe
Material(s) of wetted parts	Stainless Steel 316L ; Stainless Steel 17-4PH ; Stainless steel 15-5PH
Weight	10g without cable
Enclosure protection	IP65 for absolute & sealed gage version

Codification

Sub-Miniature Pressure and Temperature Transducer	PCM12	7	S	5bar	A	29	09/1m	A	1	1	B
Output Signal											
0.5-4.5Vdc unregulated power supply		7									
Material											
Stainless Steels			S								
Range											
Example				5bar							
Type											
Absolute					A						
Gage					G						
Sealed Gage					SG						
Mechanical connection											
M8x1-6g male with thermal probe						29					
M10x1-4h male with thermal probe						30					
Electrical connection											
AWG26 Shielded Teflon Cable Ø3.4mm ±0.2, 5 wires							09/1m				
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	
±0.01% FS/°C										2	
Options											
Special Adjustment up to 3000Hz @ -3dB											B
PT100 Class A - direct output from the probe (Ohms)											T



DIMENSIONS : mm

5 CONDUCTOR TEFLON CABLE		
PRESSION & TEMPERATURE OUTPUT	CONDUCTOR	
+ EXCITATION	RED	
+ SIGNAL (PRESSION)	GREEN	
0 VOLT	BLACK	
PT PROBE	WHITE	
PT PROBE	BLUE	
SENSOR HOUSING	SHIELD	



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