

PDC167



The PDC167 pressure sensor features the latest technological innovations developed by EFE.

The all stainless steel thin film pressure sensing element makes it compatible with most industrial fluids, including the most corrosive.

The built-in electronics deliver a high level signal 0.5-4.5V. This smart module allows a correction of the sensor's measurements in pressure and temperature over the compensation range. It is thus endowed with extreme precision: the total error band is $\pm 0.5\%$ for the entire range from -55 to $+125^{\circ}\text{C}$.

This precision does not limit the dynamics of the sensor :the bandwidth of the signal being as standard 1kHz @-3dB. Miniature and robust, the PDC167 is particularly suitable for embedded use combining temperature, vibrations, shocks and where size and mass are at premium.

FEATURES

- Miniature pressure sensor
- High accuracy : $\pm 0.5\%$ from -55 to 125°C
- Built-in electronics : 0.5-4.5V output
- Operating from -55 to $+125^{\circ}\text{C}$
- All Stainless Steel Design
- Compatible with Harsh Environments

APPLICATIONS

X	Aerospace
X	Embedded Applications
X	Flight Tests
X	Automotive



TECHNICAL SPECIFICATIONS

- Pressure Specifications

Pressure ranges (FS)	-1/+3bar; -1/+4bar; 3bar; 5bar; 10bar; 20bar; 40bar; 100bar; 250bar; 400bar -14.5/+50PSI ; -14.5/+70PSI; 50PSI; 75PSI; 150PSI; 300PSI; 500PSI; 1500PSI; 3500PSI; 6000PSI
Type	<i>Absolute ; Gage</i>
Type (for ranges > 40 bar)	<i>Sealed Gage</i>
Safe overload	<i>150% FS</i>
Burst pressure	<i>300% FS or 1000bar whichever is less</i>

- Electrical Specifications

Power Supply	<i>8 to 32Vdc</i>
Consumption	<i>< 10mA</i>
Insulation	<i>> 1000 MOhms under 50Vdc at ambient temperature</i>
Output at 0%FS or -1bar for bi-directional ranges	<i>0.5V</i>
Output at 100%FS	<i>4.5V</i>
Zero and sensitivity settings tolerances	<i>±10mV typ.</i>
Signal Bandwidth	<i>DC to 1000Hz @-3dB</i>



- Accuracy

Error Band Including combined Non-Linearity, Hysteresis and thermal shifts within the compensated temperature range	$\pm 1\%$ FS <i>Option : $\pm 0.5\%$ FS</i>
Non repeatability	$\pm 0.02\%$ FS typ.

- Environmental Specifications

Compensated temperature range	-40 to +125°C <i>Option : -55 to +125°C</i> <i>any range between -55 and +125°C</i>
Operating temperature range	-55 to +125°C
Constant acceleration in linear vibrations	20-2000Hz, 50g max.
Mechanical shock	100g ½ sinus 1ms
Electrical protection	Protected against polarity inversion
EMC protection	Compliant to EN61000

- Technical Specifications

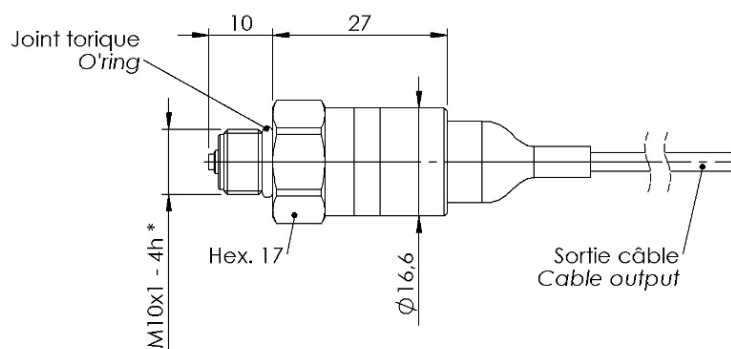
Electrical connection	Hermetic MIL-C-26482 - 6 pins Receptacle <i>Option : AWG26, Viton Jacketed Shielded Cable Ø3mm, 4 wires</i>
Mechanical connection	M10x1-4h male ; <i>Options : 3/8-24 UNJF-3A male without cone</i> <i>7/16-20 UNJF-3A male without cone</i>
Material(s) of wetted parts	316L (1.4404), 17-4PH (1.4542) and 15-5PH (1.4545) Stainless Steels
Weight	< 30g without cable
Enclosure protection	IP65 for absolute and sealed gage versions
Accessory delivered with the sensor	EPDM O-ring



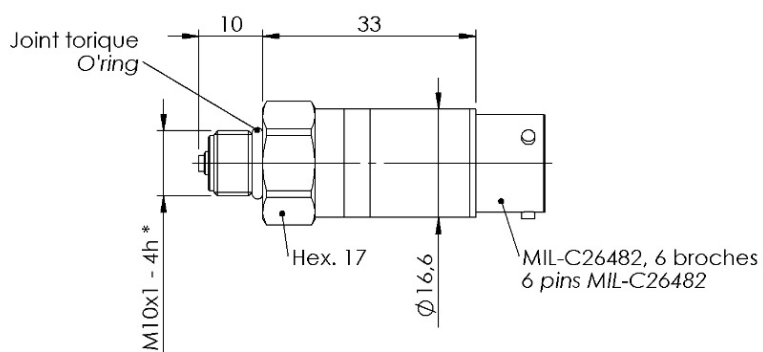
CODIFICATION

High Performance Miniature Pressure Sensor	PDC16	7	S	20bar	A	02	03	E	1	-
Output Signal										
0.5-4.5V		7								
Material										
Stainless Steel			S							
Range										
Example : 20 bar				20bar						
Type										
Absolute					A					
Gage					G					
Sealed Gage					SG					
Mechanical connection										
M10x1-4h male						02				
3/8-24 UNJF-3A male without cone						11				
7/16-20 UNJF-3A male without cone						10 J				
Electrical Connection										
AWG26, Viton Jacketed Shielded Cable, 4 wires							08/1m			
Hermetic MIL-C-26482 - 6 pins Receptacle							03			
Compensated temperature range										
-40 to +125°C								D		
-55 to +125°C								E		
Error Band										
±1% FS									0	
±0.5%FS									1	
Options										

DIMENSIONS





* Autre filetage disponible :
Other thread available :
3/8-24 UNF-3A



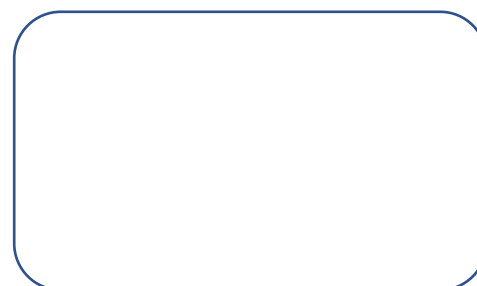
ECHELLE 1 : 1
SCALE 1 : 1

Dimensions : mm

	VITON CABLE- 4 CONDUCTORS	
	VOLTAGE OUTPUT	CONDUCTOR
	+ Excitation	Red
	+ Signal	Green / Yellow
	NC	White
	0 VDC	Blue / Black
	Sensor's Housing	Shield

	MIL C-26482 - 6 PINS	
	VOLTAGE OUTPUT	PIN
	+ Excitation	PIN A
	+ Signal	PIN B
	0 VDC	PIN C
	0 VDC	PIN D
	Sensor's Housing	PINS E & F

AGENT



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