L'Essor Français Electronique

PHE224

Compact Pressure Transducer for Harsh Environment

Features

- All Stainless steel
- Robust and reliable sensor
- Low thermal shifts
- Large Bandwidth

Applications

- Automotive - on vehicule
- Military
- Railway
- Test benchs

The PHE220 series is designed to operate in the harshest environments, including wide operating temperature, mechanical shocks and vibrations. It is well adapted to embedded measurements, on vehicules, aircrafts or satellites. With pressure ranges available from -1 up to 600 bar, absolute or gage, its all stainless steel construction makes it usable with most fluids used in industry, even corrosive ones. The PHE220 is manufactured with the ruggedized and premium sensitive elements and components developed by EFE. Its manufacturing process, including traceable controls and special burn-in, gives the best insurance of high performance and stability in the most challenging applications. The choice of mechanical threads and electrical connections makes its installation easier.

Technical specifications

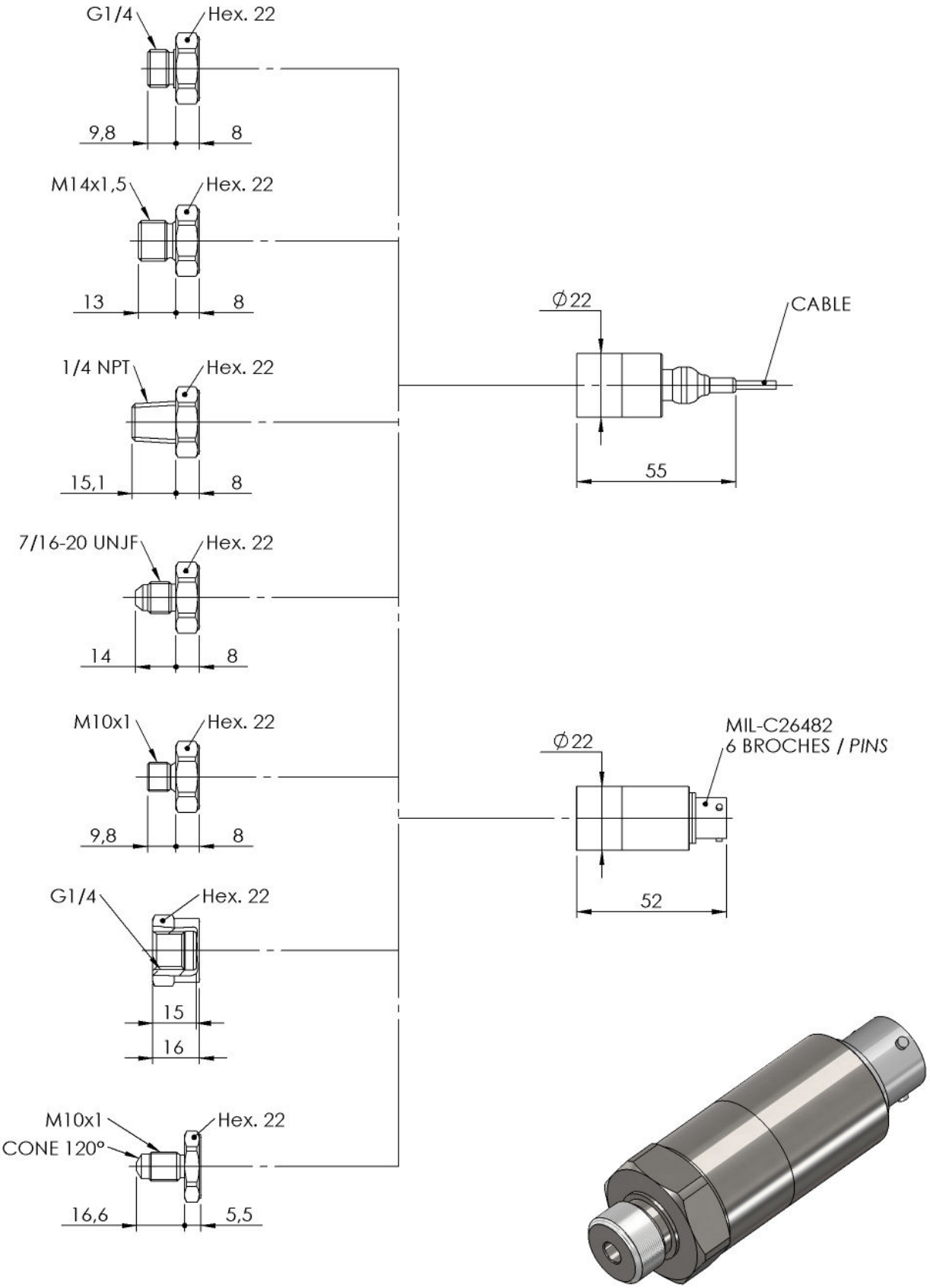
Pressure ranges (FS)	±100mbar ; ±250mbar ; ±500mbar ; ±1bar ; -1/+2bar ; -1/+5bar ; 2bar ; 5bar ; 10bar ; 20bar ; 40bar ; 100bar ; 250bar ; 400bar ; 600bar ; ±1.5PSI ; ±3.5PSI ; ±7PSI ; ±14.5PSI ; -14.5/+30PSI ; -14.5/+70PSI ; 8000PSI ; 30PSI ; 40PSI ; 70PSI ; 150PSI ; 300PSI ; 500PSI ; 1500PSI ; 3000PSI ; 5000PSI
Type	Absolute ; Gage
Type (for ranges > 40 bar)	Sealed Gage
Safe overload	150% FS
Burst pressure	300% FS
Power supply	8 to 30Vdc
Consumption	< 10mA
Insulation	> 1000 MOhms under 50Vdc at ambient temperature
Output at -100%FS (only for ± range)	0Vdc
Output at 0%FS (except ranges ±)	0Vdc
Output at 100%FS	5Vdc

Technical Specifications

Zero and sensitivity settings tolerances	±50mV
Non linearity and hysteresis combined	±0.25% FS Option : ±0.1% FS
Non repeatability	±0.02% FS typ.
Signal bandwidth	1000Hz @ -3dB Option : Special Adjustment up to 2000Hz @ -3dB
Compensated temperature range	-40 to +125°C
Operating temperature range	-40 to +125°C
Combined thermal zero & sensitivity shifts	±1.5% FS from -40 to +125°C ; ±3% FS from -40 to +125°C for ranges < 1bar
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	Hermetic MIL-C-26482 - 6 pins Receptacle Option : AWG26, Viton Jacketed Shielded Cable Ø3mm, 4 wires
Mechanical connection	1/4 Gaz A male ; 1/4 NPT male ; M14x1.5-4h male Option : 1/4 Gaz female ; 7/16-20 UNJF-3A male - MS33656-4 ; M10x1-4h male with 80° internal cone ; M10x1-4h male 120° cone
Material(s) of wetted parts	Stainless Steel 316L ; Stainless Steel 17-4PH ; Stainless steel 15-5PH
Weight	< 100g without cable
Enclosure protection	IP65 for absolute & sealed gage version

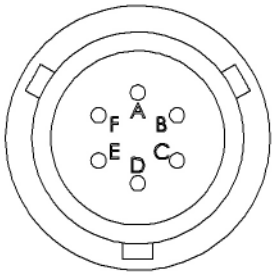
Codification

Compact Pressure Transducer for Harsh Environment	PHE22	4	S	8000PSI	A	01	03	D	1	1	B
Output Signal											
0-5Vdc		4									
Material											
Stainless Steels			S								
Range											
Example				8000PSI							
Type											
Absolute					A						
Gage					G						
Sealed Gage					SG						
Mechanical connection											
M14x1.5-4h male						01					
1/4 Gaz A male						07					
1/4 Gaz female						08					
7/16-20 UNJF-3A male - MS33656-4						10					
1/4 NPT male						13					
M10x1-4h male with 80° internal cone						19					
M10x1-4h male 120° cone						21					
Electrical connection											
Hermetic MIL-C-26482 - 6 pins Receptacle							03				
AWG26, Viton Jacketed Shielded Cable Ø3mm, 4 wires							08/1m				
Compensated temperature range											
-40 to +125°C								D			
Non linearity and hysteresis combined											
±0.25% FS									1		
±0.1% FS									2		
Combined thermal zero & sensitivity shifts											
±3% FS from -40 to +125°C for ranges < 1bar										1	
±1.5% FS from -40 to +125°C										2	
Options											
Special Adjustment up to 2000Hz @ -3dB											B

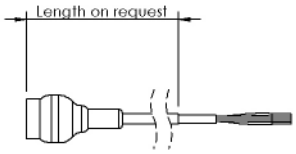


Dimensions : mm

MIL-C26482 - 6 PINS	
VOLTAGE OUTPUT	**PIN**
+ EXCITATION	PIN A
+ SIGNAL	PIN B
0 VOLT	PIN C
0 VOLT	PIN D
SENSOR HOUSING	PINS E &F



#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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