

Compact Pressure Transducer for Harsh Environment



Features

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

Applications

- ➔ Automotive - on vehicle
- ➔ Military
- ➔ Railway
- ➔ Test benches

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 vehicles, 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

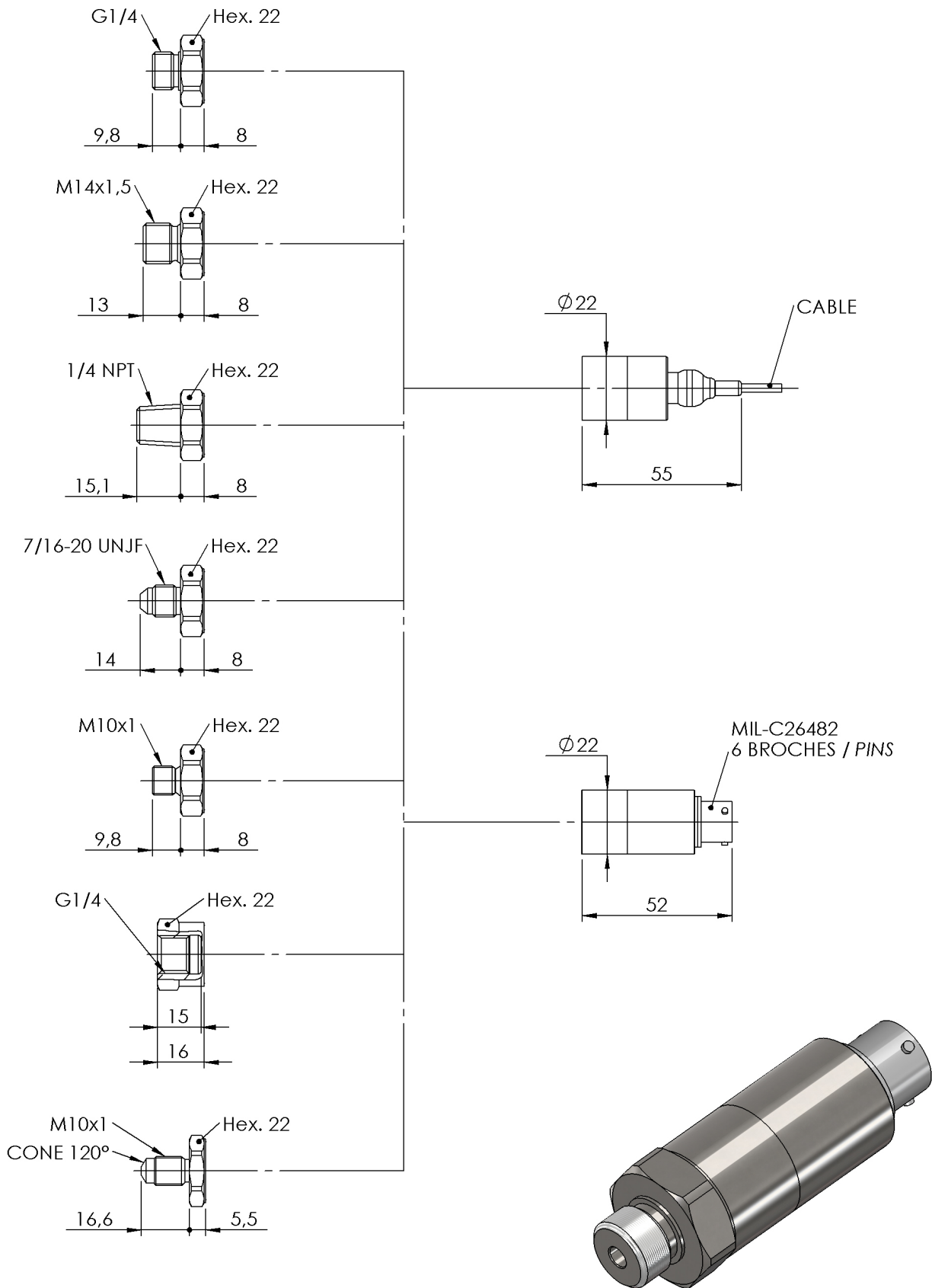
Pressure ranges (FS)	±100mbar ; ±250mbar ; ±500mbar ; ±1bar ; -1/+2bar ; -1/+5bar ; 2bar ; 5bar ; 10bar ; 20bar ; 40bar ; 100bar ; 250bar ; 400bar ; 600bar ; ±1.5PSI ; ±3.5PSI ; ±7PSI ; ±14.5PSI ; -14.5/+30PSI ; -14.5/+70PSI ; 8000PSI ; 30PSI ; 40PSI ; 70PSI ; 150PSI ; 300PSI ; 500PSI ; 1500PSI ; 3000PSI ; 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


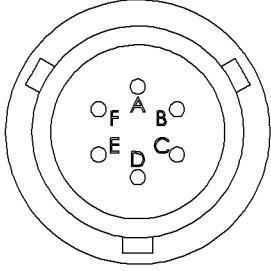
Zero and sensitivity settings tolerances	±50mV
Non linearity and hysteresis combined	±0.25% FS Option : ±0.1% FS
Non repeatability	±0.02% FS typ.
Signal bandwidth	1000Hz @ -3dB Option : Special Adjustment up to 2000Hz @ -3dB
Compensated temperature range	-40 to +125°C
Operating temperature range	-40 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


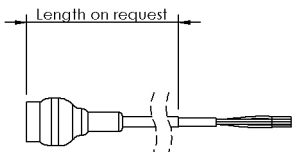
Codification

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	



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