

Miniature Pressure Sensor for Harsh Environment



Features

- ➔ Available with 0,5-4,5Vdc output
- ➔ Low thermal shifts
- ➔ Miniature pressure sensor
- ➔ Large Bandwidth

Applications

- ➔ Automotive - on vehicle
- ➔ Military
- ➔ Test benches
- ➔ Automation & Robotics

PHE160 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, satellites, robots or missiles. With pressure ranges available from -1 up to 250 bar, absolute or gage, its all stainless steel construction makes it usable with most fluids used in industry, even corrosive ones. The PHE160 is manufactured with the ruggedized and EFE proprietary sensitive elements. Its manufacturing process, including traceable controls and special burn-in, gives the best insurance of high performance and stability in the most challenging applications. Its small package and low mass make it very adapted to application where space is at a premium.

Technical specifications

Pressure ranges (FS)	-1/+2bar ; -1/+3bar ; -1/+4bar ; 5bar ; 10bar ; 20bar ; 40bar ; 100bar ; 250bar ; -14.5/+30PSI ; -14.5/+40PSI ; -14.5/+60PSI ; 70PSI ; 150PSI ; 300PSI ; 500PSI ; 1500PSI ; 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

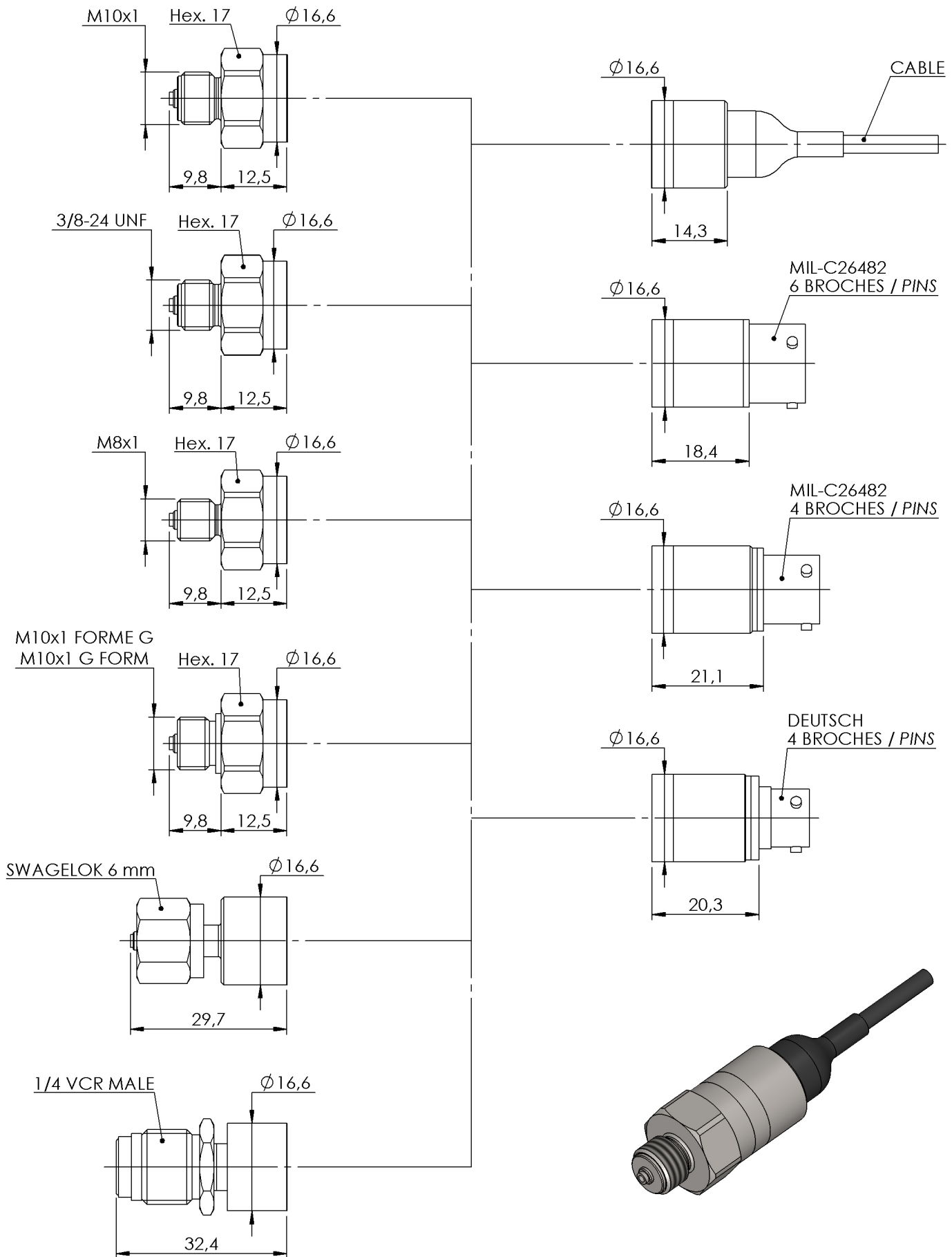
Output at 100%FS	1.5mV/V nom.
Zero and sensitivity settings tolerances	±3% FS Option : Special settings
Non linearity and hysteresis combined	±0.25% FS
Non repeatability	±0.02% FS typ.
Compensated temperature range	-40 to +125°C
Operating temperature range	-40 to +125°C
Combined thermal zero & sensitivity 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, Viton Jacketed Shielded Cable Ø3mm, 4 wires Option : Hermetic MIL-C-26482 - 6 pins Receptacle ; Hermetic MIL-C-26482 - 4 pins Receptacle ; DEUTSCH Autosport AS4H06-05-PN-HE connector
Mechanical connection	3/8-24 UNF-3A male ; M10x1-4h male Option : 1/4" VCR male ; M10x1 male form G Minimes® ; M8x1-6g male ; Swagelok nut SS-6M2-1 for OD 6mm pipe
Material(s) of wetted parts	Stainless Steel 316L ; Stainless Steel 17-4PH ; Stainless steel 15-5PH
Weight	30g without cable
Enclosure protection	IP65 for absolute & sealed gage version




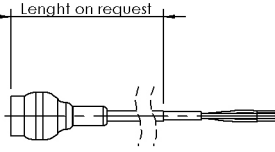
Codification


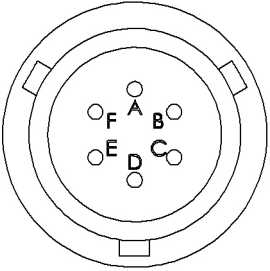
Miniature Pressure Sensor for Harsh Environment	PHE16	1	S	100bar	A	02	03	D	1	1	S
Output Signal											
	mV/V		1								
Material											
	Stainless Steels		S								
Range											
	Example			100bar							
Type											
	Absolute				A						
	Gage				G						
	Sealed Gage				SG						
Mechanical connection											
	M10x1-4h male					02					
	M8x1-6g male					03					
	3/8-24 UNF-3A male					11					
	Swagelok nut SS-6M2-1 for OD 6mm pipe					15					
	M10x1 male form G Minimess®					16					
	1/4" VCR male					22					
Electrical connection											
	Hermetic MIL-C-26482 - 6 pins Receptacle						03				
	DEUTSCH Autosport AS4H06-05-PN-HE connector						05				
	AWG26, Viton Jacketed Shielded Cable Ø3mm, 4 wires						08/1m				
	Hermetic MIL-C-26482 - 4 pins Receptacle						14				
Compensated temperature range											
	-40 to +125°C							D			
Non linearity and hysteresis combined											
	±0.25% FS								1		
Combined thermal zero & sensitivity shifts											
	±0.02% FS/°C									1	
	±0.01% FS/°C									2	
Options											
	Special settings										S


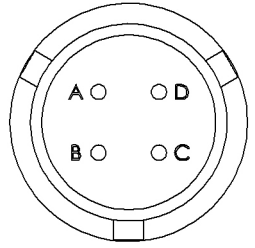



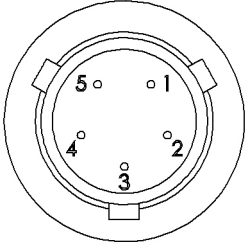


DIMENSIONS : mm

	#26 AWG, 4 CONDUCTOR SHIELDED VITON CABLE		
	mV/V OUTPUT	CONDUCTOR	
	+ EXCITATION	RED	
	+ SIGNAL	GREEN / YELLOW	
	- SIGNAL	WHITE	
	- EXCITATION	BLUE / BLACK	
SENSOR HOUSING	SHIELD		

	MIL-C26482 - 6 PINS		
	mV/V OUTPUT	PIN	
	+ EXCITATION	PIN A	
	+ SIGNAL	PIN B	
	- SIGNAL	PIN C	
	- EXCITATION	PIN D	
SENSOR HOUSING	PINS E & F		

	MIL-C26482 - 4 PINS		
	mV/V OUTPUT	PIN	
	+ EXCITATION	PIN A	
	+ SIGNAL	PIN C	
	- SIGNAL	PIN D	
	- EXCITATION	PIN B	
SENSOR HOUSING	CONNECTOR HOUSING		

	DEUTSCH ASH06-05PN-HE - 5 PINS		
	mV/V OUTPUT	PIN	
	+ EXCITATION	PIN 1	
	+ SIGNAL	PIN 3	
	- SIGNAL	PIN 4	
	- EXCITATION	PIN 2	
SENSOR HOUSING	PIN 5		

