

## High Performance Miniature Pressure Sensor



### Features

- ➔ Available with Built in Electronic
- ➔ All Stainless steel
- ➔ Operating from -40 to +125°C
- ➔ High Performance

### Applications

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

The PGP160 series is designed for high accuracy absolute or gage pressure measurements, from -1 up to 600bar. The sensing element is an advanced piezo-resistive pressure module which together with the latest compensation techniques, provides high performance measurements. It is available with low (millivolt) or high level outputs (0,5-4,5Vdc ou 0-5Vdc). For transducers, the built-in electronic delivers a dynamic analogue output, signal's bandwidth being specified at a minimum of 1kHz @-3dB. With all stainless steel wetted parts, the sensor is compatible with most media used in industry, even corrosive ones. High accuracy embedded pressure measurements are main focus for the PGP160 series.

## Technical specifications

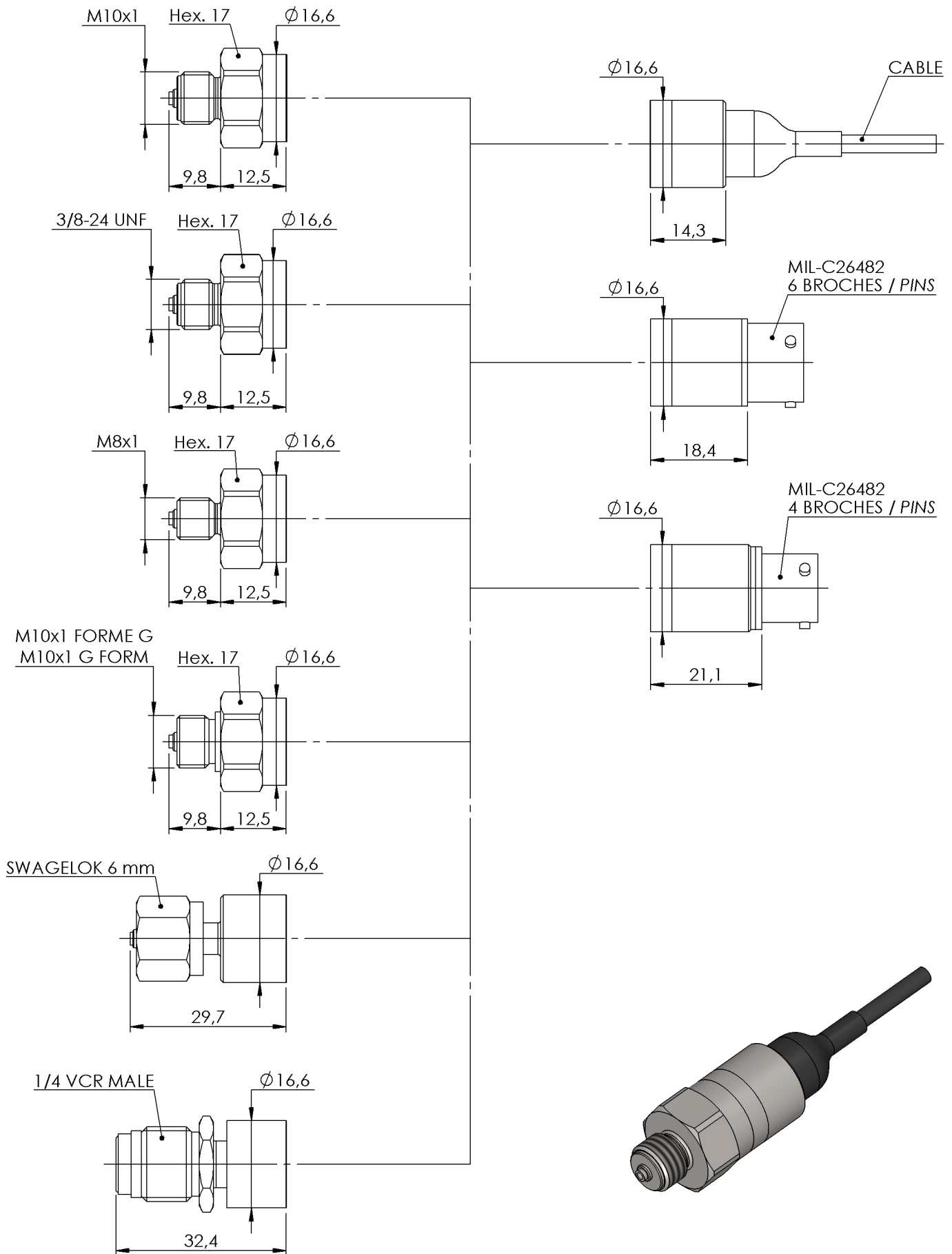
|                                      |   |
|--------------------------------------|---|
| Pressure ranges (FS)                 | -1/+2bar ; -1/+5bar ;<br>3bar ; 5bar ; 10bar ; 20bar ; 40bar ; 100bar ; 250bar ; 400bar ; 600bar ;<br>-14.5/+30PSI ; -14.5/+70PSI ;<br>8000PSI ; 40PSI ; 70PSI ; 150PSI ; 300PSI ; 500PSI ; 1500PSI ; 3000PSI ; 5000PSI |
| Type                                 | Absolute ; Gage   |
| Type (for ranges > 40 bar)           | Sealed Gage   |
| Safe overload                        | 150% FS   |
| Burst pressure                       | 300% FS   |
| 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

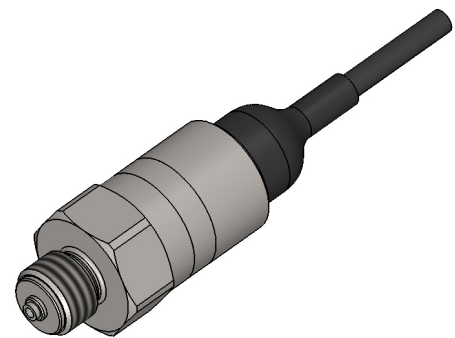
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|--|---|
| Output at 100%FS                           | 1.5mV/V nom.  |
| Zero and sensitivity settings tolerances   | ±3% FS  |
| Non linearity and hysteresis combined      | ±0.25% FS   |
| Non repeatability                          | ±0.02% FS typ.  |
| Compensated temperature range              | 0 to +60°C<br>Option : -25 to +85°C ; -25 to +125°C   |
| Operating temperature range                | -40 to +125°C   |
| Combined thermal zero & sensitivity shifts | ±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<br>Option : Hermetic MIL-C-26482 - 6 pins Receptacle ; Hermetic MIL-C-26482 - 4 pins Receptacle  |
| Mechanical connection                      | 3/8-24 UNF-3A male ; M10x1-4h male<br>Option : 1/4" VCR male ; M10x1 male form G Minimes® ; M8x1-6g male ; Swagelok nut<br>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

|  |  |   |   |       |    |    |       |   |   |   |
|--|--|---|---|-------|----|----|-------|---|---|---|
| High Performance Miniature Pressure Sensor | PGP16  | 1 | S | 10bar | A  | 02 | 03    | A | 1 | 2 |
| Output Signal                              |  |   |   |       |    |    |       |   |   |   |
|  | mV/V   |   | 1 |       |    |    |       |   |   |   |
| Material                                   |  |   |   |       |    |    |       |   |   |   |
|  | Stainless Steels                                   |   | S |       |    |    |       |   |   |   |
| Range                                      |  |   |   |       |    |    |       |   |   |   |
|  | Example  |   |   | 10bar |    |    |       |   |   |   |
| 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    |   |   |   |
|  | AWG26, Viton Jacketed Shielded Cable Ø3mm, 4 wires |   |   |       |    |    | 08/1m |   |   |   |
|  | Hermetic MIL-C-26482 - 4 pins Receptacle           |   |   |       |    |    | 14    |   |   |   |
| Compensated temperature range              |  |   |   |       |    |    |       |   |   |   |
|  | 0 to +60°C   |   |   |       |    |    |       | A |   |   |
|  | -25 to +85°C                                       |   |   |       |    |    |       | B |   |   |
|  | -25 to +125°C                                      |   |   |       |    |    |       | C |   |   |
| Non linearity and hysteresis combined      |  |   |   |       |    |    |       |   |   |   |
|  | ±0.25% FS  |   |   |       |    |    |       |   | 1 |   |
| Combined thermal zero & sensitivity shifts |  |   |   |       |    |    |       |   |   |   |
|  | ±0.01% FS/°C                                       |   |   |       |    |    |       |   |   | 2 |

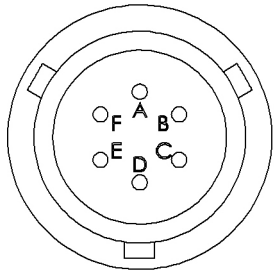



DIMENSIONS : mm

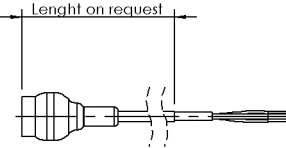





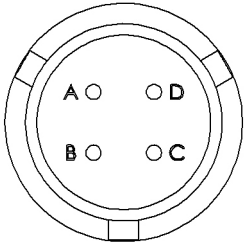
| <b>MIL-C26482 - 6 PINS</b> |            |
|----------------------------|------------|
| <b>mV/V OUTPUT</b>         | <b>PIN</b> |
| + EXCITATION               | PIN A      |
| + SIGNAL                   | PIN B      |
| - SIGNAL                   | PIN C      |
| - EXCITATION               | PIN D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

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

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



Agent :




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