

## Miniature Pressure Sensor



### Features

- ➔ Large choice of connectors & threads
- ➔ All Stainless steel
- ➔ Operating from -40 to +125°C
- ➔ Outputs : 0-5V, 4-20mA, 0,5-4,5V

### Applications

- ➔ Automotive - on vehicle
- ➔ Aerospace
- ➔ Instrumentation
- ➔ Machine construction

The PST160 series is a miniature pressure sensor. Operating from -40 up to +125°C, three compensated temperature ranges are available to best suit your application's environment. Its wetted parts being all stainless steel, it is compatible with most media, including corrosive fluids used in automotive and aerospace industries. High performances and stability over temperature are achieved thanks to EFE proprietary sensing technologies. The robust and proven design of the sensor ensures reliability in your application. The PST160 series is available with unamplified (mV/V) and amplified outputs (voltage or current), integrating a high performance and ruggedized electronic module.

## Technical specifications

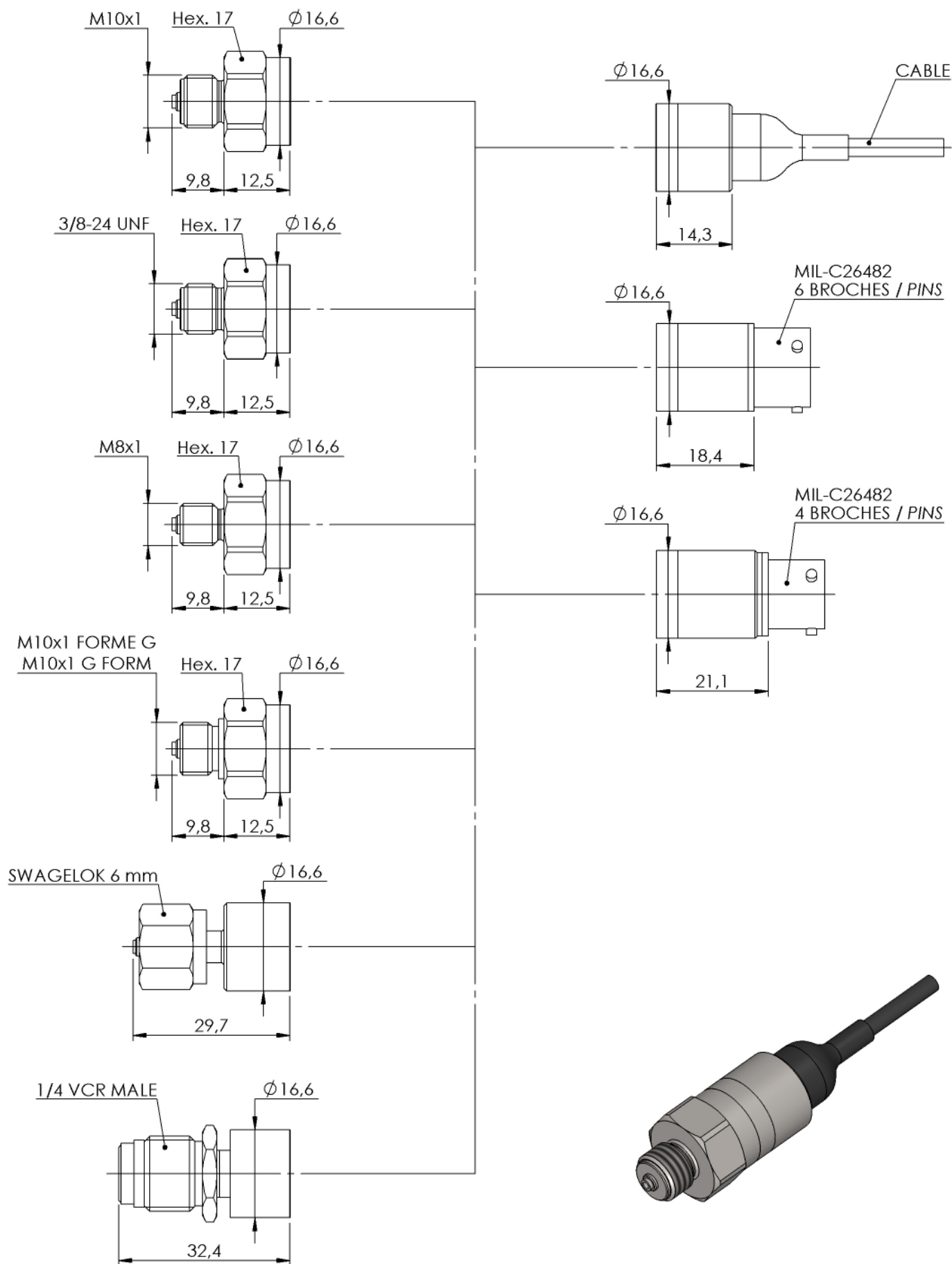
|                                      |                                                                                                                                                                                                                                                                                                           |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pressure ranges (FS)                 | 700/1200mbar ;<br><br>-1/+2bar ; -1/+3bar ; -1/+5bar ;<br><br>1bar ; 2bar ; 3bar ; 5bar ; 10bar ; 20bar ; 40bar ; 100bar ; 250bar ; 400bar ; 600bar ;<br><br>-14.5/+30PSI ; -14.5/+40PSI ; -14.5/+70PSI ;<br><br>8000PSI ; 15PSI ; 30PSI ; 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<br>Option : ±0.1% FS                                                                                                                        |
| Non repeatability                          | ±0.02% FS typ.                                                                                                                                        |
| Signal bandwidth                           | 1000Hz @ -3dB                                                                                                                                         |
| 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 | ±0.02% 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 Minimesse® ; 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 ; Additionnal Internal Viton<br>O-ring for 700-1200mbar range                  |
| Weight                                     | 30g without cable                                                                                                                                     |
| Enclosure protection                       | IP65 for absolute & sealed gage version                                                                                                               |

## Codification

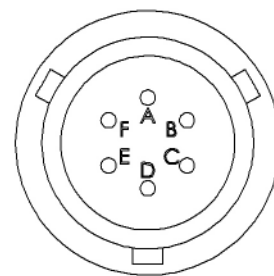
|                                                    |       |   |   |      |    |    |       |   |   |   |  |
|----------------------------------------------------|-------|---|---|------|----|----|-------|---|---|---|--|
| Miniature Pressure Sensor                          | PST16 | 4 | S | 1bar | A  | 02 | 03    | A | 1 | 1 |  |
| Output Signal                                      |       |   |   |      |    |    |       |   |   |   |  |
| 0-5Vdc                                             |       | 4 |   |      |    |    |       |   |   |   |  |
| Material                                           |       |   |   |      |    |    |       |   |   |   |  |
| Stainless Steels                                   |       |   | S |      |    |    |       |   |   |   |  |
| Range                                              |       |   |   |      |    |    |       |   |   |   |  |
| Example                                            |       |   |   | 1bar |    |    |       |   |   |   |  |
| 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 Minimesse®                       |       |   |   |      |    | 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 |   |  |
| ±0.1% FS                                           |       |   |   |      |    |    |       |   | 2 |   |  |
| Combined thermal zero & sensitivity shifts         |       |   |   |      |    |    |       |   |   |   |  |
| ±0.02% FS/°C                                       |       |   |   |      |    |    |       |   |   | 1 |  |



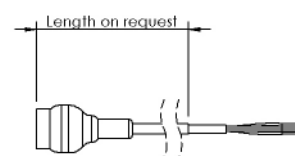
DIMENSIONS : mm

**MIL-C26482 - 6 PINS**

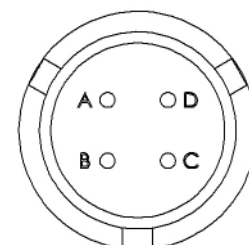
| VOLTAGE OUTPUT | PIN        |
|----------------|------------|
| + EXCITATION   | PIN A      |
| + SIGNAL       | PIN B      |
| 0 VOLT         | PIN C      |
| 0 VOLT         | PIN D      |
| SENSOR HOUSING | PINS E & F |

**#26 AWG, 4 CONDUCTOR SHIELDED VITON CABLE**

| VOLTAGE OUTPUT | CONDUCTOR      |
|----------------|----------------|
| + EXCITATION   | RED            |
| + SIGNAL       | GREEN / YELLOW |
| NC             | WHITE          |
| 0 VOLT         | BLUE / BLACK   |
| SENSOR HOUSING | SHIELD         |

**MIL-C26482 - 4 PINS**

| VOLTAGE OUTPUT | PIN               |
|----------------|-------------------|
| + EXCITATION   | PIN A             |
| + SIGNAL       | PIN C             |
| NC             | PIN D             |
| 0 VOLT         | PIN B             |
| SENSOR HOUSING | CONNECTOR HOUSING |



Agent :



E.F.E.

L'ESSOR FRANCAIS ELECTRONIQUE

16 Rue Porte a Bateaux - 27540 Ivry-la-Bataille - FRANCE

Tel : 33 (0)2 32 22 35 05 - Fax : 33 (0)2 32 36 93 08

[www.efc-sensor.com](http://www.efc-sensor.com) - [infos@efc-sensor.com](mailto:infos@efc-sensor.com)