

High Temperature Miniature Pressure Sensor



Features

- ➔ Available with 0,5-4,5Vdc output
- ➔ Robust and reliable sensor
- ➔ Miniature pressure sensor
- ➔ Operating from -40 to +175°C

Applications

- ➔ Automotive - on vehicle
- ➔ Oil & gas
- ➔ Aerospace
- ➔ Military

Operating from -40 up to +175°C, the PHT120 series is dedicated to high temperature pressure measurements. With all stainless steel wetted parts, it is compatible with most media, including corrosive fluids used in automotive, aerospace and energy industries. Equipped with the premium thin film technology developed by EFE, its performances and stability over wide temperature range are excellent. The PHT120 is available with unamplified output (mV/V), compensated in temperature to deliver the best accuracy. Amplified output (Vdc) is also standard, thanks to a high performance and ruggedized built-in electronic module.

Technical specifications

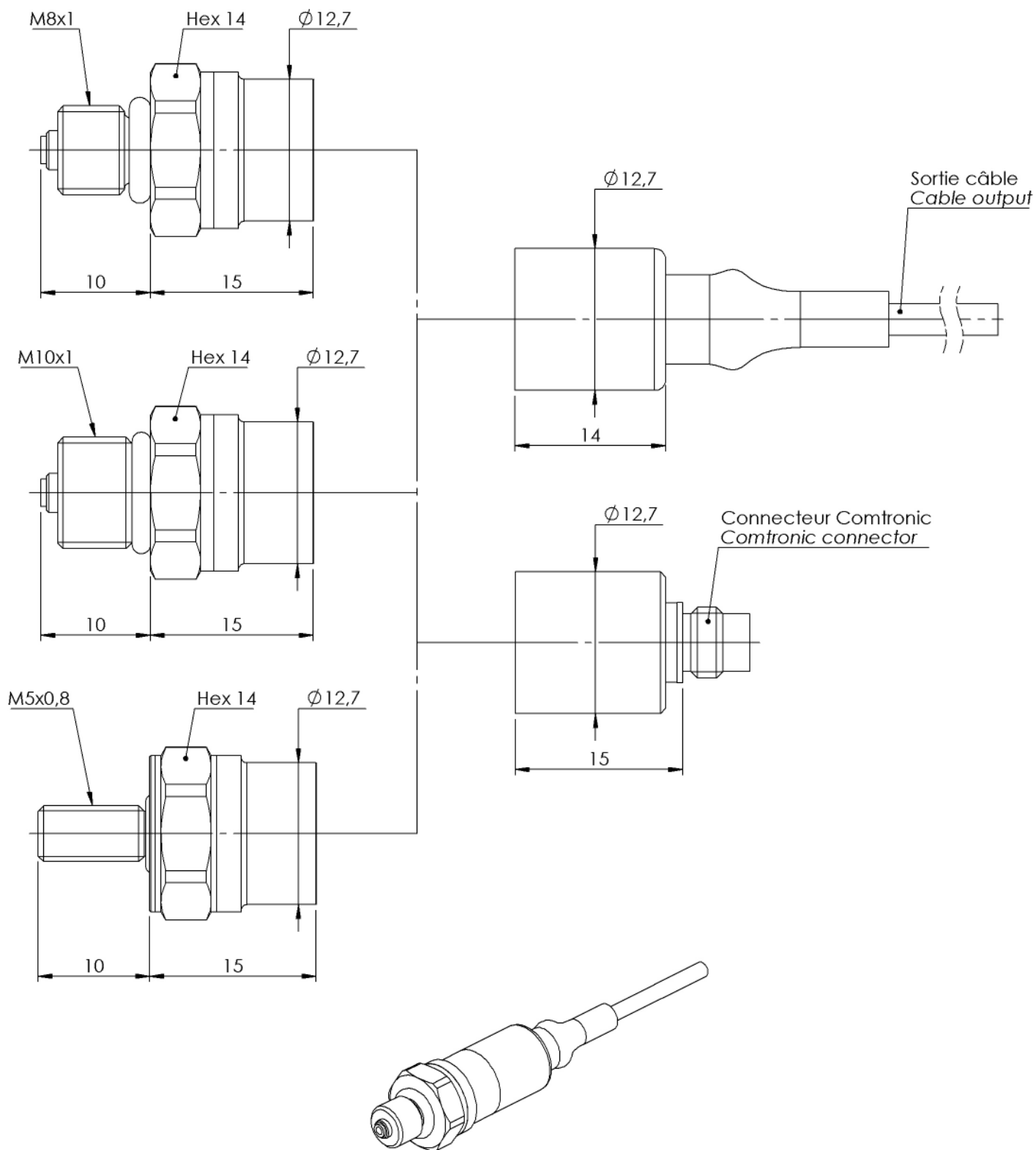
| | |
|--|--|
| Pressure ranges (FS) | ±1bar ; -1/+2bar ; -1/+3bar ; 2bar ; 5bar ; 10bar ; 20bar ; 40bar ; 70bar ; 250bar ; 400bar ; ±14.5PSI ; -14.5/+30PSI ; -14.5/+40PSI ; 30PSI ; 70PSI ; 150PSI ; 300PSI ; 500PSI ; 1000PSI ; 3000PSI ; 5000PSI |
| Type | Absolute ; Gage |
| Type (for ranges > 40 bar) | Sealed Gage |
| Safe overload | 150% FS |
| Burst pressure | 300% FS |
| Power supply | 8 to 16Vdc |
| Consumption | < 10mA |
| Insulation | > 1000 MOhms under 50Vdc at ambient temperature |
| Output at -100%FS (only for ± range) | 0.5Vdc |
| Output at 0%FS (except ranges ±) | 0.5Vdc |
| Output at 100%FS | 4.5Vdc |
| Zero and sensitivity settings tolerances | ±50mV |

Technical Specifications


| | |
|--|---|
| 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 3000Hz @ -3dB |
| Compensated temperature range | -30 to +150°C Option : 0 to +175°C |
| Operating temperature range | -40 to +150°C (-40 to +175°C if optional compensation up to 175°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 up to 150°C | AWG26, Viton Jacketed Shielded Cable Ø3mm, 4 wires Option : Miniature Receptacle 4 pins CMR-S1-E-04P |
| Electrical connection above 150°C | AWG26 Shielded Teflon Cable Ø3.4mm ±0.2, 5 wires Option : Miniature Receptacle 4 pins CMR-S1-E-04P |
| Mechanical connection | M10x1-4h male ; M5x0.8-6g male Option : M8x1-6g male |
| Material(s) of wetted parts | Stainless Steel 316L ; Stainless Steel 17-4PH ; Stainless steel 15-5PH |
| Weight | 10g without cable |
| Enclosure protection | IP65 for absolute & sealed gage version |

Codification

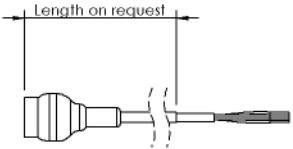

| | | | | | | | | | | | |
|--|-------|---|---|-------|----|----|-------|---|---|---|---|
| High Temperature Miniature Pressure Sensor | PHT12 | 7 | S | 10bar | A | 02 | 06 | F | 1 | 1 | B |
| Output Signal | | | | | | | | | | | |
| 0.5-4.5Vdc unregulated power supply | | 7 | | | | | | | | | |
| Material | | | | | | | | | | | |
| Stainless Steels | | | S | | | | | | | | |
| Range | | | | | | | | | | | |
| Example | | | | 10bar | | | | | | | |
| Type | | | | | | | | | | | |
| Absolute | | | | | A | | | | | | |
| Gage | | | | | G | | | | | | |
| Sealed Gage | | | | | SG | | | | | | |
| Mechanical connection | | | | | | | | | | | |
| M10x1-4h male | | | | | | 02 | | | | | |
| M8x1-6g male | | | | | | 03 | | | | | |
| M5x0.8-6g male | | | | | | 05 | | | | | |
| Electrical connection | | | | | | | | | | | |
| Miniature Receptacle 4 pins CMR-S1-E-04P | | | | | | | 06 | | | | |
| AWG26, Viton Jacketed Shielded Cable Ø3mm, 4 wires | | | | | | | 08/1m | | | | |
| AWG26 Shielded Teflon Cable Ø3.4mm ±0.2, 5 wires | | | | | | | 09/1m | | | | |
| Compensated temperature range | | | | | | | | | | | |
| -30 to +150°C | | | | | | | | F | | | |
| 0 to +175°C | | | | | | | | G | | | |
| Non linearity and hysteresis combined | | | | | | | | | | | |
| ±0.25% FS | | | | | | | | | 1 | | |
| ±0.1% FS | | | | | | | | | 2 | | |
| Combined thermal zero & sensitivity shifts | | | | | | | | | | | |
| ±0.02% FS/°C | | | | | | | | | | 1 | |
| Options | | | | | | | | | | | |
| Special Adjustment up to 3000Hz @ -3dB | | | | | | | | | | | B |



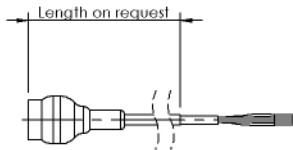

Dimensions : mm



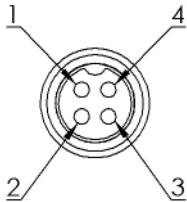
| #26 AWG, 4 CONDUCTOR SHIELDED VITON CABLE | |
|--|------------------|
| VOLTAGE OUTPUT | CONDUCTOR |
| + EXCITATION | RED |
| + SIGNAL | GREEN / YELLOW |
| NC | WHITE |
| 0 VOLT | BLUE / BLACK |
| SENSOR HOUSING | SHIELD |

| 5 CONDUCTOR TEFLON CABLE | |
|---------------------------------|------------------|
| VOLTAGE OUTPUT | CONDUCTOR |
| + EXCITATION | RED |
| + SIGNAL | GREEN |
| 0 VOLT | BLACK |
| NC | WHITE |
| NC | BLUE |
| SENSOR HOUSING | SHIELD |

| MICROTECH DR-4S-4H - 4 PINS | |
|------------------------------------|-------------------|
| VOLTAGE OUTPUT | PIN |
| + EXCITATION | PIN 1 |
| NC | PIN 4 |
| 0 VOLT | PIN 2 |
| + SIGNAL | PIN 3 |
| 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.efe-sensor.com - infos@efe-sensor.com