

FEATURES

- ◆ M16x1.5 high pressure port
- ◆ Metal / metal screw sealing
- ◆ Integrated Amplifier optional
- ◆ Heavy duty body

APPLICATIONS

- ◆ Burst pressure test benches
- ◆ Fatigue test benches
- ◆ Laboratory and research
- ◆ Pressure amplifier equipment

P125

High Pressure Sensor

SPECIFICATIONS

- ◆ Ranges from 2000 to 7000 bar (30k to 100k psi)
- ◆ Stainless steel pressure port
- ◆ Robust for Fatigue testing
- ◆ For static and dynamic applications
- ◆ Linearity up to $\pm 0.3\%$ F.S.

The **P125** is a high pressure transducer designed for to measure static and dynamic pressure up to 7 000 bar (100 kpsi). The mechanical design and a stainless steel construction allow the sensor to withstand most aggressive liquids and fatigue testing.

The sensing element is fitted with a temperature compensated Wheatstone bridge equipped with thin strain gauges. TESS offers amplified analogue versions to obtain 0.5-4.5V, 0-5V and 4-20mA.

For miniature with flush diaphragm designs, the model **XPM6** can measure up to 1 000 bar (15 kpsi).

With many years of experience as a designer and a manufacturer of sensors, TE CONNECTIVITY often works with customers to design or customize sensors for specific uses and testing environments.

On request, Instruction documents can be provided to ease the selection and use of our sensors and provide helpful tips.

P125

High pressure sensor

STANDARD RANGES

| Ranges (FS) | | Pressure Reference Gauge | Combined Linearity & Hysteresis (%FS) |
|-------------|------|--------------------------|---------------------------------------|
| Bar | psi | | |
| 2k | 30k | ↑ | ± 0.5% |
| 4k | 60k | ↑ | ± 0.5% |
| 7k | 100K | ↑ | ± 0.5% |

TEMPERATURE CHARACTERISTICS

| Ranges (FS) | | Operating Temperature Range (OTR) | | Compensated Temperature Range (CTR) | | ZeroShift in CTR /50°C | Sensitivity Shift in CTR /50°C |
|-------------|------|-----------------------------------|------------|-------------------------------------|-------------|------------------------|--------------------------------|
| Bar | psi | Celcius | Farenheit | Celcius | Farenheit | | |
| 2k | 30k | -20 to 80°C | 0 to 170°F | 0 to 60°C | 32 to 140°F | < ±2%FS | < ±3% |
| 4k | 60k | | | | | | |
| 7k | 100K | | | | | | |

MECHANICAL CHARACTERISTICS

| Ranges (FS) | | Pressure limit | | Tightening Torque | |
|-------------|------|----------------|---------------------|-------------------|--------|
| Bar | psi | Without damage | Without destruction | N.m | lbf.in |
| 2k | 30k | 1,5x FS | 3x FS | 30 | 265 |
| 4k | 60k | 1,5x FS | 3x FS | 30 | 265 |
| 7k | 100K | 1,2x FS | 2x FS | 45 | 400 |

Notes

1. Material: Body in stainless steel; housing in aluminium alloy.
2. Protection Index: IP65 with cable gland, IP50 with connector output
3. Electrical Termination: cable gland with Ø5 mm shielded cable with 4 wires, standard length 2.0 m [6.6 ft]

ELECTRICAL CHARACTERISTICS (All values are typical at temperature 23±3°C)

NON AMPLIFIED VERSION

| Ranges (FS) | | Frequency resonance | Power supply | Sensitivity (FSO) | Zero Offset | Input Impedance Ze | Output Impédance Zs |
|-------------|-----|---------------------|--------------|-------------------|-------------|--------------------|---------------------|
| Bar | Psi | | | | | | |
| 2k | 30k | TBD | 10 Vdc | 2 mV/V | < ±1mV/V | 1500 Ω | 500 Ω |
| 4k | 60k | TBD | | | | 1500 Ω | 500 Ω |
| 7k | 1K | TBD | | | | 1000 Ω | 500 Ω |

Note

1. Output impedance standard, available <100Ω on request

AMPLIFIED VERSION A1

| Ranges (FS) | | Bandwidth | Power supply | Sensitivity ¹ (FSO) | Zero Offset | Consumption | Output Impédance Zs ² |
|-------------|-----|-----------|--------------|--------------------------------|-------------|-------------|----------------------------------|
| Bar | Psi | | | | | | |
| All ranges | | 3 kHz | 10 to 30 Vdc | 4 ±0.2V | 0.5 ±0.2V | 25 mA | 1 000 Ω |

AMPLIFIED VERSION A2

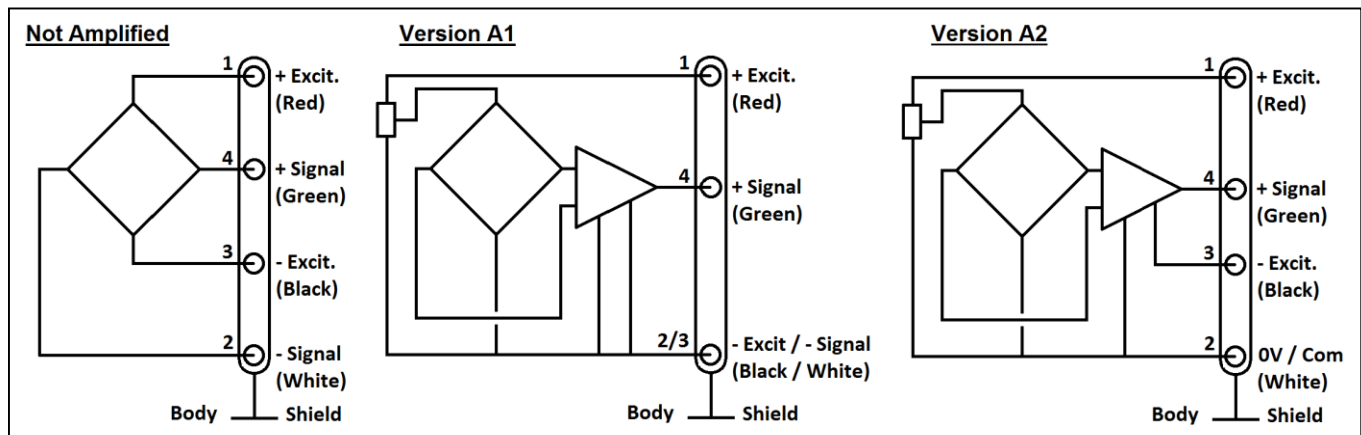
| Ranges (FS) | | Bandwidth | Power supply | Full Scale Output ¹ (FSO) | Zero Offset | Consumption | Output Impédance Zs ² |
|-------------|-----|-----------|--------------|--------------------------------------|-------------|-------------|----------------------------------|
| Bar | Psi | | | | | | |
| All ranges | | 3 kHz | 10 to 30 Vdc | 4 ±0.2V | 0.5 ±0.2V | 25 mA | 1 000 Ω |

AMPLIFIED VERSION A3⁴

| Ranges (FS) | | Bandwidth | Power supply | Full Scale Output (FSO) | Zero Offset | Consumption | Output Impédance Zs |
|-------------|-----|-----------|--------------|-------------------------|-------------|-------------|---------------------|
| Bar | Psi | | | | | | |
| All ranges | | 3 KHz | 10 to 26 Vdc | 16 ±0.3mA | 4 ±0.3mA | Up to 20 mA | - |

Notes

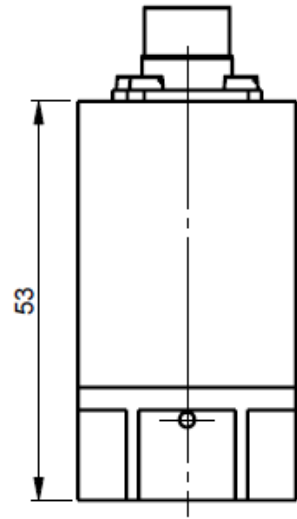
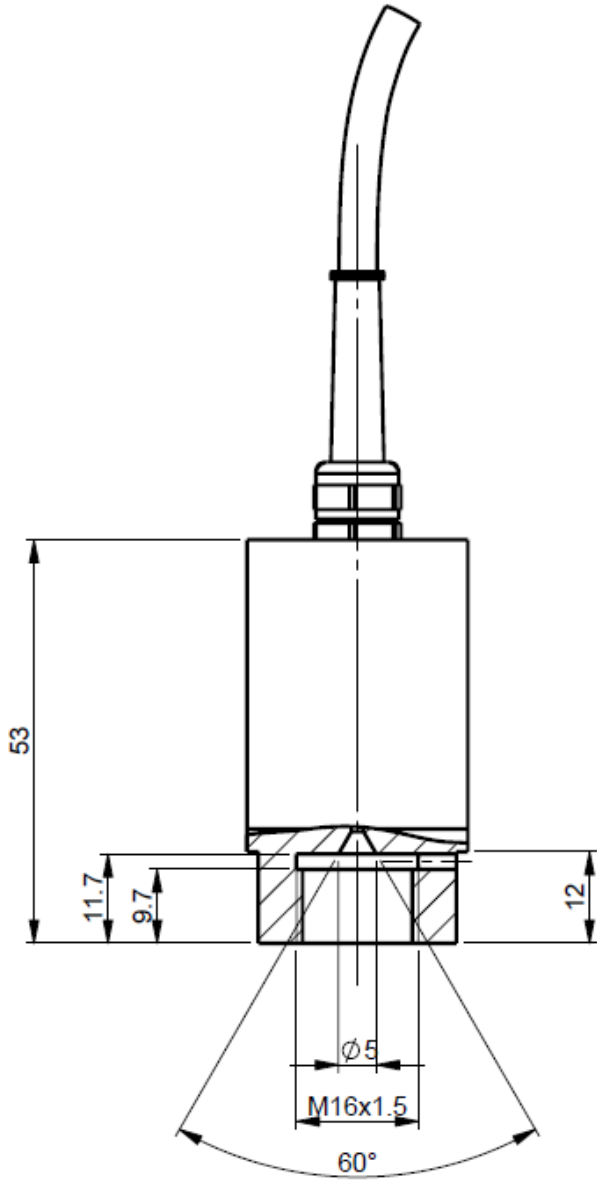
- Standard output signal, custom outputs available on request.
- Output impedance standard, available <100Ω on request.
- Insulation under 50Vdc ≥100MΩ
- A3 current output is a two wires version
- CE conformance according to EN 61010-1, EN 50081-1, EN 50082-1.



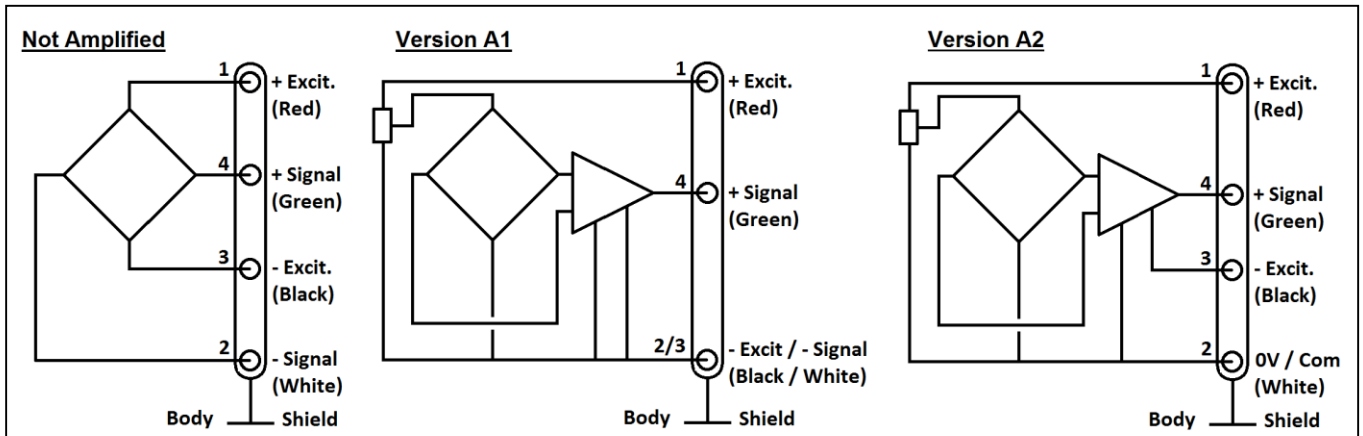
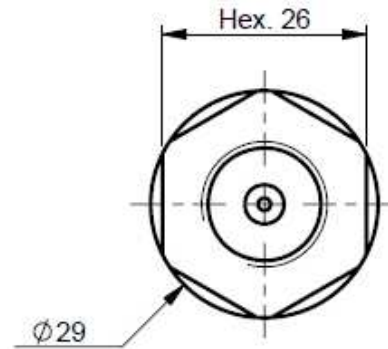
P125

High pressure sensor

DIMENSIONS (METRIC ONLY)



Version SC



P125

High pressure sensor

OPTIONS

SC : Connector output

L00M : special cable length, replace "00" with total length in meters

ORDERING INFORMATION

| P125 | - | A1 | - | 2KB | G | - | /L4M |
|-------------|---|--|---|--|--------------------|---|---|
| Model | - | Electrical interface | - | Ranges & unit | Pressure Reference | - | /Options |
| P125 | - | (empty) = bridge mV/V A1 = 0.5 to 4.5V A2 = 0-5V A3 = 4-20mA | - | 2KB 4KB 7KB | G = Gage | - | /ETX /SC /L00M |

The sensor ordering codes uses only bar as units because **P125** uses metric threads. Psi value correspondence is noted as information

SUPPLIED ACCESSOIRES (ONLY WITH SC OPTION)

EFMX-4M : mating plug Jaeger 530-801-006 with clamp 530-841-006 standard with SC option

EFMX-4H : mating plug Jaeger 530-804-006 with clamp 530-844-006 for ET1, ET2 or ET3 & SC options

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