

FP110

Flush Diaphragm Pressure Transducer

SPECIFICATIONS

- ◆ Ranges from 10 to 500 bars (150 to 7500 psi)
- ◆ Gage pressure reference
- ◆ IP66 protection
- ◆ For static and dynamic applications

The **FP110** is designed to measure static and dynamic pressure with the output characteristics substantially kept up to about 20% of the resonant frequency.

The all stainless steel construction and flush diaphragm allow the sensor to be used under a wide variety of conditions and in temperatures up to 120 °C. For 200°C high temperature range model **FP120-HT**.

Fitted with metallic strain gauges in a Wheatstone bridge circuit, the **FP110** provides excellent temperature stability. An on-board **A1** or **A2** amplifier for high level output is optionally available.

Consult TE CONNECTIVITY's Engineering Department if the standard options do not meet your needs or should your application require a more comprehensive measurement system.

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

FEATURES

- ◆ Built in stainless Steel
- ◆ M16 thread
- ◆ High Level Tension Output Available
- ◆ Accepts wide range of fluids

APPLICATIONS

- ◆ Industrial pump discharge
- ◆ Corrosive fluid storage
- ◆ Onboard equipment monitoring
- ◆ Hydraulic regulation process
- ◆ Laboratory and research

STANDARD RANGES

| | | | | | | | |
|----------------------------------|-------|-------|-------|-------|-------|-------|-------|
| Range in bar(FS) | 10 | 20 | 50 | 100 | 200 | 350 | 500 |
| Range in psi | 150 | 300 | 750 | 1 500 | 3 000 | 5 000 | 7 500 |
| Accuracy %FS | <±0.3 | <±0.3 | <±0.3 | <±0.3 | <±0.5 | <±0.5 | <±0.5 |
| Over-range | X2 | X2 | X2 | X2 | X2 | X2 | X1.5 |
| Resonance Frequency (kHz) | 15 | 20 | 27 | 35 | 40 | 45 | 55 |

PERFORMANCE SPECIFICATIONS (typical values at temperature 23±3°C)

| | |
|-------------------------------------|---------------------------------------|
| Parameters | |
| Operating Temperature Range (OTR) | -40 to 80 ° C [-40 to 176 ° F] |
| Compensated Temperature Range (CTR) | 0 to 60 ° C [32 to 140 ° F] |
| Thermal Zero Shift in CTR | <1% F.S./50°C [100°F] |
| Thermal Sensitivity Shift in CTR | <1.5% of Reading / 50 ° C [100° F] |
| Range (FS) | See standard ranges table |
| Over-Range | |
| Without Damage | 1.5x to 2x FS |
| Without Destruction | 3x FS |
| Accuracy | |
| Combined Non-Linearity & Hysteresis | ±0.3 to ±0.5% F.S. (see table page 1) |

Electrical Characteristics

| Model | FP110 | FP110-A1 | FP110-A2 |
|-----------------------------|--------------|-------------------|--------------------------|
| Supply Voltage | 10 Vdc | 10 to 30 Vdc | ±15 Vdc (±12 to ±18 Vdc) |
| F.S. Output ⁵ | 1.2 mV/V | 4 V ±0.2V. | 5 V ±0.2V |
| Zero Offset ⁵ | <± 5% F.S. | 0.5 V ±0.2V | 0 V ±0.2V |
| Input Impedance/Consumption | 350 Ω | <25 mA | <25 mA |
| Output Impedance | 350 Ω | 1 kΩ ⁶ | 1 kΩ ⁶ |
| Insulation under 50Vdc | ≥100 MΩ | ≥100 MΩ | ≥100 MΩ |

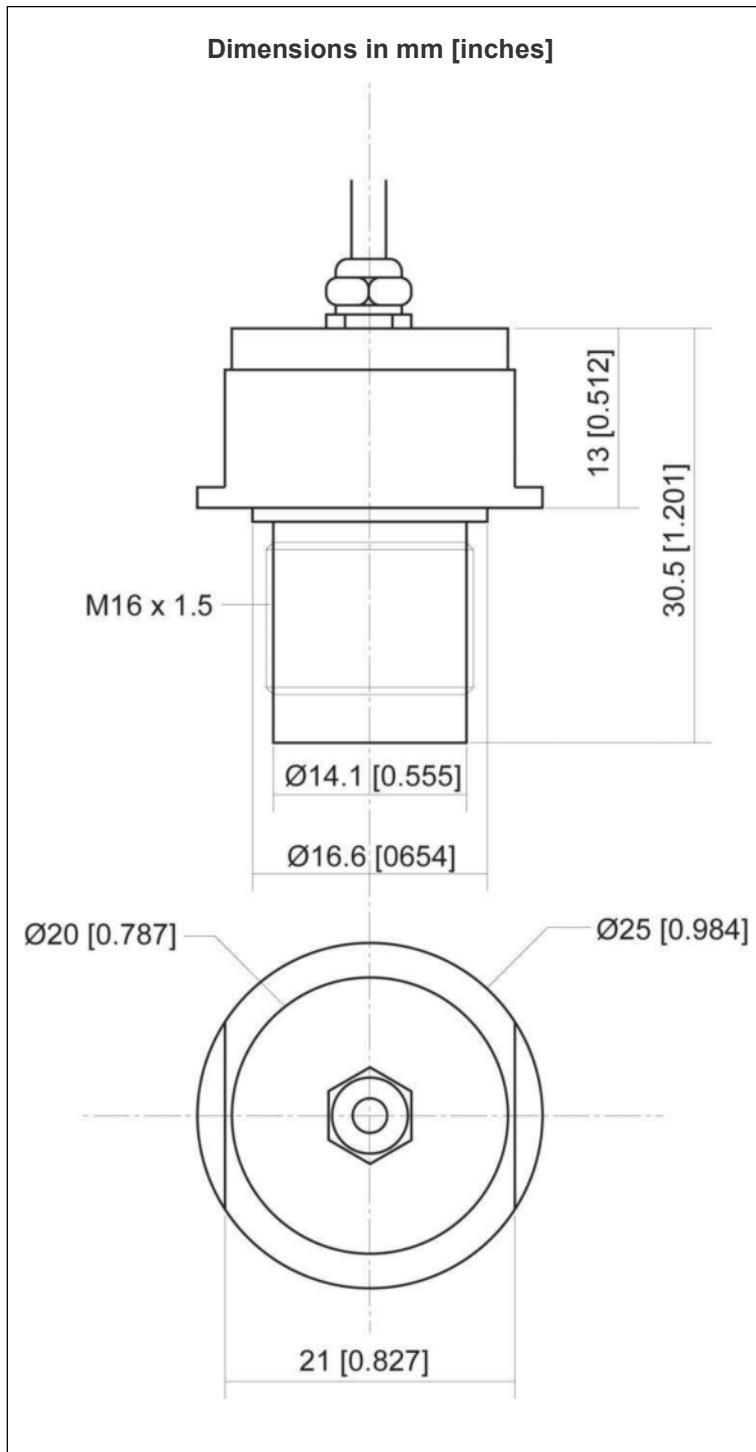
Notes

1. Electrical Termination: Shielded cable, 4 wires, standard length 2m [6.6ft]
2. Material: Body and flush diaphragm in stainless steel, laser welded
3. Protection Index: IP66
4. Self-centered, sealing ring supplied with the sensor.
5. Standard output signal, custom outputs available on request
6. Output impedance standard, available <100Ω on request.
7. CE conformance according to EN 61010-1, EN 50081-1, EN 50082-1

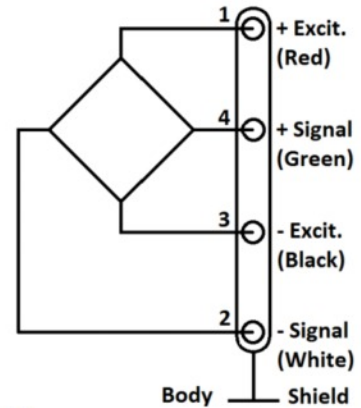
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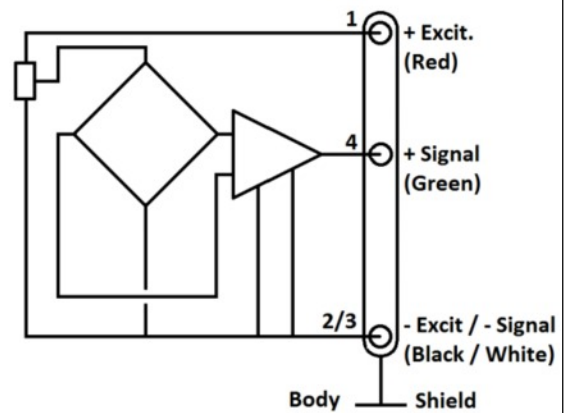
DIMENSIONS & WIRING SCHEMATIC (IN METRIC AND IMPERIAL)



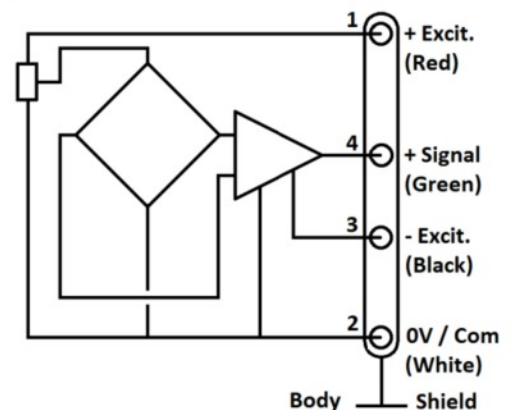
Wiring Schematic



Version -A1



Version -A2



FP110

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OPTIONS

| |
|--|
| A1 : Amplified Tension output with unipolar power supply |
| A2 : Amplified Tension output with bipolar power supply |
| ET1 : CTR -20 to 100 °C [-4 to 212°F] |
| L00M : special cable length, replace "00" with total length in meters |

ORDERING INFO

| FP110 | - | A1 | - | 20B | G | - | /Z1/ET1 |
|--------------|---|---|---|--|-----------------------|---|-----------------------------|
| Modèle | - | Electrical interface | - | Etendue de mesure | Pression de référence | - | /Options |
| FP110 | - | (empty) = bridge mV/V A1 = 0.5 to 4.5V A2 = 0 to 5V | - | 10B 20B 50B 100B 200B 350B 500B | G = Gage | - | /ET1 /L00M |

The sensor ordering codes uses only bar as units because **FP110** uses metric threads. Psi value correspondence is noted as information.

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