

FP110 Flush Diaphragm Pressure Transducer



- Built in stainless steel
- Ranges from 10 to 500 bars [150 to 7500 psi]
- Integrated amplifier version as option
- IP66 protection
- For static and dynamic applications
- Gage



DESCRIPTION

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.

Fitted with metallic strain gauges in a Wheatstone bridge circuit, the **FP110** provides excellent temperature stability. It is available in standard ranges from 0-10 bar to 0-500 bars [0 - 150 to 0 - 7500 psi]. An on-board **A1** or **A2** amplifier for high level output is optionally available. For 200°C high temperature range model FP120-/HT

Consult Measurement-Specialties' Engineering Department if the standard options do not meet your needs or should your application require a more comprehensive measurement system.

FEATURES

- M16 thread
- Wide Temperature Ranges
- Flush Diaphragm
- 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	10	20	50	100	200	350	500
Range in psi	150	300	750	1 500	3 000	5 000	7 500
Accuracy %F.S.	<±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

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PERFORMANCE SPECIFICATIONS

All values are typical at temperature 20±1°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]
Zero Shift in CTR	<1% F.S./50°C [100°F]
Sensitivity Shift in CTR	<1.5% of reading / 50 °C [100° F]
Range (F.S.)	See standard ranges table
Over-Range	
Without Damage	1.5x to 2x F.S.
Without Destruction	3x F.S.
Accuracy	
Combined Non-Linearity & Hysteresis	±0.3 to ±0.5% F.S. (see table page 1)

Electrical Characteristics

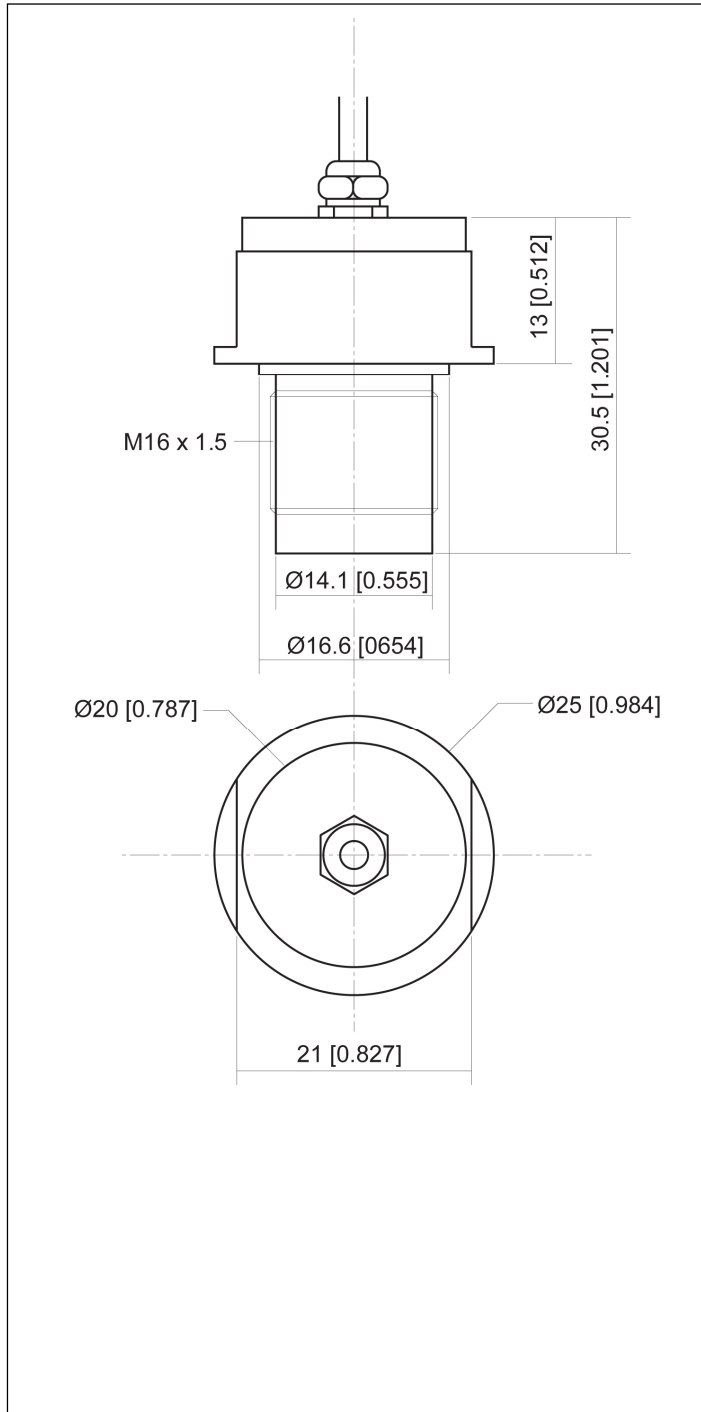
Model	FP110	FP110-A1	FP110-A2
Supply Voltage	10 Vdc	10 to 30 Vdc	±15 Vcc (±12 to ±18 Vdc)
F.S. Output ⁶	12 mV	4 V ±5% F.S.	5 V ±5% F.S.
Zero Offset ⁶	<± 5% F.S.	0.5 V ±5% F.S.	0 V ±5% F.S.
Input Impedance/Consumption	350 Ω	<25 mA	<25 mA
Output Impedance	350 Ω	1 kΩ ⁷	1 kΩ ⁷
Insulation under 50Vdc	≥100 MΩ	≥100 MΩ	≥100 MΩ

Notes

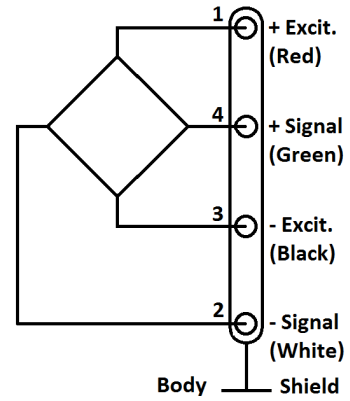
1. Electrical Termination: Shielded cable, 4 wires, standard length 2m[6.6ft]
2. Material: Body and flush diaphragm in stainless steel, laser welded
3. Protection Index: IP66
4. Pressure Port: M16x1.5 threading
5. Self-centered, sealing ring supplied with the sensor.
6. Standard output signal, custom outputs available on request
7. Output impedance standard, available <100Ω on request.
8. CE conformance according to EN 61010-1, EN 50081-1, EN 50082-1

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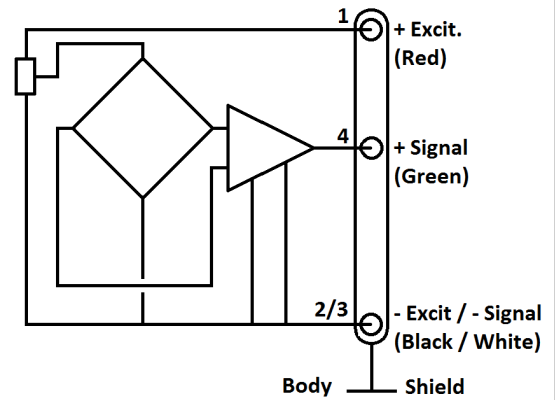
DIMENSIONS & WIRING SCHEMATIC (IN METRIC AND IMPERIAL)



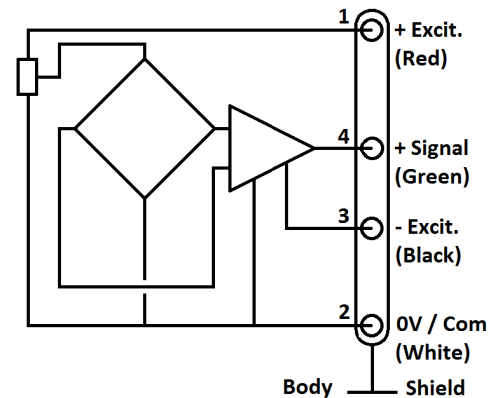
Wiring Schematic



Version -A1



Version -A2

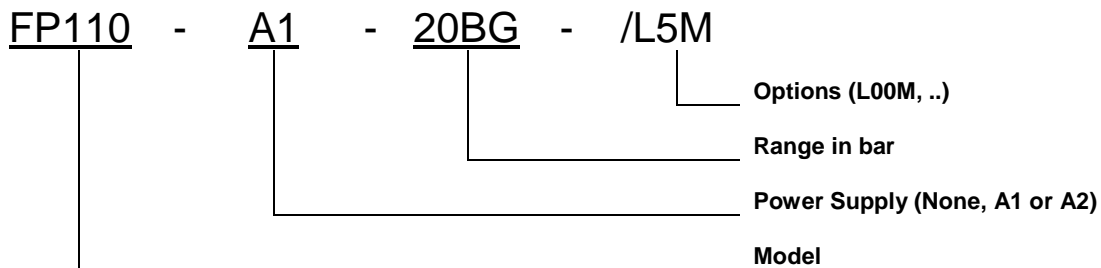


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OPTIONS

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



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