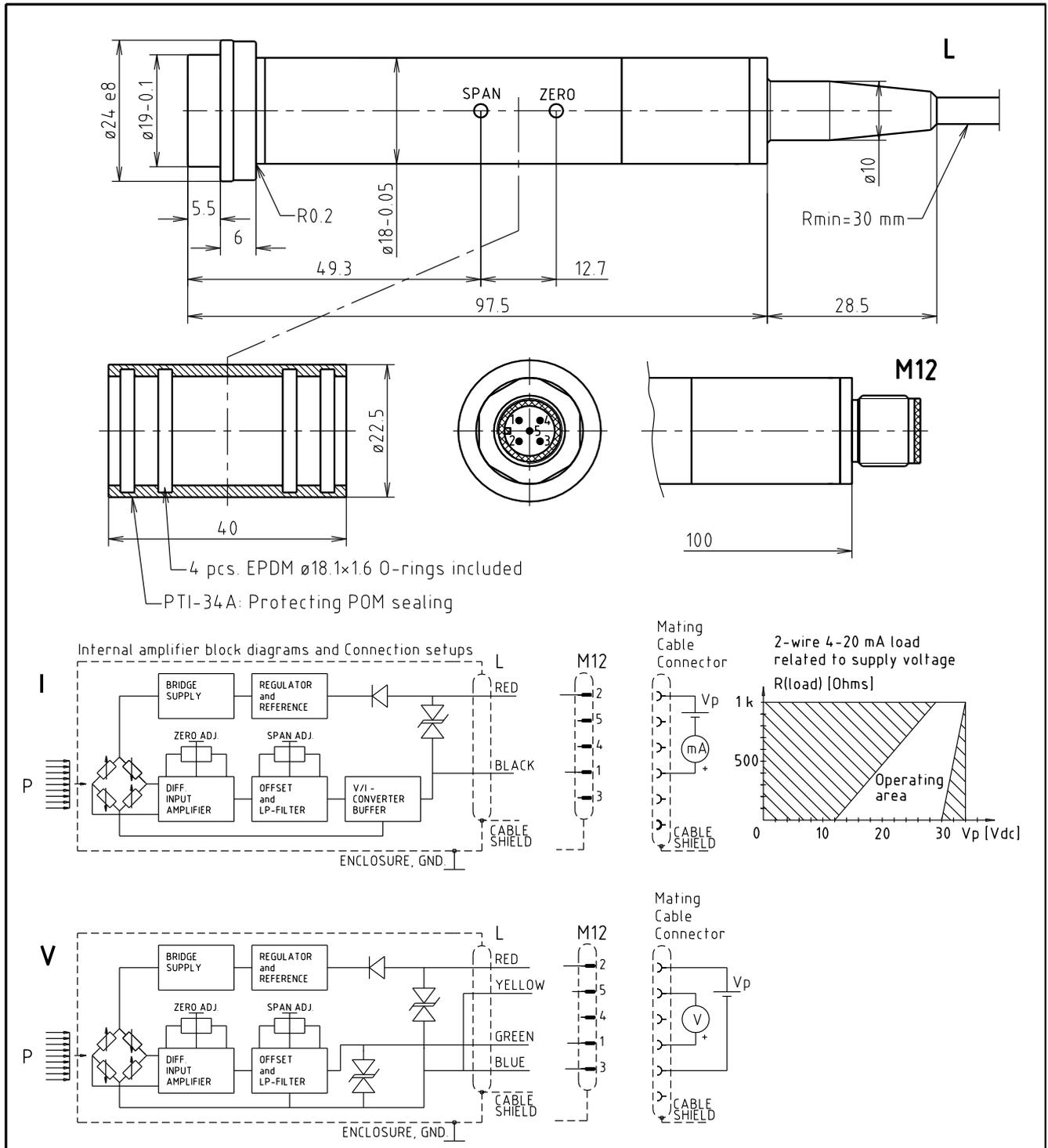


PRESSURE TRANSMITTER PTI



DESCRIPTION

The sensing element of the pressure transmitter is a diaphragm machined out of Titanium grade 5. On the inside of the diaphragm is mounted a strain gauge, which converts the pressure generated deformation to a change in resistance. Titanium grade 5 is characterized by excellent corrosion data, very high 0.1 % proof stress (85 kp/mm²), very little hysteresis and excellent long-term stability. The built-in amplifier supplies the bridge, amplifies the output voltage and converts it into a current or voltage output. Gain and zero are adjustable through tight holes. The circuit is protected against transients at the supply voltage line and signal output lines. The amplifier is mounted in a titanium tube which is laser welded at both ends to respectively the diaphragm part and the cable- or connector part.

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1.2.1

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SENSOR TECHNOLOGY

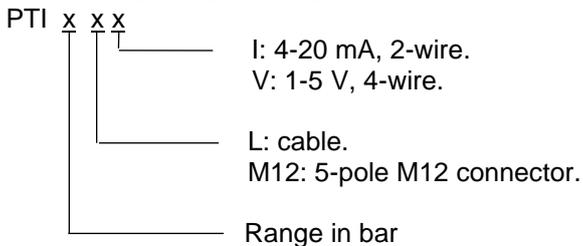
SPECIFICATIONS

Pressure ranges	5, 10 or 20 bar gauge 50, 100, 200, 300, 400, 500 or 1000 bar, sealed reference.
Pressure limits	4 times rated pressure without damage.
Materials	In contact with pressure media: Titanium grade 5. Housing: Titanium grade 2.
Surface roughness (front)	$R_a < 0.4 \mu\text{m}$.
Power requirement	12-30 V _{DC} , 4 mA _{DC} + output signal current.
Supply voltage effect	< 0.03 %/V.
Output signals and load	
- I	4-20 mA _{DC} , 2-wire, (R _L see diagram).
- V	1-5 V _{DC} , 4-wire, R _L > 5 k Ω , C _L < 1 μF .
SPAN adjustment	± 10 % of FSO.
ZERO adjustment	± 10 % of FSO.
Non-linearity incl. hysteresis	< 0.5 % of FSO from best fit straight line.
Response time	6 ms.
Temperature range	-25 °C to +85 °C.
Temperature coefficient of zeropoint	< 0.02 %/°C of FSO.
Temperature coefficient of span	< 0.02 %/°C of signal output.
Environmental conditions	
- vibration	According to IEC 68-2-6 (10-150 Hz, 0.35 mm/5g).
- shock	According to IEC 68-2-27 (1000 g half sine, 1 ms).
- electromagnetic immunity	According to EN 50082-2 (generic industrial standard)
- electromagnetic emission	According to EN 50081-2 (generic industrial standard)
Cable	
- LI	Outer insulation: FEP (blue), $\varnothing 5$ mm, length 2 m. Wires: 2 * 0.34 mm ² with common shield.
- LV	Outer insulation: FEP (white), $\varnothing 5$ mm, length 2 m. Wires: 4 * 0.34 mm ² with common shield.
Connector - M12I/M12V	5-pole male M12 chassis connector. Mating connector: 5-pole female M12 cable connector
Transducer weight	100 g.
Protection class	IP67.

INSTALLATION

The pressure transmitter can be mounted in a HFJ adaptor (please see datasheet 1.8.2).

ORDERING INFORMATION



PTI-34A Protective POM tube