

Serial n° :
Nominal range :
Cable length : 2 meters

GENERAL FEATURES

Measurement, control and process of hydraulic or pneumatic pressure on pipe

TECHNICAL PRINCIPLE

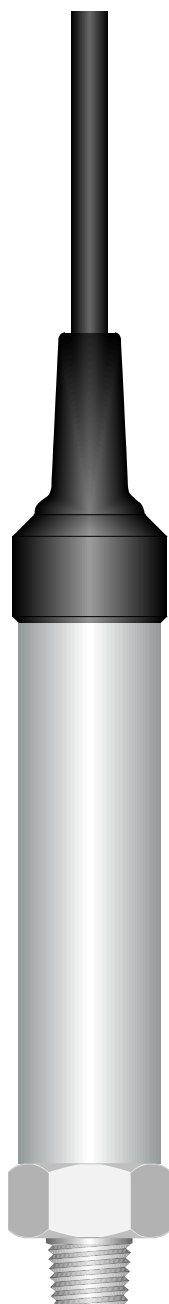
The pressure measurement is performed through the differential pressure between atmospheric pressure and liquid pressure. The pressure is converted into electric signal by piezo-electric gauge to provide a 4/20mA output signal on 2 wires

MECHANICAL SPECIFICATIONS

Housing : nickelled brass (high degree phosphorus), PVC tip, waterproof under 3m water
 Pressure connector Stainless steel 316L G 3/8" BSPC, tighten with 24mm wrench
 Cable : 2 wires + internal tube in shielded PVC (food approval) cable
 Sensor : piezo-resistive gauge with silicone coating.
 Diameter : tube 24 mm, overall 27,5mm
 Height : 155 mm (without cable)
 Weight : 260 g (without cable) *Supplied normally with 2 meters of shielded cable (100 g) or more upon request*

ELECTRICAL SPECIFICATIONS

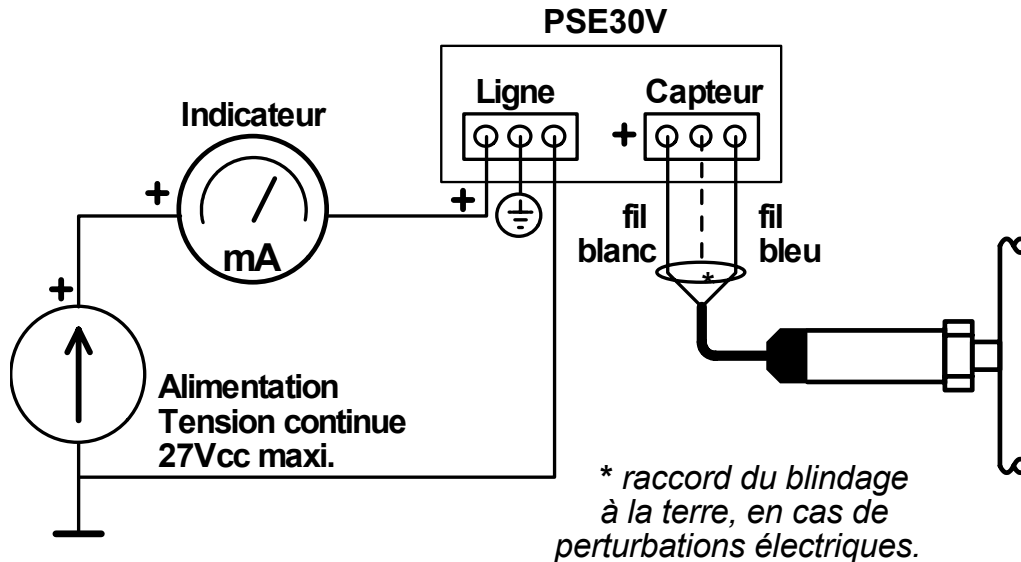
Output signal : 4/20mA output signal on 2 loop wires, 4mA for 0m and 20mA for the full-scale
 Power supply : Voltage supply between 6 to 38 volts DC input. *(Don't forget to integrate the voltage drop-out in the current loop)*
 Check the voltage specification of the protector unit
 EMC Conformity : EN 50 081-2, EN 50 082-2
 Consumption : the signal value (mA)



TECHNICAL DATA

Pressure range : Full-scale (F.S.) between 50 mbar (min.) to 40 bars (max.)
(Full-scale 20mA adjusted to the required value by Hitec)
 Standard range : 1 bar, 2 bars, 4 bars, 6 bars, 10 bars, 12, 16 and 25 bars.
 Equivalent water height : F.S. from 0.5 to 400 meters. $H(\text{meters}) = P(\text{bars}) \times 10.197$
 Hysteresis : 0,10 % F.S. *(constant temperature)*.
 Non-linearity : 0,15 % F.S. *(constant temperature)*.
 Temperature operating range : from 2°C to 50° Celsius

USING INSTRUCTIONS



Electrical connections :

The operating instructions are very easy. No need signal adjustment (fitted in laboratory)

The cable is fitted with an internal small tube for atmospheric pressure compensation. Don't block or pressure the tube. Don't put the end of the cable in water or flooding area During the installation, check the correct position of the cable without dangerous roughness or sharpness. Don't use any sharp tool for fitting: risk of water infiltration.

Check the correct polarity of the connections : the inversion of polarity is not destructive; in this case, the signal drops to 0mA.

Connect the lightning protector (PSE30V) on a very good earth line. Provide a power voltage supply sufficient to compensate the drop-out in the current loop and be sure to get a 6VDC minima on the transmitter : Measure the total electrical resistance of the line (included all electronic systems) and apply the following formula :

$$U(\text{supply mini}) = 6V + (R \text{ line} \times 0.02 \text{ A}) .$$

In the most cases, a 12 or 24 VDC supply is sufficient

Warning : Following the lightning protector unit fitted with the transmitter, **PSE43V** or **PSE30V**, the power voltage max. is **38V** for PSE43V and **27V** for PSE30V.

TROUBLE-SHOOTING PROCEDURE

Transmitter checking : Disconnect the transmitter from the system ; Connect the transmitter on a battery (12VDC or small square 9VDC battery) and introduce a milli-ampere meter in the loop. Check the current value : 4mA with the transmitter out of water and atmospheric pressure, and 20mA for the full-scale height of water.

For intermediate value : $H (\text{meter}) = (\text{Signal (mA)} - 4\text{mA}) \times \text{F.S.}(\text{meter}) / 16,$
and conversely : $\text{Signal (mA)} = ((\text{Height (m)} / \text{F.S.}(\text{m})) \times 16) + 4\text{mA}$