



PES™-302

Sealed Eddy Current Proximity Sensor



The PES-302 eddy current proximity sensor is designed for non-contact measurements of relative vibration, displacement and axial positioning. It is sealed to be fully operational in oil-filled environments and equipped with built-in conditioning circuitry allowing it to be directly connected to processing instrumentation.

GENERAL SPECIFICATIONS

Operation

- Measurement type
- Measuring range ¹
- Outputs ¹

- Sensitivity ¹

- Accuracy
- Repeatability
- Bandwidth
- Load at current output
- Load at voltage output
- Temperature drift
- Short circuit protection

Non-contact proximity, eddy current
0 to 2 mm [0 to 79 mils]
10 to 20 mA
4 to 10 V
5 mA/mm [127 µA/mil]
3 V/mm [76 mV/mil]
According to correction factor
± 5%
DC to 1 kHz (-3dB)
500 Ω max.
10 kΩ min.
< 10%
Built-in

Note 1: Target material: FE360 steel

Power Requirements

- Voltage
- Consumption
- Voltage reversal protection
- Warm-up time

15 to 30 Vdc
30 mA max.
Built-in
5 minutes

Connection

- Integral Cable
 - Outer Jacket Material
 - Outer Jacket Diameter
 - Min. Bending Radius
- Max. Cable Length (integral + extension)
 - For current output
 - For voltage output

30 m [98.4 ft], 4-wire x 0.34 mm² [22 AWG], shielded
PUR (polyurethane)
4.95 mm [0.195 in]
60 mm [2.36 in]

300 m [984 ft]
100 m [328 ft]

Environmental

- Operating temperature range
- Max. Submersible Pressure
- Protection rating

0 to 70 °C [32 to 158 °F]
10 Bar [150 PSI]
IP69

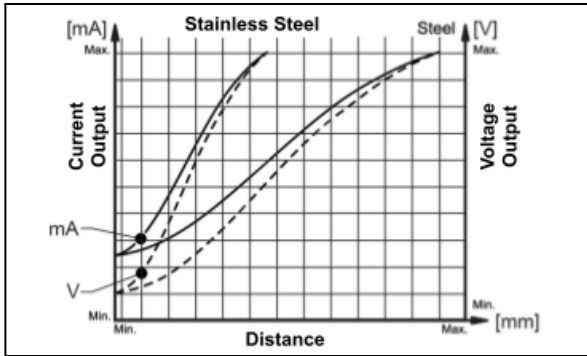
Physical Characteristics


- Sensor Body
- Sensing Face

Stainless steel
Polyamide-imide

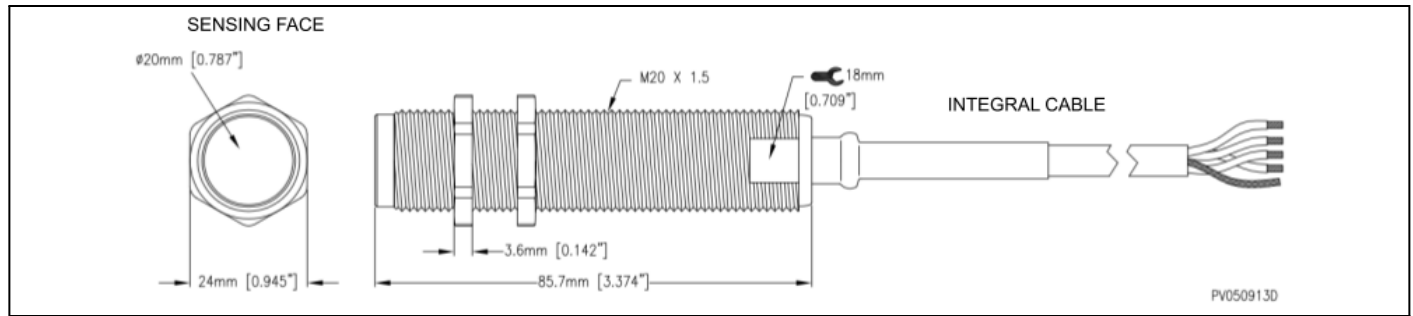


Typical Response Comparison (Steel vs Stainless Steel)



 Response of inductive sensors varies with target material. A site calibration is required to calculate the appropriate correction factor to be applied.

DIMENSIONS



CONNECTION

The signal cable must be connected as follows:

Color Code	Designation	Specifications
Brown	Power Supply	+24 Vdc
White	Current Output	10-20 mA
Blue	Common	0 V
Black	Voltage Output	4-10 V

TRANSIT / STORAGE GENERAL CONDITIONS

Specifications valid only in original VibroSystM factory packaging.

- Transit / Short term storage (< 3 months)
- Long term storage

-20 to 60°C [-4 to 140°F], up to 95% RH, non-condensing
0 to 35°C [32 to 95°F], up to 75% RH, non-condensing

PRODUCT INFORMATION

Product Number	Description
VSM-PES302-30I	PES-302 Sealed Eddy Current Proximity Sensor (0-2 mm)