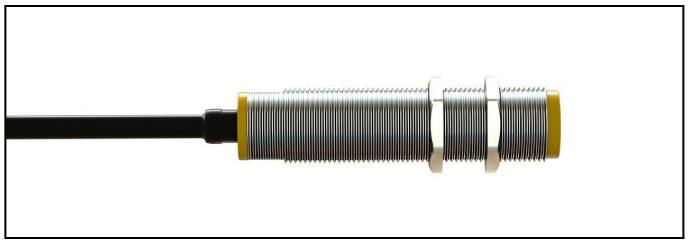
PES™-305

Sealed Eddy Current Proximity Sensor



The PES-305 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	Non-contact proximity, eddy current
Measuring range [1]	0 to 5 mm [0 to 196.9 mils]
Outputs [1]	6.67 to 20 mA 1.67 to 10 V
Sensitivity [1]	2.67 mA/mm [67.7 µA/mil] 1.67 V/mm [42.3 mV/mil]
Accuracy	According to correction factor
Repeatability	± 5%
Bandwidth	DC to 1 kHz (-3dB)
Load at current output	500 Ω max.
Load at voltage output	10 kΩ min.
Temperature drift	< 10%
Short circuit protection	Built-in

Note 1: Target material: FE360 steel

Power Requirements

Voltage	15 to 30 Vdc
Consumption	30 mA max.
Voltage reversal protection	Built-in
Warm-up time	5 minutes

Connection

Integral Cable	30 m [98.4 ft], 4-wire x 0.34 mm^2 [22 AWG], shielded
Outer Jacket Material	PUR (polyurethane)
Outer Jacket Diameter	4.95 mm [0.195 in]
Min. Bending Radius	60 mm [2.36 in]
Max. Cable Length (integral + extension)	
For current output	300 m [984 ft]
For voltage output	100 m [328 ft]

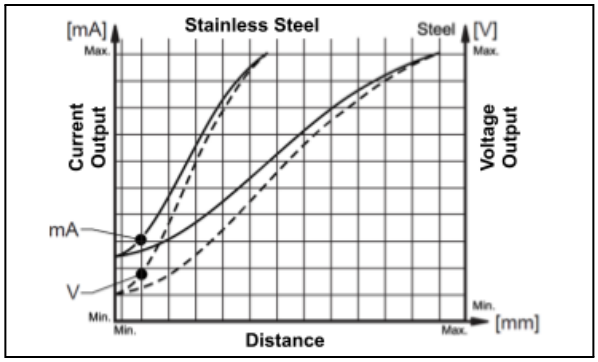
Environmental

Operating temperature range	0 to 70 °C [32 to 158 °F]
Max. Submersible Pressure	10 Bar [150 PSI]
Protection rating	IP69

Physical Characteristics

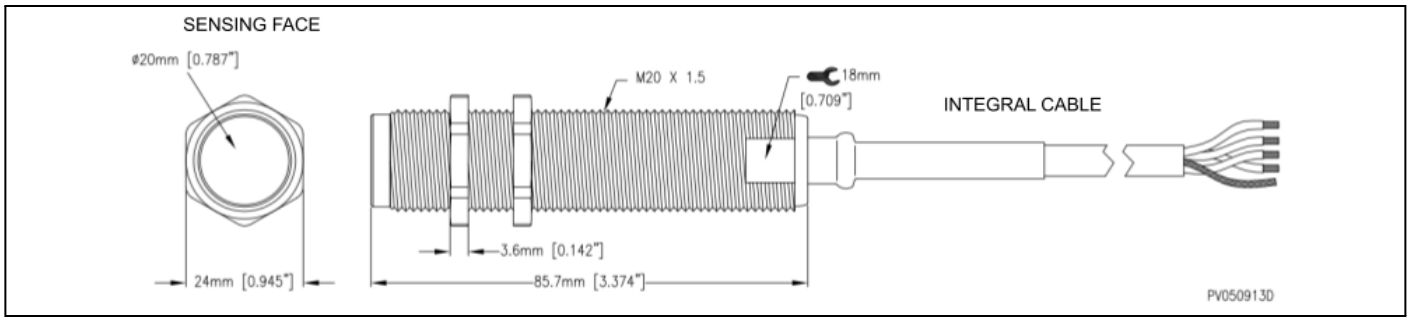
Sensor Body	Stainless steel
Sensing Face	Polyamide-imide

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	6.67-20 mA
Blue	Common	0 V
Black	Voltage Output	1.67-10 V

TRANSIT / STORAGE GENERAL CONDITIONS

Specifications valid only in original VibroSystM factory packaging.

- Transit / Short term storage (< 3 months) — -20 to 60°C [-4 to 140°F], up to 95% RH, non-condensing
- Long term storage — 0 to 35°C [32 to 95°F], up to 75% RH, non-condensing

PRODUCT INFORMATION

Product Number	Description
VSM-PES305-30I	PES-305 Sealed Eddy Current Proximity Sensor (0-5 mm)