Smart Linearized Proximity Probe proximity probe

PPT-480 - Eagle

FEATURES

- Designed for long life cycles and harsh environments
- Frequency range : 0 to 1.2kHz
- Built-in linearization to specific target mechanism
- Configurable 4-20 mA output proportional to the displacement measured
- Active temperature compensation
- Continuous online monitoring
- Optional configuration kit for setting and calibration

Monitoring solution

Axial thrust position

Shaft & bearing vibration

Typical applications

Hydrogenerators

Pumps, fan, cooling towers...

Windturbines

DESCRIPTION

The PPT-480 Eddy current proximity probes are used for non-contact measurement of shaft vibration and position. The sensor is designed with integrated linearization electronic in order to ensure excellent linearity and active temperature compensation. The built-in oscillator tuned above 750kHz ensures measurement with minimal magnetic runout effect.
The PPT-480 can be used either for measurement between 0.2mm and 2.2mm or 0.2mm and 4.2mm. The sensor is powered with +24 Vdc. The embedded sensor head is resistant to shock. The sealed body is resistant to oil and water on both sides of the sensor.

The 4-20 mA output interface can be configured for vibration displacement (PkPk or Pk) or gap (average). Optional configuration kit (software, cable and USB adapter) allows to setup the measuring range, the output qualifier (peak-peak, gap, scaling) and the target material, to perform on-site recalibration and to visualise trending values.

GLOBAL SPECIFICATIONS

OPERATION	
Power supply	+20V_{DC} to +30V_{DC}
Current consumption	< 20mA plus current output (max < 42 mA)
Linear range	0.2 to 2.2mm or 0.2 to 4.2mm
Analogue output	1x 4..20mA, with the following output: • Displacement (pkpk, µm), measuring range: 0..100µm, 0..200µm, 0..500µm, 0..1000µm) • Gap (average, mm) , measuring range: 0.2..2.2mm or 0.2..4.2mm
Temperature sensitivity (-25°C to +70°C, mid- range)	< 0.3% / °C, 0.2 to 2.2mm
Linearity (deviation from straight line)	0.2mm to 2.2mm : within ±0.02mm 2.2mm to 3.2mm : within ±0.07mm 3.2mm to 4.2mm : within ±0.2mm
Repeatability	< 0.2%
Frequency response (-3dB)	0 to 1.2kHz
Minimum target size	ø20mm
Sampling rate	8.2 KS/s or 820 S/s
Processing buffer size	8192 values (1sec. or 10sec. observing time depending SR)
COMMUNICATION	
Proprietary interface	Sensor parameters setting and calibration with MCm Sensors Manager
ENVIRONMENTAL	
Temperature range (sensor & cable)	
Operation	-25°C to 85°C
Storage	-40°C to 90°C
Ingress Protection	IP67 (Head only)
PHYSICAL	
Standard probe design	M10x 1 with integral cable
Maximum tightening torque	5Nm
Sensor body / Protection case length	79mm / 78mm
Cable length	10m, 5 poles and shield
Sensor body & Protection case material	Corrosion resistant

PINOUT

WIRE COLOUR	PPT-480
BROWN	+24V
GREEN	RS-485+
YELLOW	RS-485-
GREY	Analogue output signal
WHITE	0V
CLEAR	Shield

ORDERING INFORMATION

Part type PPT-480

Ordering Number 05.480.000 + Code **AA-BB-DD-JJ-KK**

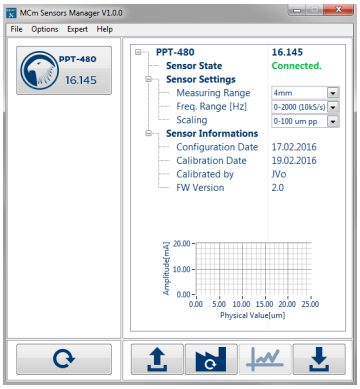
AA - Protection tube	**BB** - Measuring range	**DD** - Target material	**JJ** - Output scale	**KK** - Sampling rate
Y Armor	**2 0.2 to 2.2mm**	**1 VCL140 (1.7223)**	1 PkPk: 0..100µm	**1 8.2kS/s**
	4 0.2 to 4.2mm	2 C35E (1.1181)	2 PkPk: 0..200µm	2 820S/s
		3 CA6NM (1.4317)	3 PkPk: 0..500µm	
		99 on request	**4 PkPk: 0..1000µm**	
			5 Mean (Gap)	

Default factory code (bold) : 05.480.000 AA**Y**-BB**2**-DD**1**-JJ**4**-KK**1**

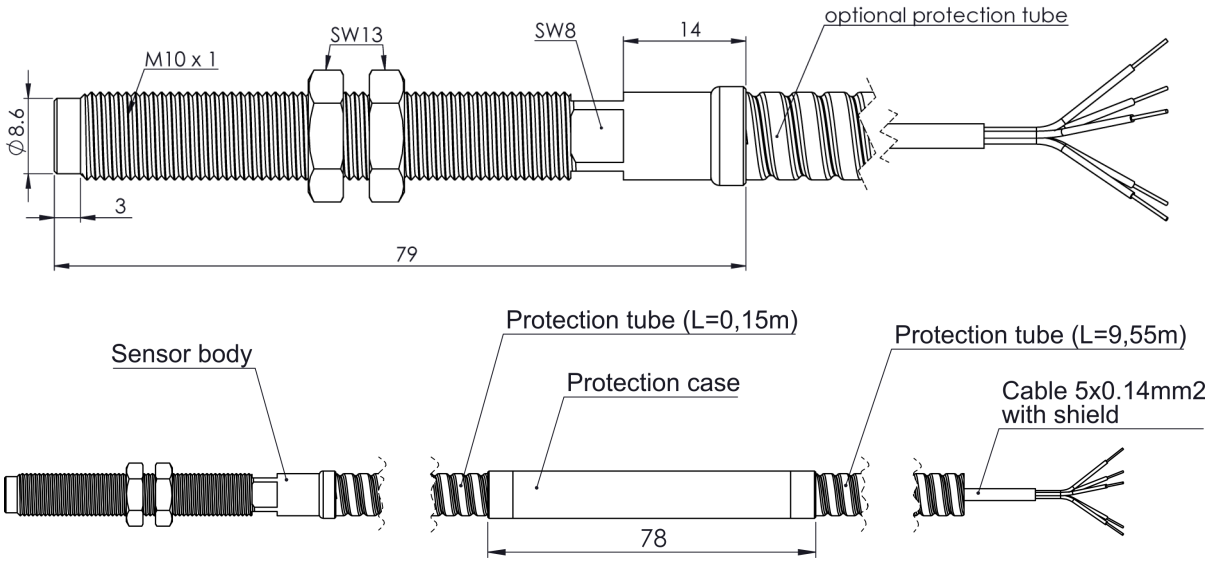
Part type PPT-990

Ordering Number 05.990.000

Description Calibration and configuration kit including USB adapter, cable and PPT-x80 Manager software



MECHANICAL DRAWING



MC-monitoring Quality certifications

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