

PPT-080 & PPT-110

FEATURES

- Designed for long life cycles and harsh environments
- Custom rugged cable jacket preventing breaking and tearing of the probe cable
- High resistance to corrosive environments
- Probes and extension cables equipped with standard protective rubber boot, covering connectors preventing oil and dirt penetration

Monitoring solution



Axial thrust position



Shaft & bearing vibration

Typical applications



Hydrogenerators

🔏 ያ Pumps, fan, cooling towers...

Gas & steam turbines



DESCRIPTION

The Proximity Probe Transducer (PPT) is used for non-contact measurements of shaft vibration and position. Each system consists of a probe, an extension cable and a driver. The PPT series proximity probe systems are designed to meet API 670 standard.

The voltage output is directly proportional to the measured distance between the metallic target and the sensor face.

Probe and extension cable :

Designed for long life cycles and suitable for harsh environments, probe and extension cables are equipped with armor and protective rubber boots, which cover the connectors and prevent oil and dirt penetration. Extension cable is compliant with API670 standard, allowing compatibility with other manufacturers' proximity probe systems.

Driver :

Used with related probe and extension cable. The circuit is isolated from ground. The total length of cable between the probe and the driver is either 5m or 9m.



GLOBAL SPECIFICATIONS

Transducer versionPPT-080PPT-110Linear range0.25mm to 2.25mm0.4mm to 4.40mmSensitivity7.87mV/µm3.94mV/µmTemperature sensitivity±0.3%/°C±0.4%/°C('30°C to 120°C)±0.3%/°C±0.4%/°CLinearity (deviation from straight line)to 3.5%/°CLinearity (deviation from straight line)±0.0254mm±0.06mmIncluding interchangeability errors±0.038mm±0.06mmincluding interchangeability errors±0.038mm±0.16mmFrequency response (±3dB)0 to 10kHz0 to 3kHzMinimum target sizeø15mmø33mmMaximum load (PPC-081 420 output)500QPower-23Vbc to -30Vbc / +24Vbc for PC-081Current consumption (static)<12mAENVIRONMENTALstorageSensor & cable-40° to +120°CSensor & cable-40° to +120°COperation-40° to +120°CStorage-40° to +120°CStorage-40° to +120°CStorage-40° to +120°CArtexNorageMinimut-15° to +80°CStorage-40° to +100°CHumidity100% non-condensingATEXNot son-condensingATEXI11 G, EEx ia II C T4CSAIntrinsically safeIntrinsically safeCass I, Div. 1, Gr. A, B, C and D, T4	OPERATION				
Sensitivity7.87mV/µm3.94mV/µmTemperature sensitivity (-30°C to 120°C)±0.3%/°C (middle of the linear range)±0.4%/°C (middle of the linear range)Linearity (deviation from straight line)±0.0254mm±0.06mmincluding interchangeability errors±0.038mm±0.06mmincluding interchangeability errors±0.038mm±0.16mmFrequency response (±3dB)0 to 10kHz0 to 3kHzMinimum target sizeø15mmø33mmMaximum load (PPC-081 420 output)500QPower23Vpc to -30Vpc / +24Vpc for PPC-081Current consumption (static)< 12mA	Transducer version	PPT-080	PPT-110		
Temperature sensitivity (-30°C to 120°C)±0.3%/°C (middle of the linear range)±0.4%/°C (middle of the linear range)Linearity (deviation from straight line) if calibrated as system including interchangeability errors±0.0254mm ±0.038mm±0.06mm ±0.06mmFrequency response (±3dB)0 to 10kHz0 to 3kHzMinimum target size werø15mm \$000ø33mmMaximum load (PPC-081 420 output)5000Power-23V _{DC} to -30V _{DC} / +24V _{DC} for PPC-081Current consumption (static)< 12mA	Linear range	0.25mm to 2.25mm	n to 2.25mm 0.4mm to 4.40mm		
(-30°C to 120°C) (middle of the linear range) (middle of the linear range) Linearity (deviation from straight line) ±0.0254mm ±0.06mm including interchangeability errors ±0.038mm ±0.16mm Frequency response (±3dB) 0 to 10kHz 0 to 3kHz Minimum target size ø15mm ø33mm Maximum load (PPC-081 420 output) 500Ω Power	Sensitivity	7.87mV/µm	3.94mV/µm		
if calibrated as system ±0.0254mm ±0.06mm including interchangeability errors ±0.038mm ±0.16mm Frequency response (±3dB) 0 to 10kHz 0 to 3kHz Minimum target size ø15mm ø33mm Maximum load (PPC-081 420 output) 500Ω Power Supply -23V _{DC} to -30V _{DC} / +24V _{DC} for PPC-081 Current consumption (static) <12mA ENVIRONMENTAL Temperature range Sensor & cable Operation -40° to +120°C Storage -40° to +120°C Driver Operation -15° to +80°C Driver Operation -15° to +80°C Storage -40° to +100°C Humidity 100% non-condensing ATEX II 1 G, EEx ia IIC T4 CSA					
including interchangeability errors ±0.038mm ±0.16mm Frequency response (±3dB) 0 to 10kHz 0 to 3kHz Minimum target size 015mm 033mm Maximum load (PPC-081 420 output) 500Ω Power Supply -23V _{DC} to -30V _{DC} / ±24V _{DC} for PPC-081 Current consumption (static) < 12mA ENVIRONMENTAL Temperature range Sensor & cable Operation -40° to ±120°C Storage -40° to ±120°C Driver Operation -15° to ±80°C Driver Operation -15° to ±80°C Storage -40° to ±100°C Humidity 100% non-condensing ATEX II 1 G, EEX ia IIC T4 CSA	Linearity (deviation from straight line)				
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Minimum target size Ø15mm Ø33mm Maximum load (PPC-081 420 output) 500Ω Power Supply -23V _{DC} to -30V _{DC} / +24V _{DC} for PPC-081 Current consumption (static) < 12mA	including interchangeability errors	±0.038mm	±0.16mm		
Maximum load (PPC-081 420 output) 500Ω Power	Frequency response (±3dB)	0 to 10kHz	0 to 3kHz		
Power -23V _{DC} to -30V _{DC} / +24V _{DC} for PPC-081 Current consumption (static) < 12mA	Minimum target size	ø15mm	ø33mm		
Supply -23V _{DC} to -30V _{DC} / +24V _{DC} for PPC-081 Current consumption (static) < 12mA	Maximum load (PPC-081 420 output)	500Ω			
Current consumption (static) < 12mA	Power				
ENVIRONMENTAL Temperature range Sensor & cable Operation -40° to +120°C Storage -40° to +120°C Driver Operation -15° to +80°C Driver Operation -15° to +80°C Storage -40° to +100°C Humidity 100% non-condensing ATEX II 1 G, EEx ia IIC T4 CSA	Supply	-23V _{DC} to -30V _{DC} / +24V _{DC} for PPC-081			
Temperature range Sensor & cable Operation -40° to +120°C Storage -40° to +120°C Driver -40° to +120°C Driver -40° to +120°C Driver -40° to +120°C Borrage -40° to +120°C Driver -40° to +120°C Mumidity -15° to +80°C ATEX 100% non-condensing ATEX II 1 G, EEx ia IIC T4 CSA	Current consumption (static)	< 12mA			
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Storage -40° to +120°C Driver Operation Storage -15° to +80°C Storage -40° to +100°C Humidity 100% non-condensing ATEX II 1 G, EEx ia IIC T4 CSA	Sensor & cable				
Storage-40° to +120°CDriverOperation-15° to +80°CStorage-40° to +100°CHumidity100% non-condensingATEXII 1 G, EEx ia IIC T4CSA	Operation	-40° to +120°C			
Driver Operation -15° to +80°C Storage -40° to +100°C Humidity 100% non-condensing ATEX II 1 G, EEx ia IIC T4 CSA		-40° to +120°C			
Storage-40° to +100°CHumidity100% non-condensingATEXII 1 G, EEx ia IIC T4CSA	Driver				
Humidity100% non-condensingATEXII 1 G, EEx ia IIC T4CSA	Operation	-15° to +80°C			
Humidity100% non-condensingATEXII 1 G, EEx ia IIC T4CSA	Storage	-40° to +100°C			
ATEX II 1 G, EEx ia IIC T4 CSA	-	100% non-condensing			
CSA					
	CSA	-, -			
		Class I, Div. 1, Gr. A, B, C and	D,T4		
Class I, Zone 0, Ex ia IIC T4		Class I, Zone 0, Ex ia IIC T4			
Non-incendive Class 1, Div. 2, Gr. A, B, C and D, T4	Non-incendive	Class 1, Div. 2, Gr. A, B, C and D, T4			
PCEC Ex ia IIC T4	PCEC	Ex ia IIC T4			
PHYSICAL	PHYSICAL				
Sensor dimensions [mm]					
PPT-080 70 L x ø8 terminated by 1m cable ø8		70 L x ø8 terminated by 1m cable ø8			
PPT-110 70 L x ø11 terminated by 1m cable ø8		-			
PPT-110 int 100 L x ø11 with integral cable (5m or 9m length)	PPT-110 int	-			
Driver dimensions [mm] 94 x 34 x 75 LxWxH	Driver dimensions [mm]				
Extension cable dimensions 8m x ø8mm or 4m x ø8mm (depending on req. length version)	Extension cable dimensions	8m x ø8mm or 4m x ø8mm (depending on req. length version)			



ORDERING INFORMATION

Part type Ordering code	PPT-080 05.080.000	(Proximity probe transducer 8mm)		
Part type Ordering code	PPT-110 05.110.000	(Proximity probe transducer 11mm)		
Part type Ordering code	PPT-110 int 05.110.000-int	(Proximity probe transducer 11mm, with integ	ral cable)	
Part type Ordering code	PPC-081 - Condition PPC-081-AA-EE-GC	ner with 420mA output G-SS		
Information	AA: Full scale 00: 0-200μmpp 01: 0-500μmpp 02: 0-1000μmpp	EE: Probe and cable (not included) 00: PPS-080, 8mm probe / 5m cable 01: PPS-080, 8mm probe / 9m cable 08: PPS-110, 11mm probe / 5m cable 09: PPS-110, 11mm probe / 9m cable	GG = 00 DIN rail mount	SS = 00 CE Mark approval

All models are available with 9m or 5m total cable length between sensor and driver

MECHANICAL DRAWING

