D8081

Precision Proximity Transducer

Description

The D8081 + Signal Conditioner system provides an output voltage that is proportional to the distance between the probe tip and the observed conductive surface. The sensor can measure both Static (position) and Dynamic (vibration) distance values. The device primary applications are vibration and position measurements on fluid-film bearing machines, as well as phase reference and speed measurement. This eddy current proximity transducer system delivers the most advanced performance including outstanding linear range, accuracy, and temperature stability. All D8081 transducer systems provide this level of performance and support complete interchangeability of probes, extension cables, and proximitor, eliminating the need to match or bench calibrate individual components. The transducer performs good long-term reliability, high sensitivity, anti-interference, non-contact measurement, fast response and anti-corrosive to oil/water, thus be often applied to monitor the shaft displacement, shaft vibration and rotating speed of industrial rotating machinery in real time for a long term, so as to analyze the working condition and fault causes of the equipment, effectively protect the equipment and carry out predictive maintenance.

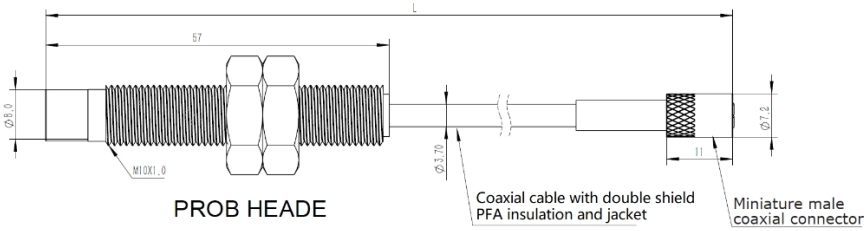
Features

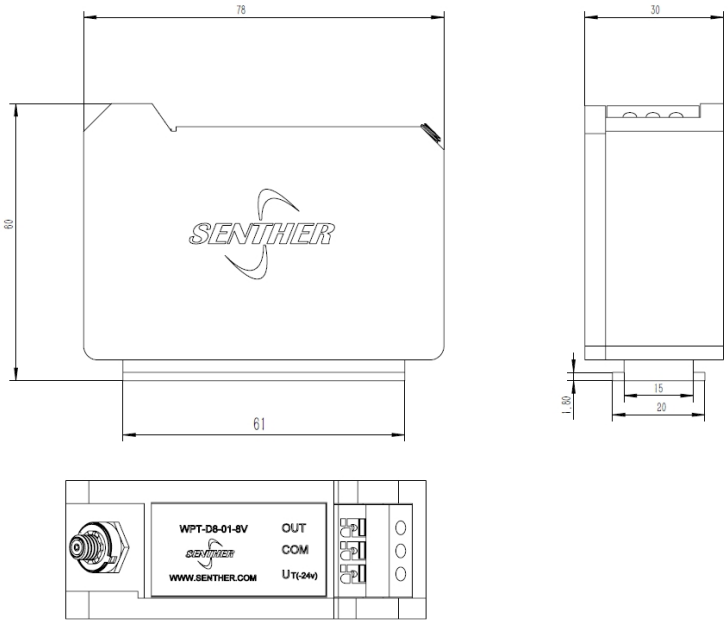
- High Resolution output
- Outstanding linearity
- Vibration resistant
- Compact size
- Light weight
- High temperature operation
- Reliability package
- Anti-corrosion design

Application

- Rotating machinery
- Turbine machine
- Blower and compressor
- Power generation
- Gearbox monitoring
- Shaft displacement
- Lubrication film thickness
- Expansion differential test
- Metal part inspection

Signal conditioner





Connect view

Specification

Typical at 18 ˚C ~27 ˚C (+64 ˚F to +80 ˚F), -24 Vdc power supply, a 10 kΩ load, a 40CrMo steel target.

Performance Spec.	Standard	Units
Part Number	D8081	
Dynamic Range	2	mm
Sensitivity ±5%	8	V/mm
Freq. Resp. 10%	0-1000	Hz
Freq. Resp. -3dB	0-10000	Hz
Phase Resp －10°	0-1000	Hz
Phase Resp －100°	0-10000	Hz
Temp. Resp., -55 to +150°C	≤0.05%/℃	
Non-Linearity	1	%FSO
Weight	42 Exclude cable	Grams

Application Spec.	Standard	Units
Supply Voltage	-24	Vdc
Supply Current	1Max	mA
Output Impedance	50	Ω
Case Insulation (@100Vdc)	>100	MΩ
Operating Temperature	-55 to +150°C	°C
Pressure Prob	12 Max	Mpa
Torque	20	N•m
Prob Case Material	316 Stainless Steel	
Cable material	PFA	
Probe resistance DC	<5.5	Ω
Conductor resistance DC	0.60±0.02	Ω/m
Cable capacitance	50±3	pF/m
Connector	Miniature male coaxial connector	
Proximity Transducer	IP67	

Accessories

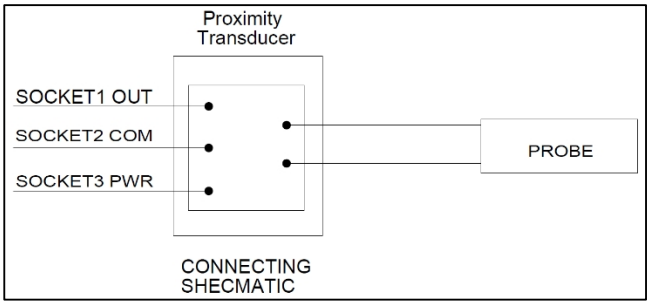
Calibration certificate included.

Part Number	Description	Availability
PM10129	M10 Mounting nut	2pcs Included
WPT-D8-01-8V	Proximity signal conditioner	Optional
IN-91	Portable vibration analyzer	Optional
IN-SDG	8 channels data acquisition system	Optional

Measurement configuration

Sensor probe	Signal conditioner	Data acquisition	Computer
			

System configuration:



Ordering information

D8081	A	-	5	-	K1	-	A
Model	Integrated proximity transducer	-	Cable length	-	Cable armour	-	Signal conditioner
D8081	A= Integrated proximity transducer Blank= w/o	-	1=1 meter 5=5 meters Blank=Connector version	-	K1= Plastic pipe armour K2= Metal pile armour Blank= w/o	-	A= Accessories with proximity transducer Blank= w/o