ISen-H230 Eddy Current Displacement Sensor

Datasheet

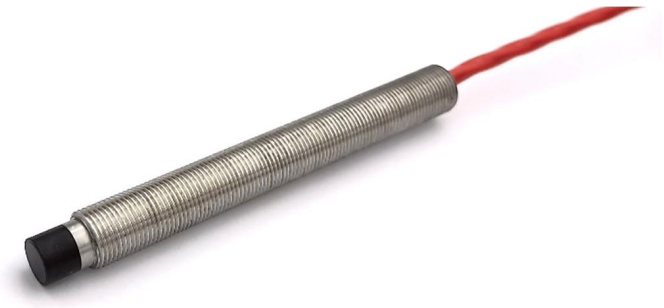
June 25, 2025
CN Rev.v1.0.3

Product Overview

The ISen-H230 eddy current displacement sensor (with signal conditioning circuit) can directly output a voltage signal proportional to the distance between the probe and the surface of the conductive target. This sensing solution enables simultaneous measurement of static displacement (position) and dynamic displacement (vibration). The device is particularly suitable for vibration and position measurement of sliding-bearing machinery, as well as phase reference and speed measurement. The eddy current displacement sensor provides state-of-the-art performance, including an excellent linear range, accuracy, and temperature stability. The sensor features good parameter consistency and supports interchangeability of probes, extension cables, and the preprocessor (if applicable) without requiring special matching or calibration of individual components. The displacement sensor features high long-term reliability, high sensitivity, strong anti-interference capability, non-contact measurement, fast response speed, and is not affected by media such as oil or water.

Main Features

- High-resolution signal
- Excellent linear range
- Vibration-resistant performa
- High operating temperature
- Reliable encapsulation
- Corrosion-resistant design



Technical Parameters

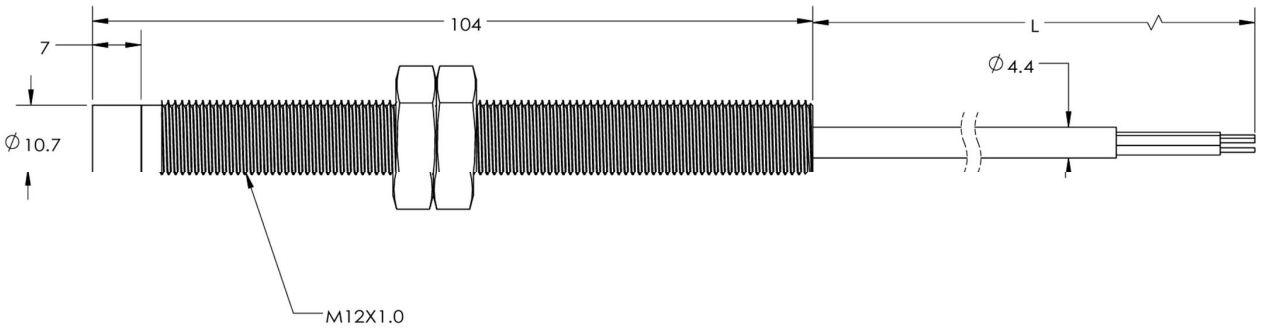
	Specification Range	Unit
Dynamic measurement range	4(0.5~4.5)	mm
Output voltage range	0.5-9.5	V
Resolution	1	um
Accuracy	1	um
Sensitivity ±5%	2.25	V/mm
Frequency response 10%	0-1000	Hz
Frequency response -3dB	0-10000	Hz
Phase response (−10°)	0-1000	Hz
Phase response (−100°)	0-10000	Hz
Temperature response (-55 to +150 °C)	≤0.05%/°C	/
Nonlinearity	1	%FSO
Weight	90 (excluding cable)	g
Supply voltage	24	Vdc
Supply current	30Max	mA
Output resistance	50	Ω
Housing insulation (@100 Vdc)	>100	MΩ
Operating temperature (probe)	-55 to +120℃	℃
Probe pressure resistance	12 Max	Mpa
Installation torque	20	N•m
Probe housing material	Stainless steel 316L	/

Cable material	PFA	/
Probe resistance	<5.5	Ω
Cable resistance	0.6±0.02	/
Probe protection rating	IP67	/

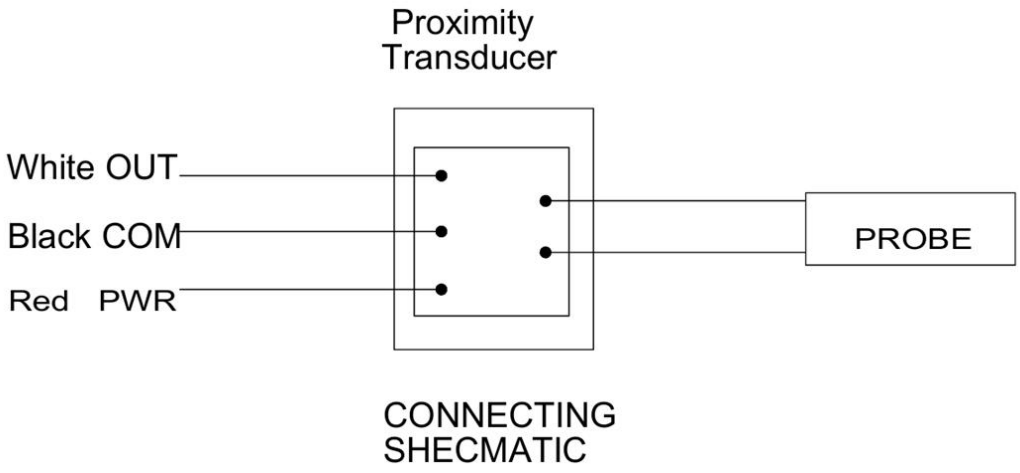
Unless otherwise specified, the above typical parameters are measured under the following conditions: ambient temperature 18°C–27°C (+64°F–+80°F), −24 Vdc power supply, 10 kΩ load, and a measurement target made of 40CrMo steel.

Product Dimension Diagram

Dimensional drawing:



Measurement system functional diagram:



ISen-H231 Eddy Current Displacement Sensor

Datasheet

June 25, 2025
CN Rev.v1.0.2

Product Overview

The ISen-H231 eddy current displacement sensor (with built-in signal conditioning circuit) can directly output a voltage signal proportional to the distance between the probe and the surface of the conductive target. This sensing solution enables simultaneous measurement of static displacement (position) and dynamic displacement (vibration). The device is particularly suitable for vibration and position measurement of sliding-bearing machinery, as well as phase reference and speed measurement.

The eddy current displacement sensor system provides state-of-the-art performance, including an excellent linear range, accuracy, and temperature stability. It supports interchangeability of probes and extension cables without the need for special matching or calibration of individual components. The displacement sensor features high long-term reliability, high sensitivity, strong anti-interference capability, non-contact measurement, fast response speed, and is not affected by media such as oil or water.

Main Features

- High-resolution signal
- Excellent linear range
- Vibration-resistant performance
- Wide test range
- Reliable encapsulation
- Corrosion-resistant design

Technical Parameters

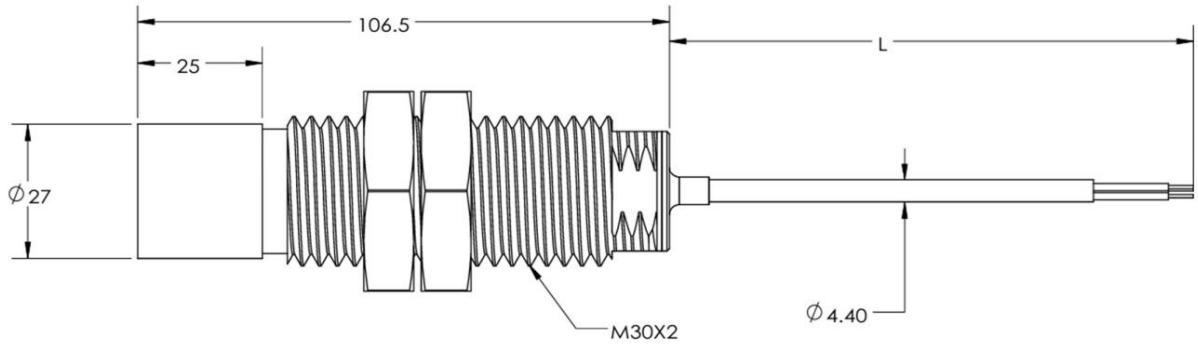
	Specification Range	Unit
Dynamic measurement range	12(1.5~13.5)	mm
Output voltage range	0.5-9.5	V
Resolution	1	um
Accuracy	1	um
Sensitivity ±5%	0.75	V/mm
Frequency response 10%	0-1000	Hz
Frequency response -3dB	0-10000	Hz
Phase response (−10°)	0-1000	Hz
Phase response (−100°)	0-10000	Hz
Temperature response (-55 to +120 ℃)	≤0.05%/℃	/
Nonlinearity	1	%FSO
Weight	300 (excluding cable)	g
Supply voltage	24	Vdc
Supply current	30Max	mA
Output resistance	< 100	Ω
Housing insulation (@100 Vdc)	>100	MΩ
Operating temperature (probe)	-55 to +120℃	℃
Probe pressure resistance	12 Max	Mpa
Installation torque	20	N•m

Probe housing material	304 stainless steel	/
Cable material	PVC	/
Probe resistance	<5.5	Ω
Cable resistance	0.6±0.02	Ω/m
Probe protection rating	IP67	/

Unless otherwise specified, the above typical parameters are measured under the following conditions: ambient temperature 18°C–27°C (+64°F–+80°F), −24 Vdc power supply, 10 kΩ load, and a measurement target made of 40CrMo steel.

Product Dimension Diagram

Dimensional drawing:



Measurement system functional diagram: