

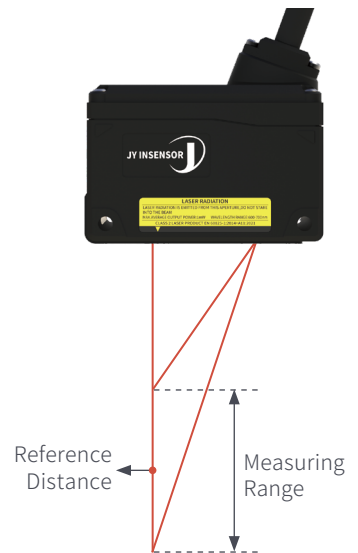


Laser Displacement Sensor

INTRODUCTION TO INTELLIGENT SENSOR

Product Overview

The JPN/JPS series targets high-precision, medium-to-high frequency applications. Reference distances from 20–150 mm, measurement range 15–250 mm, with sub-micron to micron accuracy. Compact, IP67-rated, and available standalone or with an amplifier for expanded functionality, perfectly suited for industrial applications with demanding requirements on measurement range and stability.



Technical Advantage



High Precision

Repeatability up to 0.5 μm
linearity $< \pm 0.08\%$ MR



High Frequency Response

Up to 5 kHz
measurement frequency



Compact Design

Compact size, enabling easy
installation in confined spaces



IP67 Protection

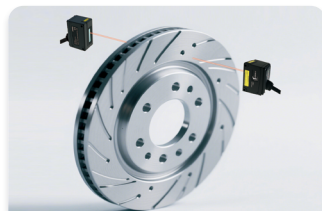
Robust and durable for
harsh environments

Application Scenarios



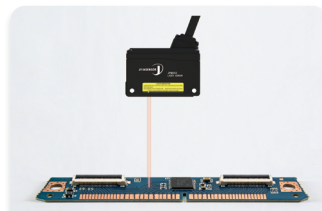
Height Measurement

Robotic arm positioning control
Dispensing machine nozzle
height control



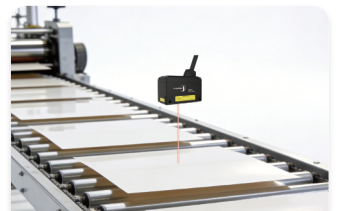
Thickness Measurement

Dual-sensor Disc Thickness
Measurement, Metal pressing
thickness monitoring



Warpage & Flatness

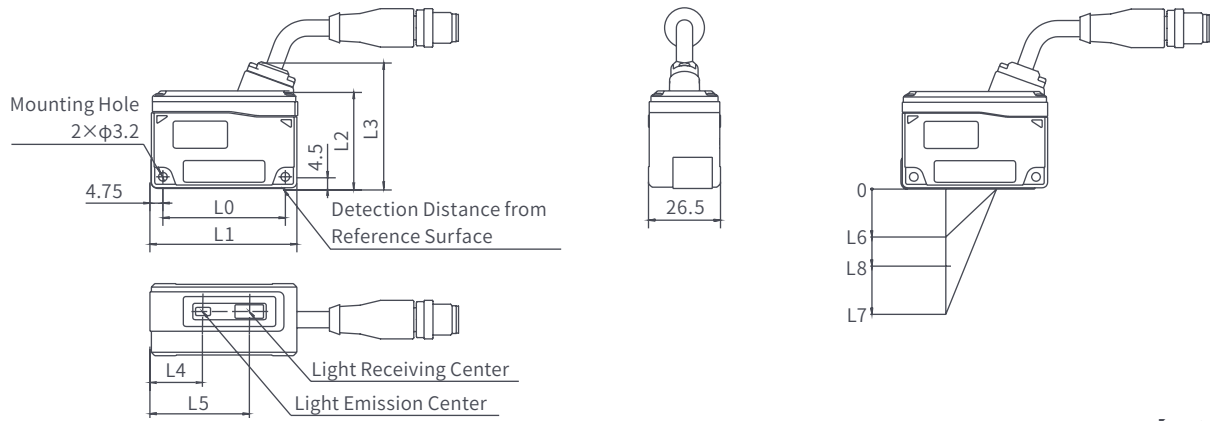
PCB warpage inspection
Crankshaft end-face runout
inspection



Seam Inspection & Counting

Thin material counting on
conveyor belts
Battery heat sink inspection

Dimensions Diagram



【Unit: mm】

Model	L0	L1	L2	L3	L4	L5	L6	L7	L8
JPS010	50	59	40	50	18.8	33.3	15	25	20
JPS026	50	59	40	50	20.8	36	27	53	40
JPN050	45	54	36	46.3	19.3	35.3	35	85	60
JPN100	45	54	36	46.3	19.8	35.3	40	140	90
JPN150	45	54	36	46.3	20.3	35.7	45	195	120
JPN200	45	54	36	46.3	18.8	37.9	50	250	150

Performance Specifications

Model	JPS010	JPS026	JPN050	JPN100	JPN150	JPN200
Reference Distance	20 mm	40 mm	60 mm	90 mm	120 mm	150 mm
Measuring Range	15 - 25 mm	27 - 53 mm	35 - 85 mm	40 - 140 mm	45 - 195 mm	50 - 250 mm
Repeatability*1	0.5 μm	1 μm	2 μm	4 μm	6 μm	8 μm
Linearity*2*3	< ±0.08 % MR					
Voltage Range	11 - 30 VDC					
External Input	Data mode, laser mode, zero reset, etc.					
Analog Output	Current: 4–20 mA, Load impedance: 300 Ω or less					
Switch Output	Open collector output (NPN/PNP switchable)					
Communication Interface	RS422					
Power Consumption	< 2 W (24 V)					
Measuring Rate	MAX: 5 kHz					
Laser*4	Red laser (658 nm) Laser class: Class2 EN:60825-1:2014+A11:2021					
Protection Class	IP67					
Temperature Range	Storage	-20 ~ +70 ° C (No condensation)				
	Work	0 ~ +50 ° C (No condensation)				
Shock Resistance	15 g / 6 ms, 3 axes, 1000 times each in X, Y, and Z axes					
Vibration Resistance	20g/20...500 Hz, 10 cycles each in 2 directions along X, Y, and Z axes					
Weight	approx. 198 g			approx. 171 g		
Display	LED indicator × 3					
Material	Housing: Zinc alloy					
Linking Method	300 mm cable with M12 Connector					

*1 This is the data of a standard diffuse object (white diffuse object) measured at a reference distance, a sampling period of 10 ms, and an average of 128 times.

*2 Is the data for measuring standard diffuse objects (white diffuse objects).

*3 FS for each model is as follows: JPS010: 10 mm, JPS026: 26 mm, JPN050: 50 mm, JPN100: 100 mm, JPN150: 150 mm, JPN200: 200 mm.

*4 The FDA's (CDRH) laser classification is based on IEC60825 - 1 and is implemented in accordance with the requirements of Laser Notice No.50.