

Sensor Basics

Detection based on "light"

Detection based on
"eddy current"

Detection based on "contact"

Detection based on "ultrasonic"

Detection based on "images"

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Detection based on "light"

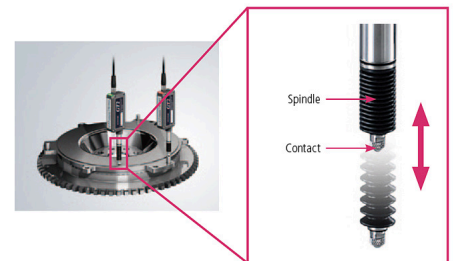
Detection based on "eddy
current"Detection based on
"contact"Detection based on
"ultrasonic"Detection based on
"images"Keep the copy of this site by
yourself.Click here to download the
PDF

Detection based on "contact"

What is a Contact Positioning Sensor?

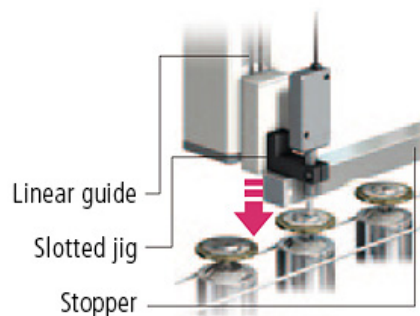
Outline

As the name indicates, this is a **sensor measuring the position of a target by directly contacting it**. When the height of the spindle changes as shown in the figure on the right, the sensor internally calculates the amount of displacement. Contact Positioning Sensors are mainly used for detecting the height, thickness, or warpage of the target.



Air push type measuring by extending a spindle

Standard model



GT2 Air push type

Since the sensor can be fixed at the same position, no complicated jig is required. There is also no errors due to the influence of a jig on accuracy.



Since measurement is possible with the sensor head being fixed, no mechanism is required to move the sensor head. This saves installation space and greatly reduces man-hours during installation.

Features

Provisur EX1038
IPR2024-00258
U.S. Patent No. 10,647,013

Sensor type comparison based on the detection method

Item	Inductive	Optical	Ultrasonic	Laser focus	Contact
Detectable target	Metal	Almost all materials	Almost all materials	Almost all materials	Solid
Measuring distance	Short	Normal	Long	Short	Short
Accuracy	High	High	Low	High	High
Response speed	Fast	Fast	Slow	Normal	Slow
Dust, water, oil, etc.	Unaffected	Normal	Normal	Normal	Unaffected
Measuring surface	Normal	Small	Large	Small	Small

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Detection based on “eddy current” Inductive displacement sensors What is an inductive displacement sensor?	Detection based on “contact” Contact Positioning Sensors Principle and types of Contact Positioning Sensors
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KEYENCE Product Catalogs:

Contact Positioning Sensor options:

Other related products



High-Accuracy Digital Contact Sensor
GT2 series

[Catalog Download](#)



Self-contained CMOS Laser Sensor
LR-Z series

[Catalog Download](#)



Self-Contained Full-Spectrum Sensor
LR-W Series

[Catalog Download](#)



Digital Fiber Optic Sensors
FS-N series (FS-neo)

[Catalog Download](#)



Vision Sensor
IV series

[Catalog Download](#)

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Photoelectric Sensors	Fiber Optic Sensors	Inductive Proximity Sensors	Contact Positioning Sensors	Vision sensors
Outline	Outline	Outline	Outline	Outline
Features	Features	Features	Principle and major types	Features
Classification	Classification	Classification		
Other variations	Key terms for selection			
Laser Sensors: “Received light” recognition type	Laser Sensors: “Position” recognition type	Inductive displacement sensors		
Outline	Outline	Outline		
Features	Features			