Triple Beam Adjustable Range Reflective Photoelectric Sensor Amplifier Built-in

MQ-W SERIES

Related Information
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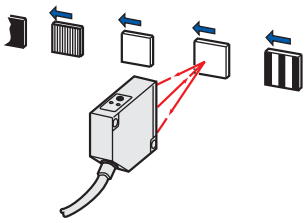
■ Glossary of terms..... P.1455~
■ General precautions ..... P.1458~

panasonic.net/id/pidsx/global

Sensing objects can be detected at a constant distance using the triple beam sensing method

Hardly affected by color

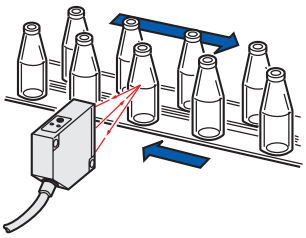
Adjustable range reflective type sensor can detect white or black object at the same distance. Therefore, the sensor can even detect individual objects that are mixed with black objects or objects of various colors that were hard for the diffuse reflective type sensor to detect.



(However, when the background is specular, it may be necessary to change the angle of the sensor.)

Hardly affected by background

Adjustable range reflective type sensor dose not detect objects beyond the set range.
For this reason, malfunction does not occur even if there are moving machines or people passing by in the background.



ENVIRONMENTAL RESISTANCE

Insusceptible to contamination on lens

Adjustable range reflective type sensor detects the distance by the angle, not by the light receiving intensity. Even if the lens surface is soiled by dust or any powdery material, there is little variation of sensing range.
In addition, the sensor stably detects approaching objects at a fixed distance because the distance is sensed by the angle of received light.

MOUNTING / SIZE

Compact and slim size

A small size of W32 × H32 × D12.6 mm W1.260 × H1.260 × D0.496 in has been achieved for the 40 mm 1.575 in / 200 mm 7.874 in sensing range type due to the built-in amplifier. In addition, you can mount the sensor both vertically and horizontally by diagonal mounting.

VARIETIES

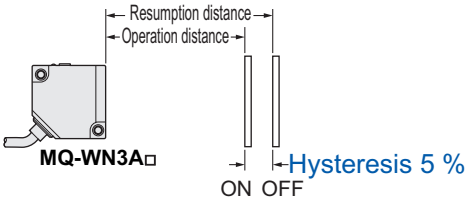
Visible light type and low hysteresis type are available

Visible light type

Beam axis alignment can be performed by looking at the spot light.

Low hysteresis type

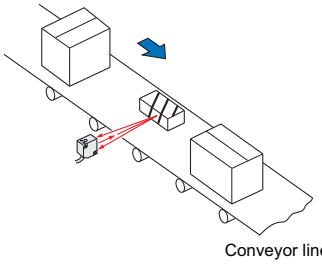
Hysteresis between the ON and OFF status has been reduced by half (compared to conventional model). Detection precision has been further improved!



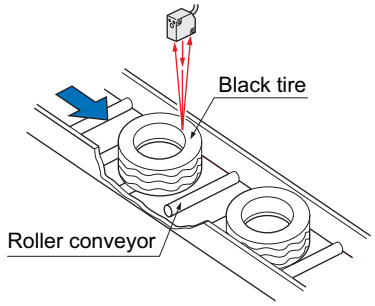
APPLICATIONS

Object presence detection

The sensor detects objects that are being conveyed with almost no influence from background objects.

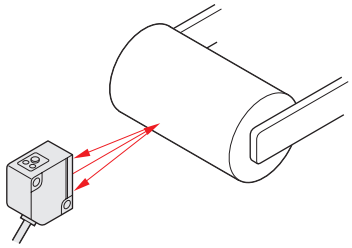


Black tire sensing



Detecting the remaining amount of roll sheets

Even if roll sheet colors are changed, the sensor can detect them at almost the same distance.



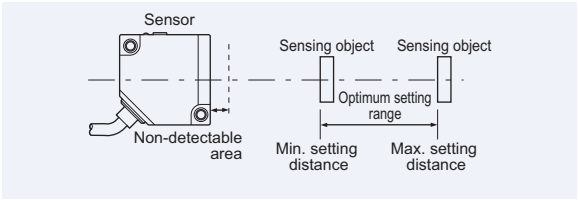
Glossary (Performance overview of the triple beam adjustable range reflective type)

Sensing distance (rated)

- For the triple beam adjustable range reflective type, the maximum distance to operate stably with a standard sensing object is shown.

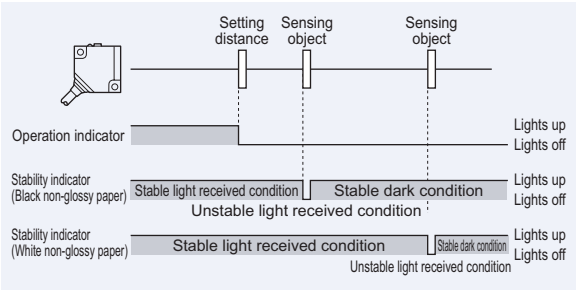
Setting range (optimum)

- For the triple beam adjustable range reflective type, the range between the maximum and minimum setting distance to operate stably with a standard sensing object is shown. When used beyond this range, there will be a non-detectable area near the sensor. There will also be insufficient light intensity on the far side of the sensor. This will result in unstable sensing. So when setting the sensor, use it within the optimum setting range.

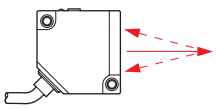


Stability Indicator

- The **MQ-W** series uses PSD for light receiving elements and since sensing is based on the position of the entering beam and not its intensity, the output corresponds to distance. The stability indicator displays the marginal degree of the incident light intensity. So take note that the distance by which the indicator lights on/off varies depending on the reflectance of the sensing object, as shown in the diagram below. Also, do not use the sensor when the stability indicator lights off (Unstable light received condition).



ORDER GUIDE

Type		Appearance	Sensing range	Model No.
Triple beam adjustable range reflective type	Standard (infrared)		40 mm 1.575 in	MQ-W3A-DC12-24V
			200 mm 7.874 in	MQ-W20A-DC12-24V
			700 mm 27.559 in	MQ-W70A-DC12-24V
	Visible light (red)		40 mm 1.575 in	MQ-W3AR-DC12-24V
			200 mm 7.874 in	MQ-W20AR-DC12-24V
	Low hysteresis (infrared)		40 mm 1.575 in	MQ-WN3A-DC12-24V
			200 mm 7.874 in	MQ-WN20A-DC12-24V
			700 mm 27.559 in	MQ-WN70A-DC12-24V