

Mini-rectangular Photoelectric Sensors OS10 Series

Сделано в Китае





Description:

Mini-rectangular photoelectric sensors OS10 series, with high performance and 25.4mm standard mounting hole distance, are available as BGS (background suppression) mode, Diffused mode, retro-reflective mode, and opposed mode. With optional red beam or laser beam source, they are suitable for printing and packaging, pharmaceutical, electronic, small equipment and other application fields.

Features:

- BGS function greatly improves the detection effect
- Optional red beam or laser beam
- Adjustable sensing range
- Protection class IP67
- Optional M8 connector, 2 m pre-wired cable

Red Beam:

Detection mode	Type	Distance	Light source	Frequency	Output	Switching mode	Connection	Wiring
BGS	OS10-AK65CN6	6...65mm	Red	1kHz	NPN	Light on/dark on	2m cable	Fig. 2
	OS10-AK65CP6	6...65mm	Red	1kHz	PNP	Light on/dark on	2m cable	Fig. 3
	OS10-AK65CN6Q8	6...65mm	Red	1kHz	NPN	Light on/dark on	M8 connector, 4-pin	Fig. 5
	OS10-AK65CP6Q8	6...65mm	Red	1kHz	PNP	Light on/dark on	M8 connector, 4-pin	Fig. 6
	OS10-AK150CN6	6...150mm	Red	1kHz	NPN	Light on/dark on	2m cable	Fig. 2
	OS10-AK150CP6	6...150mm	Red	1kHz	PNP	Light on/dark on	2m cable	Fig. 3
	OS10-AK150CN6Q8	6...150mm	Red	1kHz	NPN	Light on/dark on	M8 connector, 4-pin	Fig. 5
	OS10-AK150CP6Q8	6...150mm	Red	1kHz	PNP	Light on/dark on	M8 connector, 4-pin	Fig. 6
	OS10-AK350CN6	6...350mm	Red	1kHz	NPN	Light on/dark on	2m cable	Fig. 2
	OS10-AK350CP6	6...350mm	Red	1kHz	PNP	Light on/dark on	2m cable	Fig. 3
	OS10-AK350CN6Q8	6...350mm	Red	1kHz	NPN	Light on/dark on	M8 connector, 4-pin	Fig. 5
	OS10-AK350CP6Q8	6...350mm	Red	1kHz	PNP	Light on/dark on	M8 connector, 4-pin	Fig. 6

Laser Beam:

Detection mode	Type	Distance	Light source	Frequency	Output	Switching mode	Connection	Wiring
BGS	OS10-AKL150CN6	6...150mm	Laser	1KHz	NPN	Light on/dark on	2m cable	Fig. 2
	OS10-AKL150CP6	6...150mm	Laser	1KHz	PNP	Light on/dark on	2m cable	Fig. 3
	OS10-AKL150CN6Q8	6...150mm	Laser	1KHz	NPN	Light on/dark on	M8 connector, 4-pin	Fig. 5
	OS10-AKL150CP6Q8	6...150mm	Laser	1KHz	PNP	Light on/dark on	M8 connector, 4-pin	Fig. 6
	OS10-AKL350CN6	6...350mm	Laser	1KHz	NPN	Light on/dark on	2m cable	Fig. 2
	OS10-AKL350CP6	6...350mm	Laser	1KHz	PNP	Light on/dark on	2m cable	Fig. 3
	OS10-AKL350CN6Q8	6...350mm	Laser	1KHz	NPN	Light on/dark on	M8 connector, 4-pin	Fig. 5
	OS10-AKL350CP6Q8	6...350mm	Laser	1KHz	PNP	Light on/dark on	M8 connector, 4-pin	Fig. 6

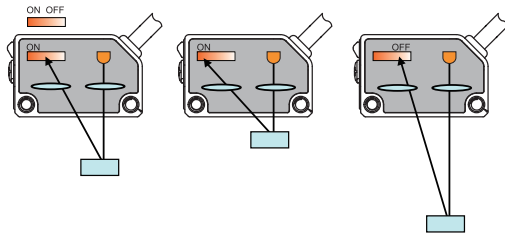
Technical Data:

Operating voltage	10...30VDC
Ripple voltage	±10% of U_B
Light source	Red (625nm) / class 1 laser
Output type	PNP / NPN
Switch mode	Light on: Setting connects U+ Dark on: Setting connects U-
No-load current	≤20mA
load current	≤100mA
Sensitivity	Potentiometer adjustment
LED	Power supply (green), switch (yellow)
Housing	Polycarbonate
Connection	M8 connector/2m cable
Ambient temperature	-25°C...+55°C
Storage temperature	-40°C...+70°C
Protection class	IP67

Product Features:

<p>Precise distance setting High resolution</p>	<p>Multi-turn potentiometer for accurate setting. Detect a workpiece with a thickness of up to 0.2 mm, such as a business card (the object to be tested is standard white).</p>
<p>BGS function</p>	<p>For workpieces of different colors and materials, the detection distance is basically the same. For a whiteboard with a reflectivity of 90% and a blackboard with a reflectivity of 6%, the distance attenuation is within 15%.</p> <div data-bbox="909 515 1292 817"> <p>Attenuation rate Y</p> <p>Distance (white matte paper 90%) X (mm)</p> </div>
<p>Small spot</p>	<p>The OS10-AKL150 series laser light source has a spot size of 1mm at 100mm position, which has the advantages of precise positioning and edge detection.</p>
<p>High brightness light source</p>	<p>High-brightness LED red light source for easy identification of detection positions</p> <div data-bbox="510 952 909 1321"> <p>Distance Y (mm)</p> <p>Beam size X (mm)</p> <p>OS10-AK150</p> </div> <div data-bbox="933 952 1332 1321"> <p>Distance Y (mm)</p> <p>Beam size X (mm)</p> <p>OS10-AK350</p> </div>
<p>BGS</p>	<div data-bbox="486 1355 885 1668"> <p>Distance (mm)</p> <p>Potentiometer angle (degree)</p> <p>OS10-AK150/AKL150</p> </div> <div data-bbox="901 1355 1300 1668"> <p>Distance (mm)</p> <p>Potentiometer angle (degree)</p> <p>OS10-AK350/AKL350</p> </div>
<p>Resolution</p>	<div data-bbox="494 1691 869 2004"> <p>resolution (mm)</p> <p>distance (mm)</p> <p>AK150</p> </div> <div data-bbox="885 1691 1284 2004"> <p>resolution (mm)</p> <p>distance (mm)</p> <p>AK350</p> </div>

BGS Background Suppression Function:



The sensor judges an present object when light is received at the receiver Red position.

Standard diffused mode photoelectric sensors detect the objects according to the value of the received light, which is dependent on object color, material, transparency and other factors. Therefore, even using the same type of diffused photoelectric sensor to detect different objects, the sensing ranges vary dramatically.

By using dual diode receiver, the BGS mode photoelectric sensors detect the objects according to the different position that reflected light falls on the receiver. As shown in left figure, when the sensor is relatively close to the object, the reflected light falls on receiver Red position, at this time, the output is turned ON.

The sensing range of the photoelectric sensors with BGS is basically the same for various objects.

Wiring:

Cable

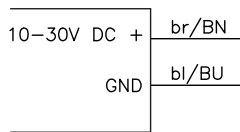


Fig.1

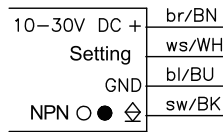


Fig.2

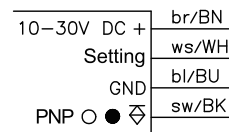


Fig.3

M8 connector

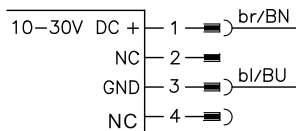


Fig.4

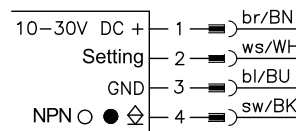


Fig.5

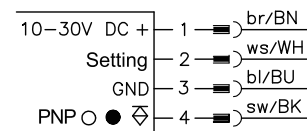
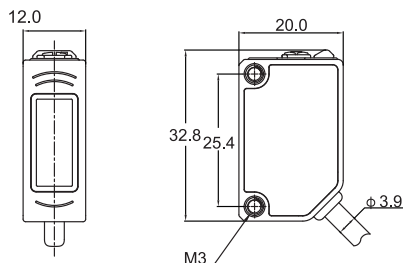


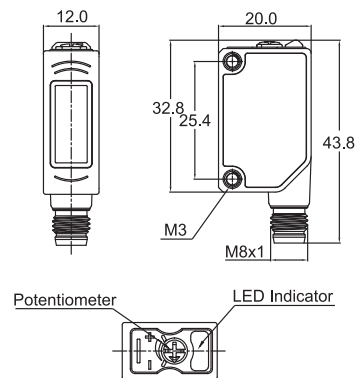
Fig.6

Dimensions:

Cable



M8 connector



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