Photoelectric Sensors—Rectangular-OS20

Description:

High-performance mini rectangular photoelectric sensor can provide BGS (dynamic and static state, 1M BGS) detection, laser coaxial polarized retro-reflective detection and laser non-coaxial polarized retro-reflective detection, transparent object detection and PCB detection. It is suitable for logistics, Textile, glass machinery, food packaging and other applications.

Features:

- It can provide stable and reliable detection of the motion state of objects
- Distance of 1M available for BGS
- Coaxial has no blind-zone, precise positioning function
- Red or laser are optional

Type:

Detection mode	Type	Distance	Light source	Frequency	Output	Switching mode	Connection	Wiring
Dynamic and static state	OS20-SDK40CN6	40mm	Red	800Hz	NPN	Light on/dark on	2m cable	Fig.1
	OS20-SDK40CP6		Red	800Hz	PNP	Light on/dark on	2m cable	Fig.3
	OS20-SDK40CN6Q8		Red	800Hz	NPN	Light on/dark on	M8 4-pin connector	Fig.2
	OS20-SDK40CP6Q8		Red	800Hz	PNP	Light on/dark on	M8 4-pin connector	Fig.4
BGS PCB detection line array light source	OS20-AK100CN6/L	100mm	Red	800Hz	NPN	Light on/dark on	2m cable	Fig.1
	OS20-AK100CP6/L		Red	800Hz	PNP	Light on/dark on	2m cable	Fig.3
	OS20-AK100CN6Q8/L		Red	800Hz	NPN	Light on/dark on	M8 4-pin connector	Fig.2
	OS20-AK100CP6Q8/L		Red	800Hz	PNP	Light on/dark on	M8 4-pin connector	Fig.4
BGS	OS20-AK300CN6	6...300mm	Red	800Hz	NPN	Light on/dark on	2m cable	Fig.1
	OS20-AK300CP6		Red	800Hz	PNP	Light on/dark on	2m cable	Fig.3
	OS20-AK300CN6Q8		Red	800Hz	NPN	Light on/dark on	M8 4-pin connector	Fig.2
	OS20-AK300CP6Q8		Red	800Hz	PNP	Light on/dark on	M8 4-pin connector	Fig.4
Energetic	OS20-AK1000CN6	20...1000mm	Red	30Hz	NPN	Light on/dark on	2m cable	Fig.1
	OS20-AK1000CP6		Red	30Hz	PNP	Light on/dark on	2m cable	Fig.3
	OS20-AK1000CN6Q8		Red	30Hz	NPN	Light on/dark on	M8 4-pin connector	Fig.2
	OS20-AK1000CP6Q8		Red	30Hz	PNP	Light on/dark on	M8 4-pin connector	Fig.4
Retro-reflective transparent object detection	OS20-TRCN6	2.5m	Red	50Hz	NPN	Light on/dark on	2m cable	Fig.1
	OS20-TRCP6		Red	50Hz	PNP	Light on/dark on	2m cable	Fig.3
	OS20-TRCN6Q8		Red	50Hz	NPN	Light on/dark on	M8 4-pin connector	Fig.2
	OS20-TRCP6Q8		Red	50Hz	PNP	Light on/dark on	M8 4-pin connector	Fig.4
Non-coaxial polarized retro-reflective detection	OS20-RPLCN6	5m	Laser	800Hz	NPN	Light on/dark on	2m cable	Fig.1
	OS20-RPLCP6		Laser	800Hz	PNP	Light on/dark on	2m cable	Fig.3
	OS20-RPLCN6Q8		Laser	800Hz	NPN	Light on/dark on	M8 4-pin connector	Fig.2
	OS20-RPLCP6Q8		Laser	800Hz	PNP	Light on/dark on	M8 4-pin connector	Fig.4
Coaxial polarized retro-reflective detection	OS20-TRPLCN6	5m	Laser	800Hz	NPN	Light on/dark on	2m cable	Fig.1
	OS20-TRPLCP6		Laser	800Hz	PNP	Light on/dark on	2m cable	Fig.3
	OS20-TRPLCN6Q8		Laser	800Hz	NPN	Light on/dark on	M8 4-pin connector	Fig.2
	OS20-TRPLCP6Q8		Laser	800Hz	PNP	Light on/dark on	M8 4-pin connector	Fig.4

*/I Infrared beam, eg. OS20-AK100CN6/L/I

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Technical Data:

Operating voltage	10...30VDC
Ripple voltage	≤10%
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	Teach button or potentiometer adjustment
Output indicator	Red LED
Steady state indicator	Green LED
Housing	PC+PBT
Connection	M8 connector/2m cable
Ambient temperature	-25°C...+55°C
Storage temperature	-40°C...+70°C
Voltage withstanding	1000V/AC/ 50/60Hz 60s
Insulation impedence	≥50MΩ（500VDC)
Shock resistance	Complex amplitude 1.5mm 10... 50Hz (2hr X, Y,Z respectively)
Impact resistance	500m/S² (50G) 3 times X,Y,Z respectively
Protection class	IP67

Wiring:

Pre-wired cable

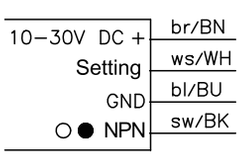


Fig.1

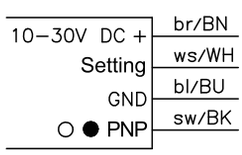


Fig.2

M8 connector

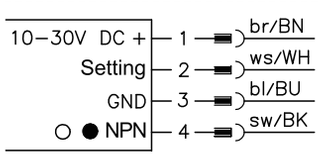


Fig.3

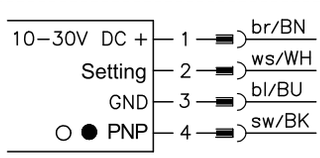
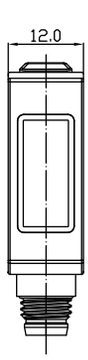
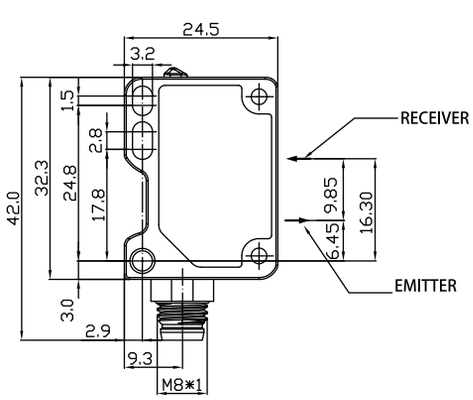
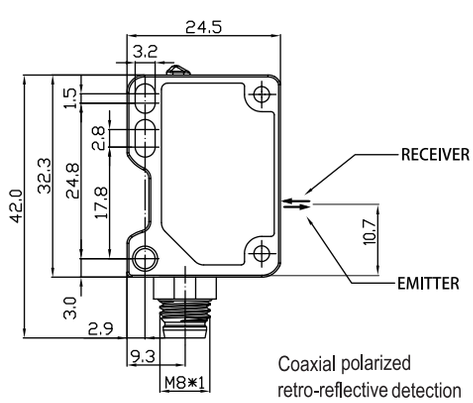


Fig.4

Dimensions:

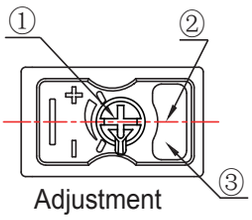






Coaxial polarized
retro-reflective detection

Adjustment:



Adjustment

①	Potentiometer	
②	output indicator	red
③	stable indicator	green

Note: When the sensitivity is minimum, there is no response to the reflector or highlighted objects.

Note: The maximum potentiometer value is not equal to the the maximum distance of 5m.

Step1：Place the reflector to the demanded position（≤5m），slowly increase the sensitivity from the minimum,till the red and green LEDs are both on, and then setting is completed.

Step2：When the sensitivity is maximum, if the sensor is triggered by the highlight object, the sensitivity needs to be reduced till the red and green LEDs just turns on.

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