

# Photoelectric Sensors—Rectangular-OS10S



## Description:

Mini-rectangular photoelectric sensors OS10S series, with high performance and 25.4mm standard mounting hole distance, Product series include 10m opposed, 3m polarized, 350mm and 1m/4m BGS. With optional red beam. They are suitable for logistics transportation, new energy and other application fields.

## Features:

- 350mm BGS LO or DO adjustable
- 1m/4m BGS adjustable with teach button
- IP67
- Optional M8 connector, 2 m pre-wired cable

## Type:

Detection mode	Type	Distance	Light source	Frequency	Output	Switching mode	Connection	Wiring
Opposed	OS10S-S6	10m	Red	---	---	---	2m cable	Fig.1
	OS10S-ECN6	10m	---	800Hz	NPN	Light on/dark on	2m cable	Fig.2
	OS10S-ECP6	10m	---	800Hz	PNP	Light on/dark on	2m cable	Fig.3
	OS10S-S6Q8	10m	Red	---	---	---	M8 connector, 4-pin	Fig.8-1
	OS10S-ECN6Q8	10m	---	800Hz	NPN	Light on/dark on	M8 connector, 4-pin	Fig.9-1
	OS10S-ECP6Q8	10m	---	800Hz	PNP	Light on/dark on	M8 connector, 4-pin	Fig.10-1
Polarized retroreflective	OS10S-RPCN6	3m	Red	800Hz	NPN	Light on/dark on	2m cable	Fig.2
	OS10S-RPCP6	3m	Red	800Hz	PNP	Light on/dark on	2m cable	Fig.3
	OS10S-RPCN6Q8	3m	Red	800Hz	NPN	Light on/dark on	M8 connector, 4-pin	Fig.9-1
	OS10S-RPCP6Q8	3m	Red	800Hz	PNP	Light on/dark on	M8 connector, 4-pin	Fig.10-1
BGS	OS10S-AK350CN6	6...350mm	Red	600Hz	NPN	Light on/dark on	2m cable	Fig.2
	OS10S-AK350CP6	6...350mm	Red	600Hz	PNP	Light on/dark on	2m cable	Fig.3
	OS10S-AK350CN6Q8	6...350mm	Red	600Hz	NPN	Light on/dark on	M8 connector, 4-pin	Fig.9-1
	OS10S-AK350CP6Q8	6...350mm	Red	600Hz	PNP	Light on/dark on	M8 connector, 4-pin	Fig.10-1
BGS TOF	OS10S-AK1000LN6	50...1000mm	Infrared laser	10~20HZ	NPN	Light on	2m cable	Fig.4
	OS10S-AK1000LP6	50...1000mm	Infrared laser	10~20HZ	PNP	Light on	2m cable	Fig.5
	OS10S-AK1000DN6	50...1000mm	Infrared laser	10~20HZ	NPN	Dark on	2m cable	Fig.6
	OS10S-AK1000DP6	50...1000mm	Infrared laser	10~20HZ	PNP	Dark on	2m cable	Fig.7
	OS10S-AK1000LN6Q8	50...1000mm	Infrared laser	10~20HZ	NPN	Light on	M8 connector, 4-pin	Fig.11-1
	OS10S-AK1000LP6Q8	50...1000mm	Infrared laser	10~20HZ	PNP	Light on	M8 connector, 4-pin	Fig.12-1
	OS10S-AK1000DN6Q8	50...1000mm	Infrared laser	10~20HZ	NPN	Dark on	M8 connector, 4-pin	Fig.13-1
	OS10S-AK1000DP6Q8	50...1000mm	Infrared laser	10~20HZ	PNP	Dark on	M8 connector, 4-pin	Fig.14-1
	OS10S-AK4000LN6	20...4000mm	Infrared laser	50~100HZ	NPN	Light on	2m cable	Fig.4
	OS10S-AK4000LP6	20...4000mm	Infrared laser	50~100HZ	PNP	Light on	2m cable	Fig.5
	OS10S-AK4000DN6	20...4000mm	Infrared laser	50~100HZ	NPN	Dark on	2m cable	Fig.6
	OS10S-AK4000DP6	20...4000mm	Infrared laser	50~100HZ	PNP	Dark on	2m cable	Fig.7
	OS10S-AK4000LN6Q8	20...4000mm	Infrared laser	50~100HZ	NPN	Light on	M8 connector, 4-pin	Fig.11-1
	OS10S-AK4000LP6Q8	20...4000mm	Infrared laser	50~100HZ	PNP	Light on	M8 connector, 4-pin	Fig.12-1
	OS10S-AK4000DN6Q8	20...4000mm	Infrared laser	50~100HZ	NPN	Dark on	M8 connector, 4-pin	Fig.13-1
	OS10S-AK4000DP6Q8	20...4000mm	Infrared laser	50~100HZ	PNP	Dark on	M8 connector, 4-pin	Fig.14-1

# Photoelectric Sensors—Rectangular-OS10S

## Type:

Detection mode	Type	Distance	Light source	Frequency	Output	Switching mode	Connection	Wiring
Opposed	OS10S-S6Q8.3	10m	Red	— —	— —	— —	M8 connector, 3-pin	Fig.8-2
	OS10S-ECN6Q8.3	10m	— —	800Hz	NPN	Light on/dark on	M8 connector, 3-pin	Fig.9-2
	OS10S-ECP6Q8.3	10m	— —	800Hz	PNP	Light on/dark on	M8 connector, 3-pin	Fig.10-2
Polarized retroreflective	OS10S-RPCN6Q8.3	3m	Red	800Hz	NPN	Light on/dark on	M8 connector, 3-pin	Fig.9-2
	OS10S-RPCP6Q8.3	3m	Red	800Hz	PNP	Light on/dark on	M8 connector, 3-pin	Fig.10-2
BGS	OS10S-AK350CN6Q8.3	6...350mm	Red	600Hz	NPN	Light on/dark on	M8 connector, 3-pin	Fig.9-2
	OS10S-AK350CP6Q8.3	6...350mm	Red	600Hz	PNP	Light on/dark on	M8 connector, 3-pin	Fig.10-2
BGS TOF	OS10S-AK1000LN6Q8.3	50...1000mm	Infrared laser	10~20HZ	NPN	Light on	M8 connector, 3-pin	Fig.11-2
	OS10S-AK1000LP6Q8.3	50...1000mm	Infrared laser	10~20HZ	PNP	Light on	M8 connector, 3-pin	Fig.12-2
	OS10S-AK1000DN6Q8.3	50...1000mm	Infrared laser	10~20HZ	NPN	Dark on	M8 connector, 3-pin	Fig.13-2
	OS10S-AK1000DP6Q8.3	50...1000mm	Infrared laser	10~20HZ	PNP	Dark on	M8 connector, 3-pin	Fig.14-2
	OS10S-AK4000LN6Q8.3	20...4000mm	Infrared laser	50~100HZ	NPN	Light on	M8 connector, 3-pin	Fig.11-2
	OS10S-AK4000LP6Q8.3	20...4000mm	Infrared laser	50~100HZ	PNP	Light on	M8 connector, 3-pin	Fig.12-2
	OS10S-AK4000DN6Q8.3	20...4000mm	Infrared laser	50~100HZ	NPN	Dark on	M8 connector, 3-pin	Fig.13-2
	OS10S-AK4000DP6Q8.3	20...4000mm	Infrared laser	50~100HZ	PNP	Dark on	M8 connector, 3-pin	Fig.14-2

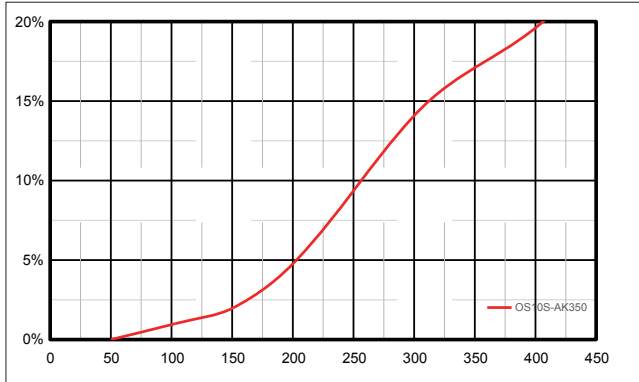
## Technical Data:

Operating voltage	10...30VDC
Ripple voltage	≤10%
Light source	630nm red beam (AK350) ; 940nmVcsl laser (AK1000/AK4000) ; 630nm red beam (polarized)
Output type	PNP / NPN
Switch mode	LO/DO optional (AK350 and polarized) ; LO/DO (AK1000)
Spot size	φ60mm (Polarized retroreflective@3m) ; φ7mm (AK350@350mm) ; φ35mm (AK1000@1m) ; 80*150mm(AK4000@4m)
No-load current	25mA
load current	≤100mA
Output indicator	Red LED
Steady state indicator	Green LED
Housing	PC+PBT
Connection	2m cable(3 wires )/ M8 3-pin or 4-pin connector
Ambient temperature	-20°C...+60°C
Storage temperature	-40°C...+70°C
Voltage withstanding	1000V/AC/ 50/60Hz 60s
Insulation impedance	≥50MΩ (500VDC)
Shock resistance	Complex amplitude 1.5mm 10... 50Hz (2hr X, Y,Z respectively)
Impact resistance	500m/s <sup>2</sup> (50G) 3 times X,Y,Z respectively
Protection class	IP67

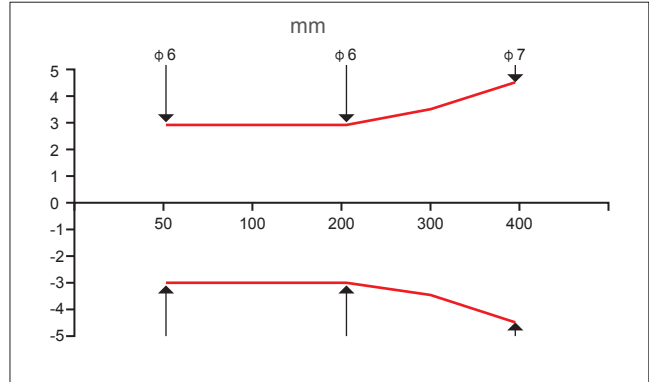
# Photoelectric Sensors—Rectangular-OS10S

## Product Features:

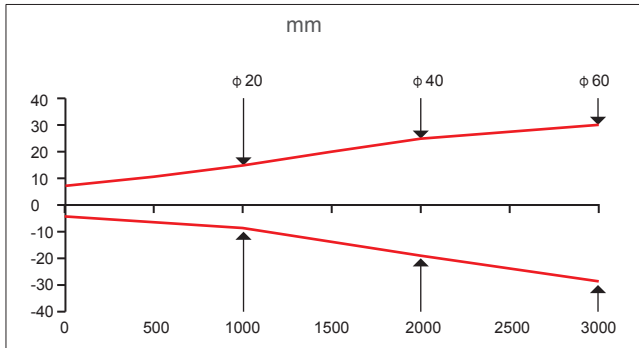
OS10S-AK350 attenuation figure



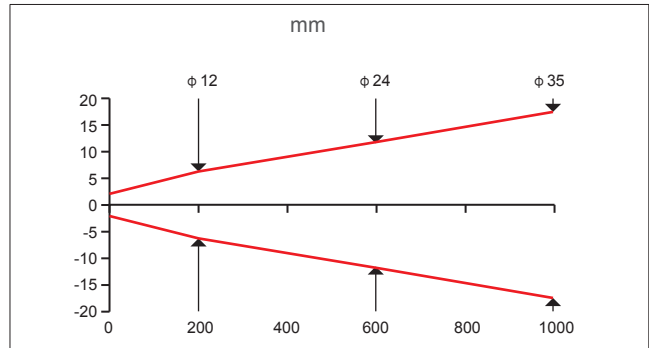
OS10S-AK350 spot figure



OS10S-PR spot figure



OS10S-AK1000 spot figure



## Wiring:

### Cable

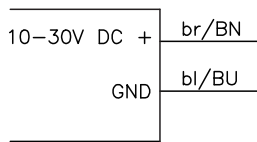


Fig.1

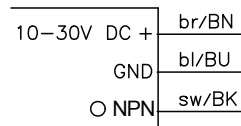


Fig.4

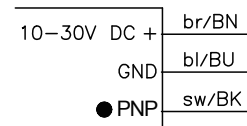


Fig.7

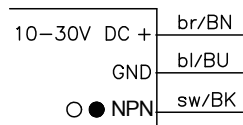


Fig.2

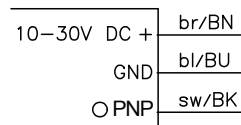


Fig.5

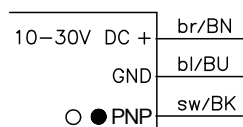


Fig.3

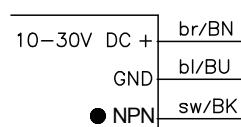
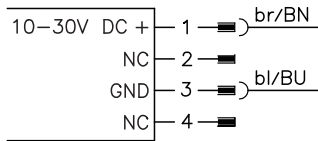


Fig.6

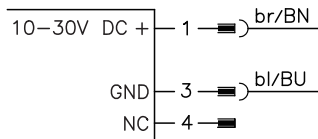
# Photoelectric Sensors—Rectangular-OS10S

## Wiring:

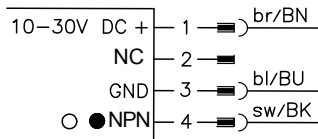
M8 connector



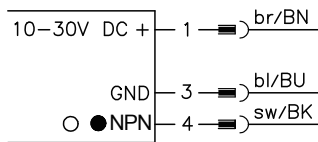
M8-4 pin  
Fig. 8-1



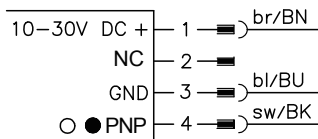
M8-3 pin  
Fig. 8-2



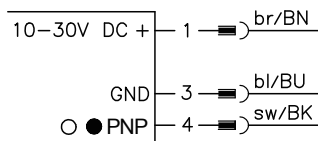
M8-4 pin  
Fig. 9-1



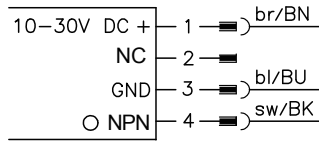
M8-3 pin  
Fig. 9-2



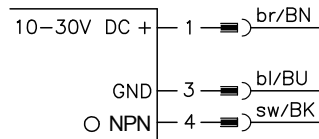
M8-4 pin  
Fig. 10-1



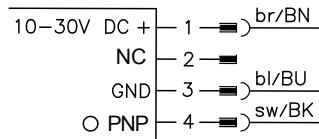
M8-3 pin  
Fig. 10-2



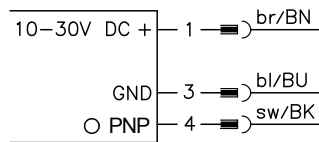
M8-4 pin  
Fig. 11-1



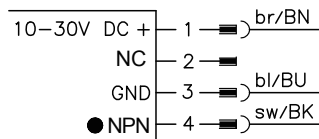
M8-3 pin  
Fig. 11-2



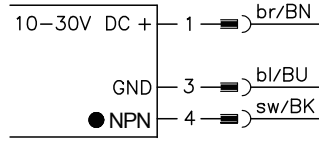
M8-4 pin  
Fig. 12-1



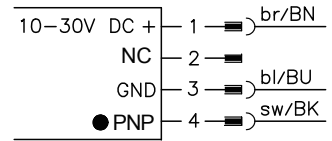
M8-3 pin  
Fig. 12-2



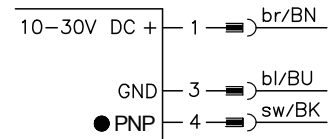
M8-4 pin  
Fig. 13-1



M8-3 pin  
Fig. 13-2



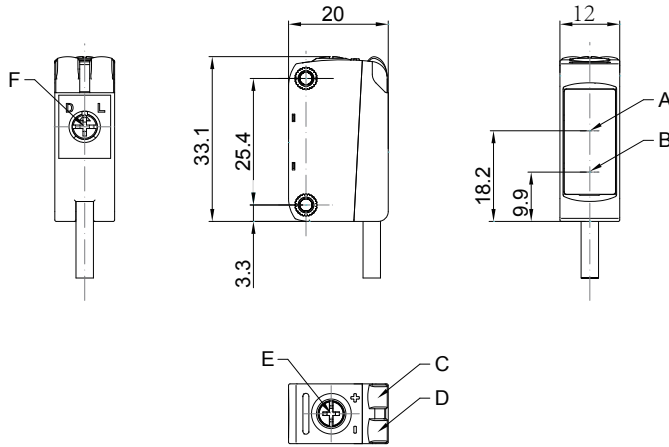
M8-4 pin  
Fig. 14-1



M8-3 pin  
Fig. 14-2

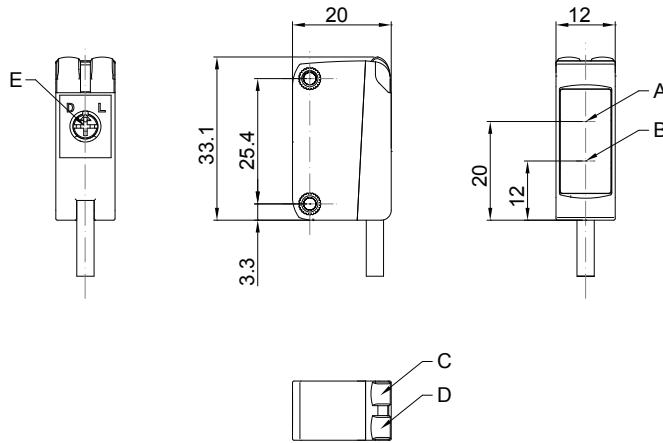
# Dimensions:(Cable)

## BGS



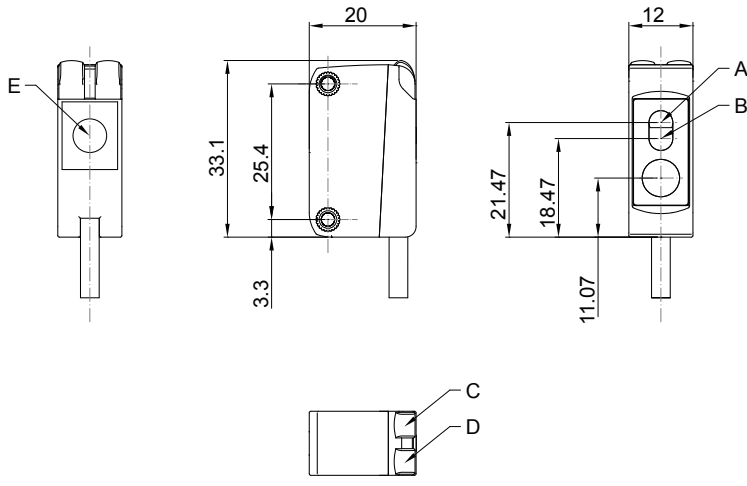
- A:Receiver
- B:Emitter
- C:Output indicator
- D:Steady state indicator
- E:Adjustor for distance
- F:Adjustor for LO/DO

## Polarized retroreflective



- A:Receiver
- B:Emitter
- C:Output indicator
- D:Steady state indicator
- E:Adjustor for LO/DO

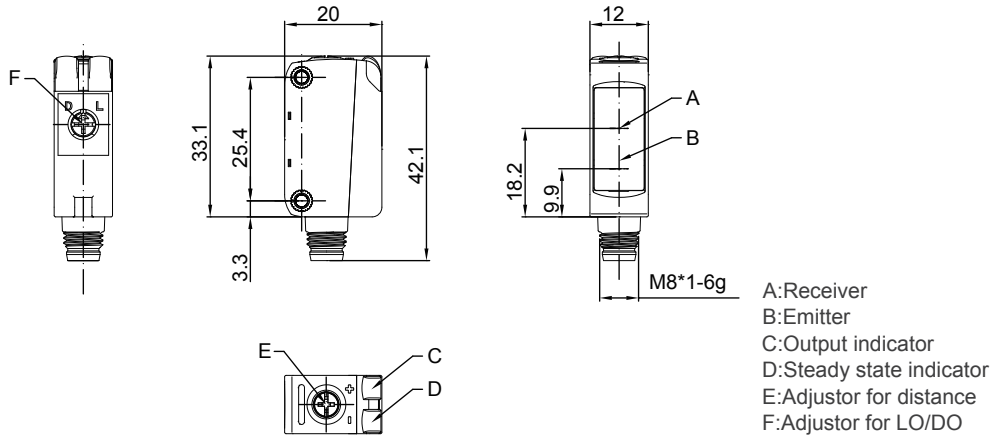
## BGS TOF



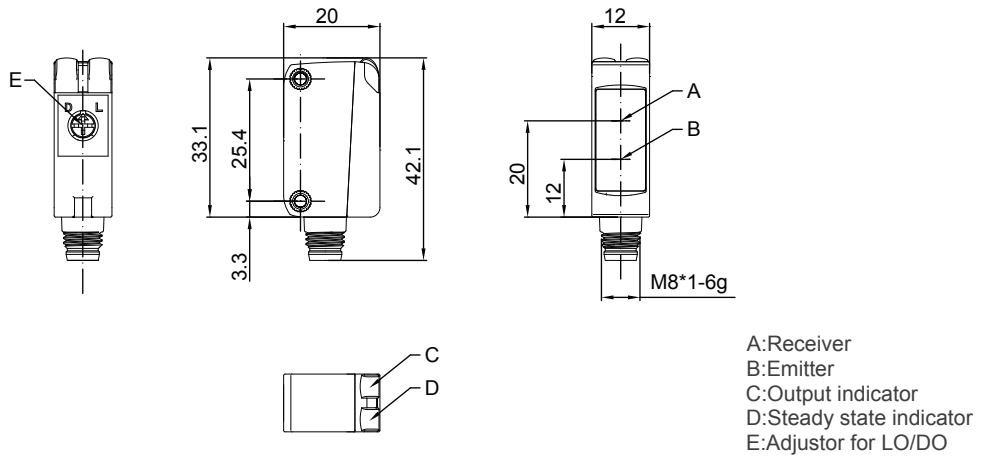
- A:Receiver
- B:Emitter
- C:Output indicator
- D:Steady state indicator
- E:TEACH BUTTON

Dimensions:(M8 connector)

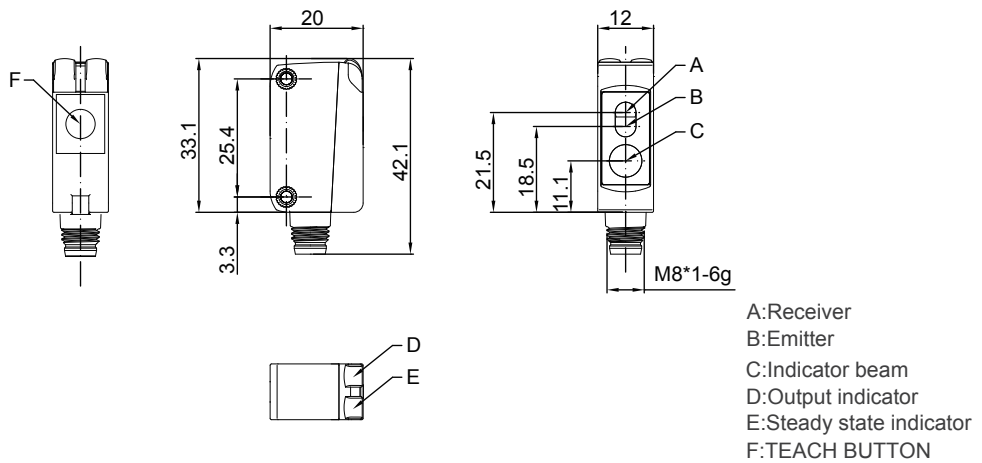
BGS



Polarized retroreflective



BGS TOF



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