



### 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, 1.5m, 4m BGS adjustable with teach button
- Opposed and Polarized retroreflective, Light/Dark Operate, Fixed distance products are not adjustable
- \*/R Infrared laser light source products can provide red light indication light source
- IP67

### 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.9
	OS10S-ECN6Q8	10m	---	800Hz	NPN	Light on/dark on	M8 connector, 4-pin	Fig.10
	OS10S-ECP6Q8	10m	---	800Hz	PNP	Light on/dark on	M8 connector, 4-pin	Fig.11
	OS10S-S6Q8.3	10m	Red	---	---	---	M8 connector, 3-pin	Fig.17
	OS10S-ECN6Q8.3	10m	---	800Hz	NPN	Light on/dark on	M8 connector, 3-pin	Fig.18
	OS10S-ECP6Q8.3	10m	---	800Hz	PNP	Light on/dark on	M8 connector, 3-pin	Fig.19
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.10
	OS10S-RPCP6Q8	3m	Red	800Hz	PNP	Light on/dark on	M8 connector, 4-pin	Fig.11
	OS10S-RPCN6Q8.3	3m	Red	800Hz	NPN	Light on/dark on	M8 connector, 3-pin	Fig.18
	OS10S-RPCP6Q8.3	3m	Red	800Hz	PNP	Light on/dark on	M8 connector, 3-pin	Fig.19
	BGS	OS10S-AK150CN6	6...150mm	Red	600Hz	NPN	Light on/dark on	2m cable
OS10S-AK150CP6		6...150mm	Red	600Hz	PNP	Light on/dark on	2m cable	Fig.3
OS10S-AK150CN6Q8		6...150mm	Red	600Hz	NPN	Light on/dark on	M8 connector, 4-pin	Fig.10
OS10S-AK150CP6Q8		6...150mm	Red	600Hz	PNP	Light on/dark on	M8 connector, 4-pin	Fig.11
OS10S-AK150CN6Q8.3		6...150mm	Red	600Hz	NPN	Light on/dark on	M8 connector, 3-pin	Fig.18
OS10S-AK150CP6Q8.3		6...150mm	Red	600Hz	PNP	Light on/dark on	M8 connector, 3-pin	Fig.19

# Photoelectric Sensors—Rectangular-OS10S

Type:

Detection mode	Type	Distance	Light source	Frequency	Output	Switching mode	Connection	Wiring
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.10
	OS10S-AK350CP6Q8	6...350mm	Red	600Hz	PNP	Light on/dark on	M8 connector, 4-pin	Fig.11
	OS10S-AK350CN6Q8.3	6...350mm	Red	600Hz	NPN	Light on/dark on	M8 connector, 3-pin	Fig.18
	OS10S-AK350CP6Q8.3	6...350mm	Red	600Hz	PNP	Light on/dark on	M8 connector, 3-pin	Fig.19

Detection mode	Type	Distance	Light source	Frequency	Output	Switching mode	Connection	Wiring
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.12
	OS10S-AK1000LP6Q8	50...1000mm	Infrared laser	10-20HZ	PNP	Light on	M8 connector, 4-pin	Fig.13
	OS10S-AK1000DN6Q8	50...1000mm	Infrared laser	10-20HZ	NPN	Dark on	M8 connector, 4-pin	Fig.14
	OS10S-AK1000DP6Q8	50...1000mm	Infrared laser	10-20HZ	PNP	Dark on	M8 connector, 4-pin	Fig.15
	OS10S-AK1000LN6Q8.3	50...1000mm	Infrared laser	10-20HZ	NPN	Light on	M8 connector, 3-pin	Fig.20
	OS10S-AK1000LP6Q8.3	50...1000mm	Infrared laser	10-20HZ	PNP	Light on	M8 connector, 3-pin	Fig.21
	OS10S-AK1000DN6Q8.3	50...1000mm	Infrared laser	10-20HZ	NPN	Dark on	M8 connector, 3-pin	Fig.22
	OS10S-AK1000DP6Q8.3	50...1000mm	Infrared laser	10-20HZ	PNP	Dark on	M8 connector, 3-pin	Fig.23
	OS10S-AK1500LN6	50...1500mm	Infrared laser	80HZ	NPN	Light on	2m cable	Fig.4
	OS10S-AK1500LP6	50...1500mm	Infrared laser	80HZ	PNP	Light on	2m cable	Fig.5
	OS10S-AK1500DN6	50...1500mm	Infrared laser	80HZ	NPN	Dark on	2m cable	Fig.6
	OS10S-AK1500DP6	50...1500mm	Infrared laser	80HZ	PNP	Dark on	2m cable	Fig.7
	OS10S-AK1500LN6Q8	50...1500mm	Infrared laser	80HZ	NPN	Light on	M8 connector, 4-pin	Fig.12
	OS10S-AK1500LP6Q8	50...1500mm	Infrared laser	80HZ	PNP	Light on	M8 connector, 4-pin	Fig.13
	OS10S-AK1500DN6Q8	50...1500mm	Infrared laser	80HZ	NPN	Dark on	M8 connector, 4-pin	Fig.14
	OS10S-AK1500DP6Q8	50...1500mm	Infrared laser	80HZ	PNP	Dark on	M8 connector, 4-pin	Fig.15
	OS10S-AK1500LN6Q8.3	50...1500mm	Infrared laser	80HZ	NPN	Light on	M8 connector, 3-pin	Fig.20
	OS10S-AK1500LP6Q8.3	50...1500mm	Infrared laser	80HZ	PNP	Light on	M8 connector, 3-pin	Fig.21
	OS10S-AK1500DN6Q8.3	50...1500mm	Infrared laser	80HZ	NPN	Dark on	M8 connector, 3-pin	Fig.22
	OS10S-AK1500DP6Q8.3	50...1500mm	Infrared laser	80HZ	PNP	Dark on	M8 connector, 3-pin	Fig.23
	OS10S-AK4000LN6	50...4000mm	Infrared laser	80HZ	NPN	Light on	2m cable	Fig.4
	OS10S-AK4000LP6	50...4000mm	Infrared laser	80HZ	PNP	Light on	2m cable	Fig.5
	OS10S-AK4000DN6	50...4000mm	Infrared laser	80HZ	NPN	Dark on	2m cable	Fig.6
	OS10S-AK4000DP6	50...4000mm	Infrared laser	80HZ	PNP	Dark on	2m cable	Fig.7
	OS10S-AK4000LN6Q8	50...4000mm	Infrared laser	80HZ	NPN	Light on	M8 connector, 4-pin	Fig.12
	OS10S-AK4000LP6Q8	50...4000mm	Infrared laser	80HZ	PNP	Light on	M8 connector, 4-pin	Fig.13

## Type:

Detection mode	Type	Distance	Light source	Frequency	Output	Switching mode	Connection	Wiring
BGS TOF	OS10S-AK4000DN6Q8	50...4000mm	Infrared laser	80HZ	NPN	Dark on	M8 connector, 4-pin	Fig.14
	OS10S-AK4000DP6Q8	50...4000mm	Infrared laser	80HZ	PNP	Dark on	M8 connector, 4-pin	Fig.15
	OS10S-AK4000LN6Q8.3	50...4000mm	Infrared laser	80HZ	NPN	Light on	M8 connector, 3-pin	Fig.20
	OS10S-AK4000LP6Q8.3	50...4000mm	Infrared laser	80HZ	PNP	Light on	M8 connector, 3-pin	Fig.21
	OS10S-AK4000DN6Q8.3	50...4000mm	Infrared laser	80HZ	NPN	Dark on	M8 connector, 3-pin	Fig.22
	OS10S-AK4000DP6Q8.3	50...4000mm	Infrared laser	80HZ	PNP	Dark on	M8 connector, 3-pin	Fig.23

Detection mode	Type	Distance	Light source	Repeatability	Output	Measurement accuracy	Connection	Wiring
BGS TOF	OS10S-K4000/485	50...4000mm	Infrared laser	10mm	485	30mm	2m cable	Fig.8
	OS10S-K4000-0.2-Q8/485	50...4000mm	Infrared laser	10mm	485	30mm	M8 Pigtail	Fig.16

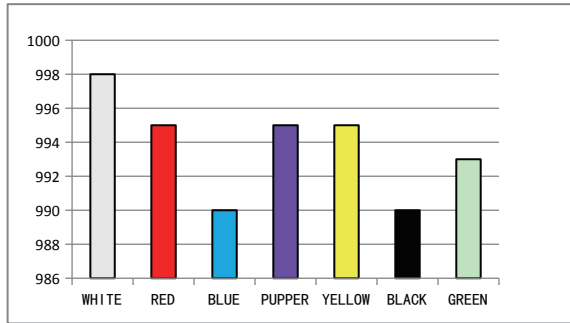
## Technical Data:

Operating voltage	10...30VDC/5VDC
Ripple voltage	≤10%
Light source	630nm red beam(opposed, retroreflective, AK350 diffused); 940nmVcsel laser (AK1000 / AK1500 / AK4000)
Output type	PNP / NPN
Switch mode	LO/DO optional (opposed, retroreflective, AK350 diffused); LO/DO (AK1000 / AK1500 / AK4000)
No-load current	24V 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

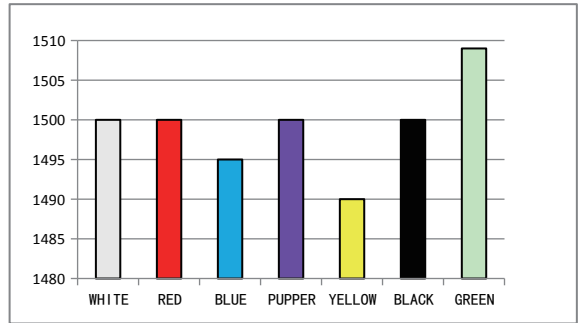
# Photoelectric Sensors—Rectangular-OS10S

Attenuation figure:

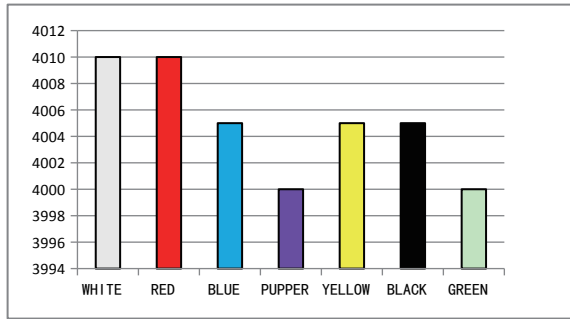
OS10S-AK1000



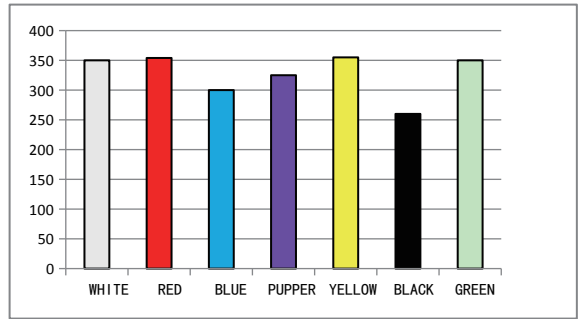
OS10S-AK1500



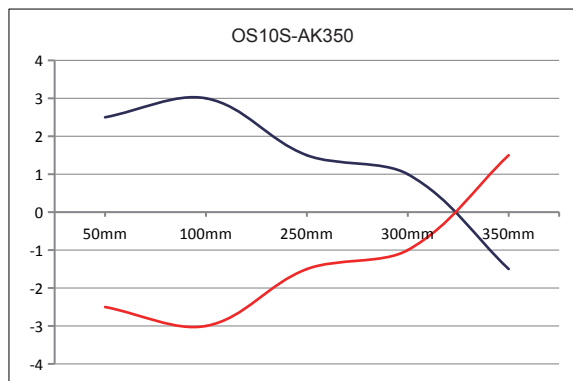
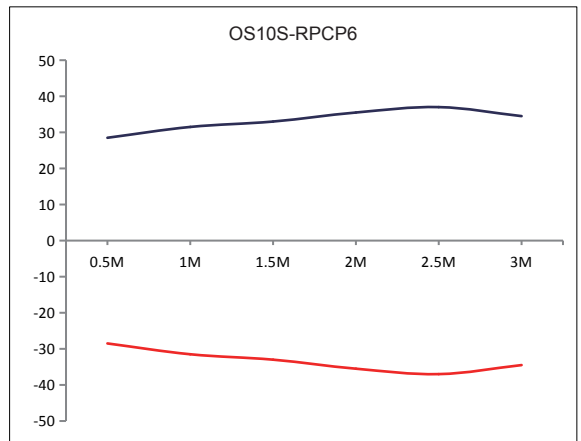
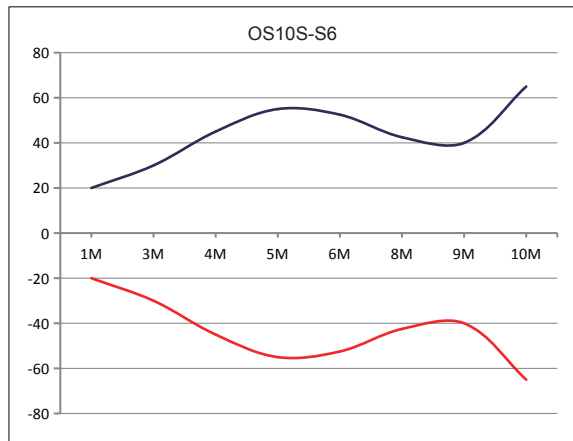
OS10S-AK4000



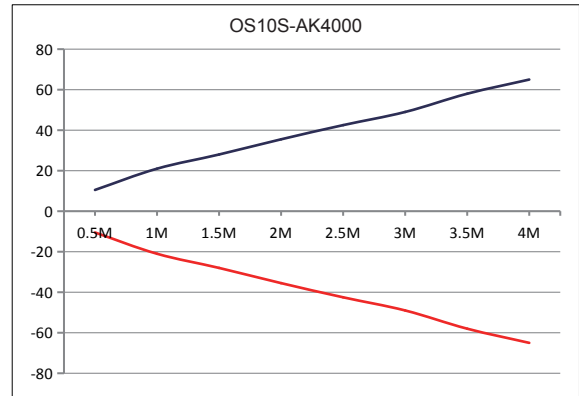
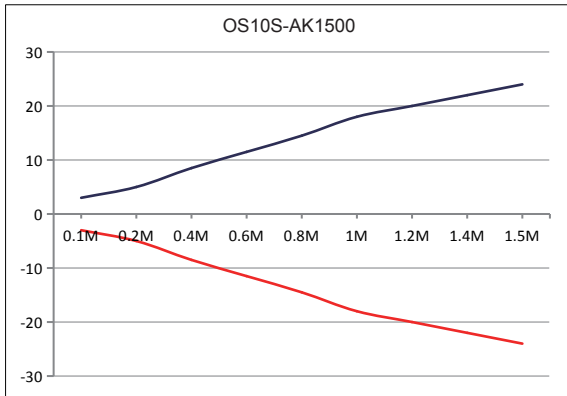
OS10S-AK350



Translation characteristic curve:

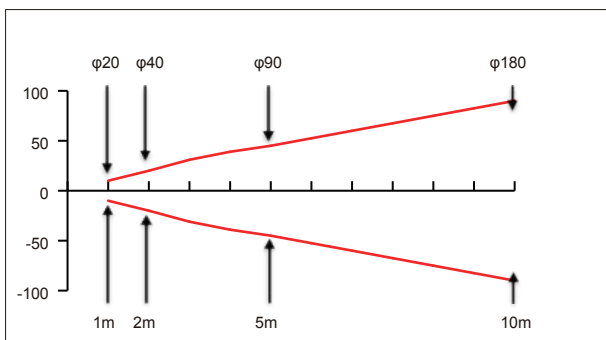


### Translation characteristic curve:

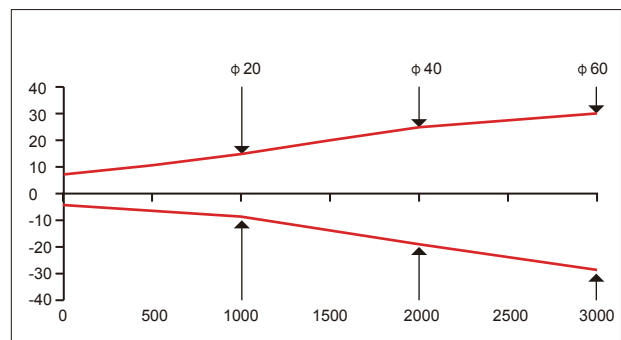


### Beam Pattern:

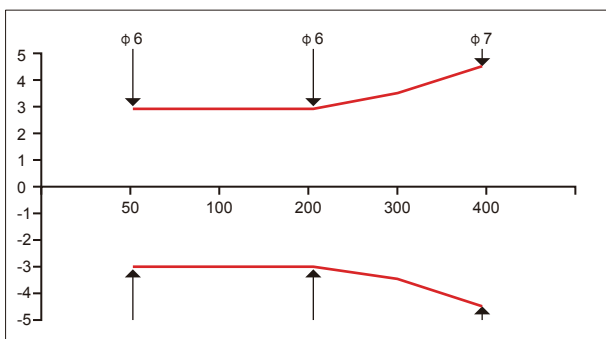
OS10S-S6 (mm)



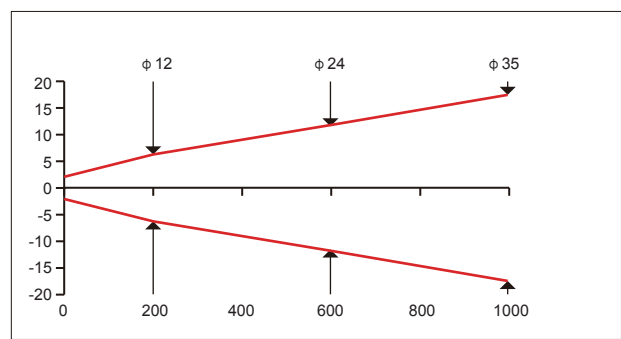
OS10S-PR (mm)



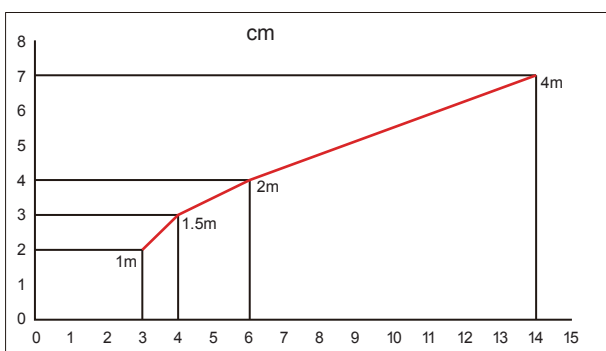
OS10S-AK350 (mm)



OS10S-AK1000 (mm)



OS10S-AK1500/4000 (cm)



# Photoelectric Sensors—Rectangular-OS10S

## Wiring:

### Cable

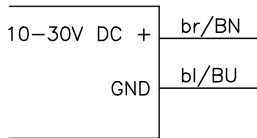


Fig. 1

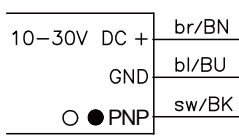


Fig. 3

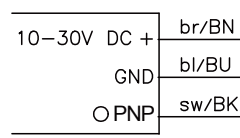


Fig. 5

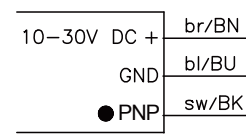


Fig. 7

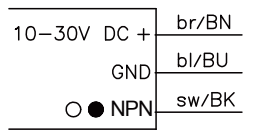


Fig. 2

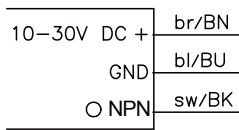


Fig. 4

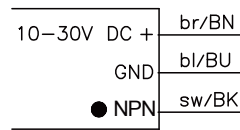


Fig. 6

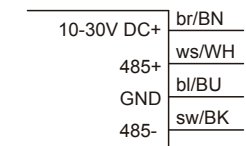


Fig. 8

### M8 connector

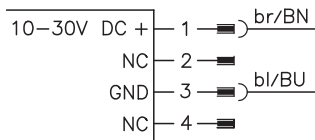


Fig. 9

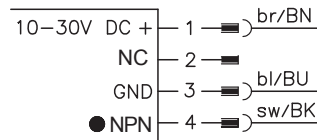


Fig. 14

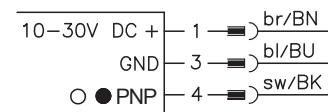


Fig. 19

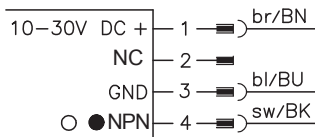


Fig. 10

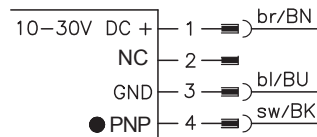


Fig. 15

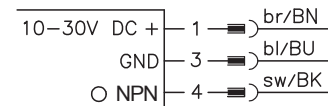


Fig. 20

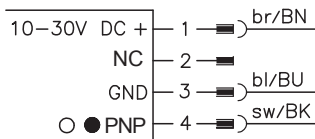


Fig. 11

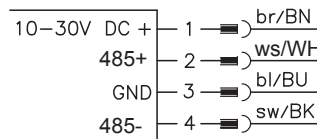


Fig. 16

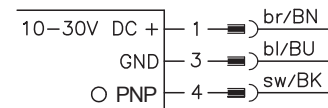


Fig. 21

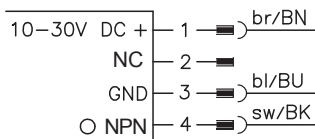


Fig. 12

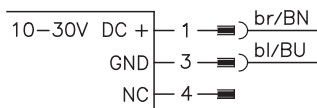


Fig. 17

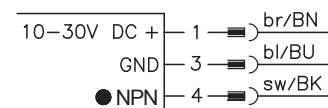


Fig. 22

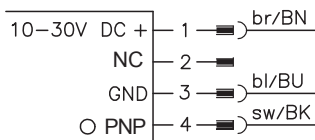


Fig. 13

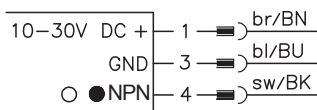


Fig. 18

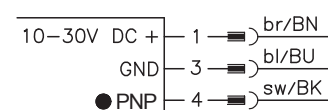
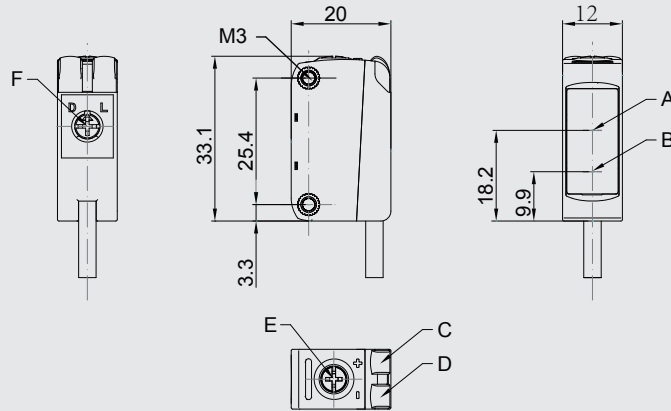


Fig. 23

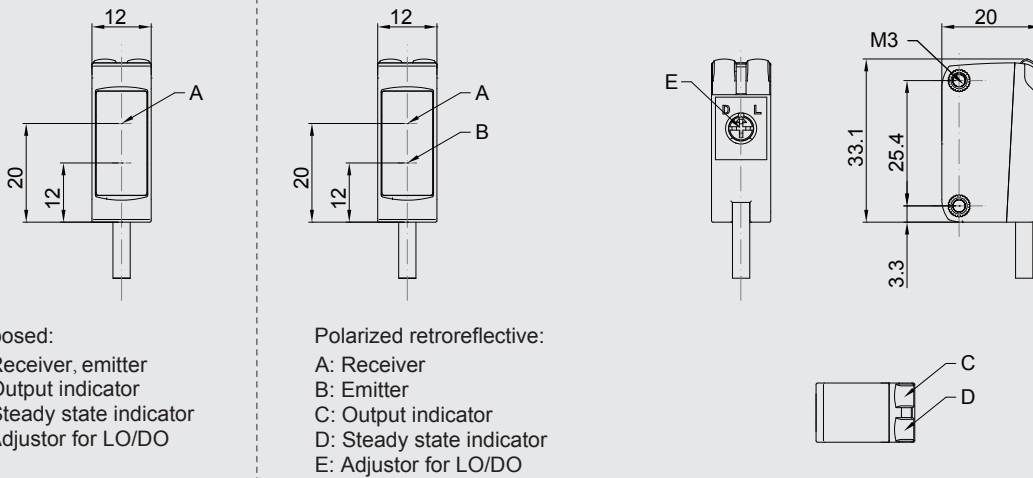
## Dimensions:(Cable)

### BGS



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

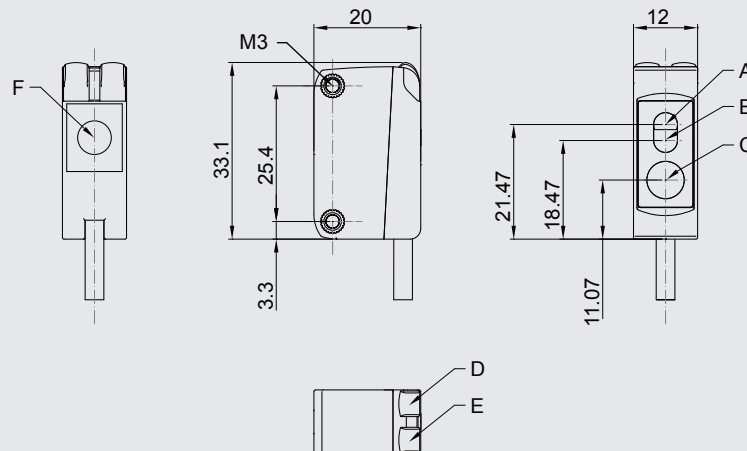
### Opposed / Polarized retroreflective



- Opposed:
- A: Receiver, emitter
  - C: Output indicator
  - D: Steady state indicator
  - E: Adjustor for LO/DO

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

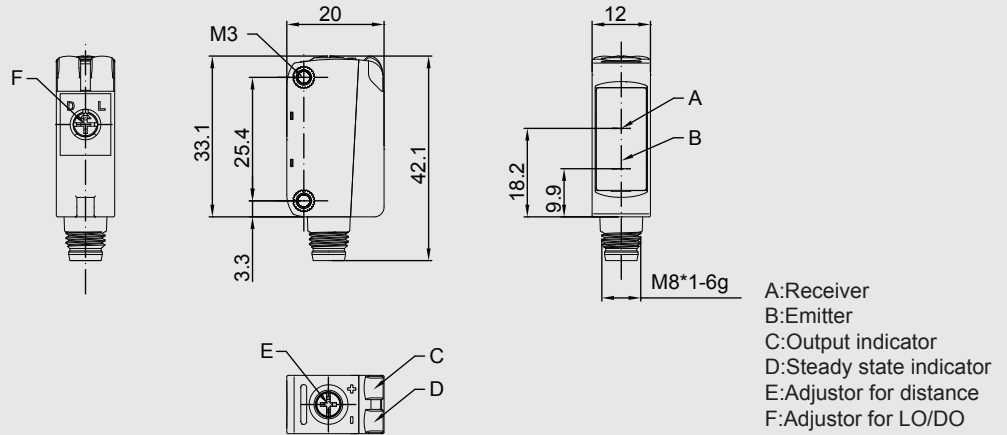
### BGS TOF



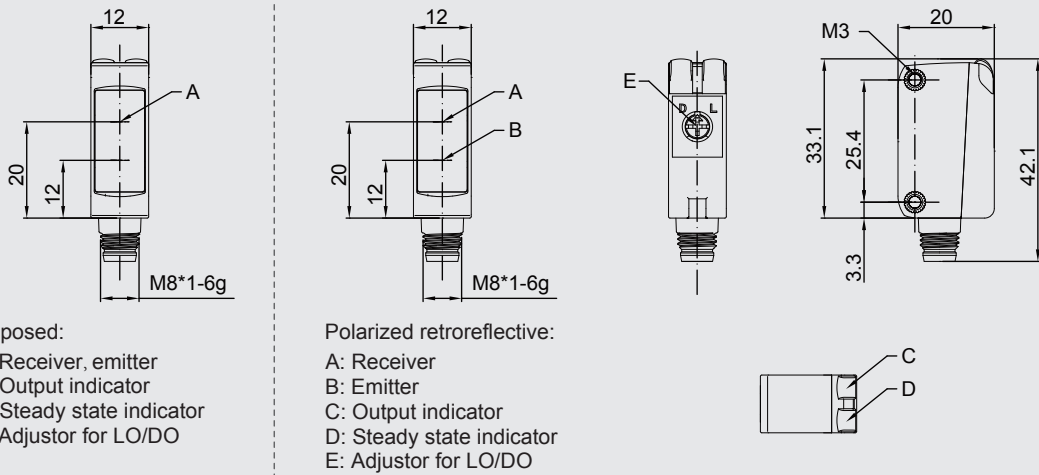
- A: Receiver
- B: Emitter
- C: Indicator light
- D: Output indicator
- E: Steady state indicator
- F: TEACH button

## Dimensions:(M8 connector)

### BGS



### Opposed / Polarized retroreflective



### BGS TOF

