ELCO
INDUSTRIAL AUTOMATION

Photoelectric Sensor

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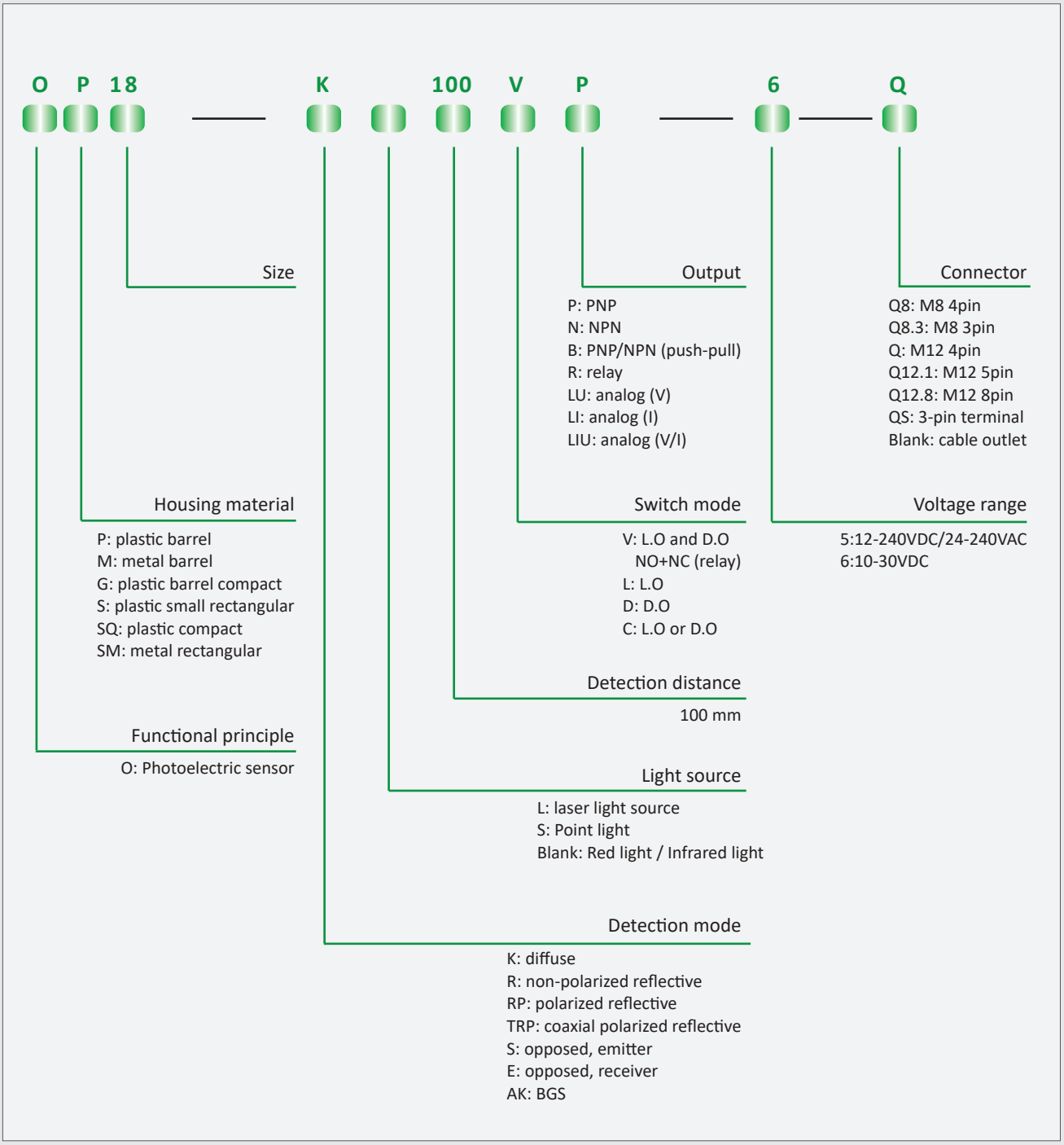
Model Description:



Photoelectric Sensor

	Barrel			Compact
Product picture				
Series	OP12	OP18	OM18	OG18
Features	Barrel	Barrel Cost-effective	Barrel Long distance laser	Barrel Short body
Detection range	Opposed: 5m	Opposed: 10 m Retro-reflective: 3 m Polarized retro-reflective: 3 m Diffused: 0.6 m	Opposed: 10m, 60 m Retro-reflective: 3 m Polarized retro-reflective: 3 m Diffused: 0.6 m	Opposed: 30 m Retro-reflective: 4 m Polarized retro-reflective: 4 m Diffused: 0.6 m
Light source	Infrared light	Red light Infrared light	Laser beam Red light Infrared light	Red light Infrared light
Power supply	10-30VDC	10-30 VDC	10-30 VDC	10-30 VDC
Output	NPN/PNP	NPN/PNP	NPN/PNP	NPN/PNP
Housing material	PC+PMMA	PC + PBT	Nickel plated brass	ABS + PBT
Protection class	IP67	IP67	IP67	IP67

Compact	Rectangular		
			
OSQ18	OS4	OS22	OS26
Round hole mounting Screw mounting	Thin and small size	High performance Mini size	Economical Short distances
Opposed: 30 m Retro-reflective: 3.5 m Polarized retro-reflective: 3.5 m Diffused: 0.6 m BGS: 200 mm	Opposed: 1 m BGS: 15 mm 30 mm	Opposed: 1 m BGS: 15 mm 30 mm 50 mm 120 mm	Reflect: 10...55mm
Laser beam Red light Infrared light	Red light	Red light	Infrared light
10-30 VDC	10-30 VDC	10-30 VDC	10-30VDC
NPN/PNP	NPN/PNP	NPN/PNP	NPN/PNP
ABS + PBT	PC + PBT	PC + ABS	PC + PMMA
IP67	IP67	IP67	IP50

Photoelectric Sensor

	Rectangular			
Product picture				
Series	OS10	OS10S	OS10U	OS20
Features	High precision Laser BGS	High precision Spot light source BGS	Laser Triangulation principle	High performance Laser BGS
Detection range	Opposed: 30 m Polarized retro-reflective: 3 m, 5 m Diffused: 1 m BGS: 350 mm	Opposed: 10m Polarized retro-reflective: 3m BGS: 350mm 1m 4m	30...300mm	BGS: 100 mm, 300 mm polarized reflective: 5 m Coaxial polarized reflective: 5 m
Light source	Laser beam Red light Infrared light	Red light Infrared laser beam	Red laser	Laser beam Red light
Power supply	10-30 VDC	10-30 VDC	10-30 VDC	10-30 VDC
Output	NPN/PNP	NPN/PNP	Push-Pull RS485 IO-Link	NPN/PNP
Housing material	PC + PBT	PC + PBT	PC+PMMA	PC + PBT
Protection class	IP67	IP67	IP67	IP67

Rectangular

			
OS50	OSM70	OSM40	OSM41
Wide voltage Long distance Relay	Metal housing Long distance Relay	Metal housing High precision Laser distance measurement	Metal housing High precision Laser distance measurement
Opposed: 60 m Retro-reflective: 10 m Polarized retro-reflective: 6 m Diffused: 1 m, 3.5 m, 7 m	Opposed: 150 m Retro-reflective: 30 m Polarized retro-reflective: 25 m BGS: 4 m	Distance measuring: 25...35 mm 35...70 mm 60...160 mm 100...300 mm 150...800 mm	Distance measuring: 30 ± 5 mm 400±200 mm 50 ± 15 mm 50 ... 2500 mm 100 ± 35 mm 50 ... 4000 mm 200 ± 80 mm 0.01 ... 10 m
Laser beam Red light Infrared light	Laser beam	Laser beam	Laser beam
10-30 VDC 24-240 V AC/DC	10-30 VDC 24-240 V AC/DC	10-30 VDC	10-30 VDC
NPN/PNP, Relay	Push-Pull Relay	Push-Pull Analogue IO-Link RS485	NPN/PNP Analogue RS485
PBT + ABS	Die-cast zinc	316L	Die-cast zinc
IP67	IP67	IP67	IP67

Photoelectric Sensor

	Rectangular			
Product picture				
Series	OSM42	OSM47	OSM61	OSMT60
Features	Metal housing Laser distance measurement	Metal housing Color detection	Metal housing Laser distance measurement	Metal housing It is equipped with an OSC1 controller
Detection range	Distance measuring: 150 ... 1200 mm 150 ... 2000 mm 50 ... 2500 mm 50 ... 4000 mm	30...500mm	30 ± 4mm 50 ± 10mm 85 ± 20mm 120 ± 60mm 250 ± 150mm	Measuring width: 10mm Measuring distance: 300mm
Light source	Laser beam	White LED	Red laser	Red laser
Power supply	10-30 VDC	10-30VDC	10-30VDC	12-24VDC
Output	2 x Push-Pull	2 x NPN/PNP	2 x Push-Pull NPN/PNP	——
Housing material	Die-cast zinc	Die-cast zinc	Aluminium alloy	Aluminium alloy
Protection class	IP67	IP67	IP67	IP50

Photoelectric Sensors - Barrel OP12

Description:

Compact body, meeting the demand for compact space in industries . Such as electronics, photovoltaics, and semiconductors. The small threaded photoelectric sensor has strong resistance to light interference and adopts the principle of radiation to stably detect all opaque objects.

Features:

- Compact body and structure
- M12 threaded mounting for easy installation
- The product adopts infrared light, which has stronger resistance to environmental light interference

Type:

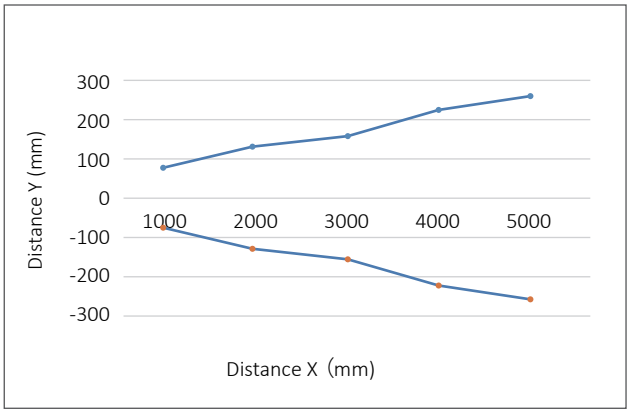
Detection mode	Type	Distance	Light source	Frequency	Output	Switching mode	Connection	Wiring
Opposed	OP12-S6	5m	Infrared light	— —	— —	— —	2 m cable	Fig.1
	OP12-ELN6	5m	— —	100Hz	NPN	Light-on	2 m cable	Fig.2
	OP12-EDN6	5m	— —	100Hz	NPN	Dark-on	2 m cable	Fig.3
	OP12-ELP6	5m	— —	100Hz	PNP	Light-on	2 m cable	Fig.4
	OP12-EDP6	5m	— —	100Hz	PNP	Dark-on	2 m cable	Fig.5

Technical Data:

Operating voltage	10...30VDC
Ripple voltage	≤ 10%
Light source	850 nm
Output	PNP/NPN
Switching mode	Light-on / Dark-on
Current consumption	≤ 20 mA
load current	≤ 50 mA
Output indicator	Red LED
Power indicator	Green LED
Housing material	PC+PMMA
Storage temperature	-20 ... +70 °C
Ambient temperature	-10 ... +50 °C
Protection class	IP67
Protective circuit	Reverse polarity protection, short circuit protection, overload protection（1KV/0.5J）
Voltage withstanding	650V/AC/ 50/60Hz 60s
Insulation impedence	≥ 50 MΩ (500VDC)
Shock resistance	Complex amplitude 1.5 mm 10 ... 50 Hz (2hr X, Y, Z respectively)
Impact resistance	500m/S^2 (50G) 3 times X, Y, Z respectively
Environment light immue	Incandescent lamp ≤ 10000 Lux

Photoelectric Sensors - Barrel OP12

Translation characteristic curve:



Wiring:

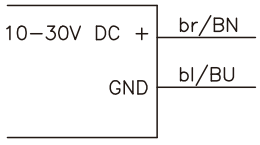


Fig.1

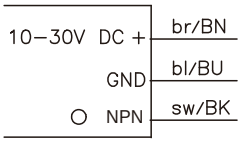


Fig.2

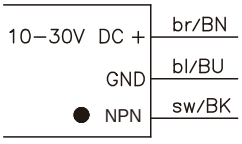


Fig.3

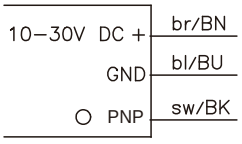


Fig.4

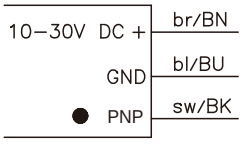
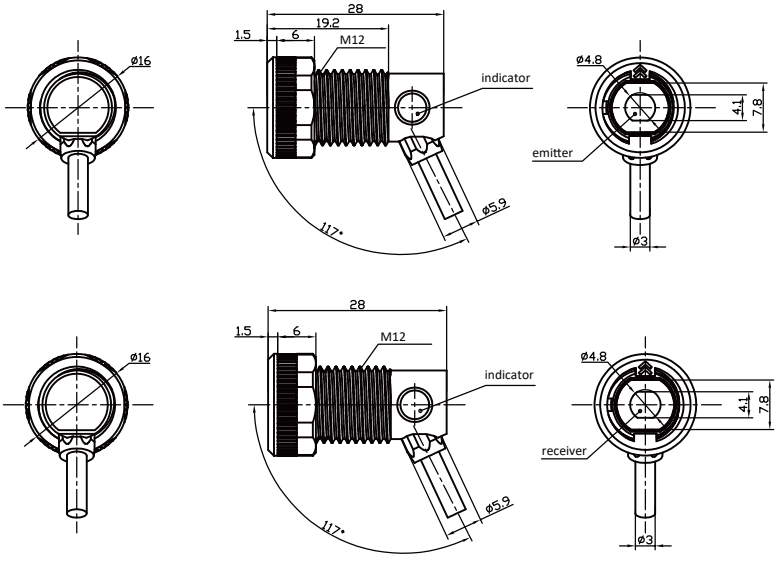


Fig.5

Dimensions:



Photoelectric Sensors - Barrel OP18

Description:

M18 barrel mounting mode, high cost-effective, OEM variations are optional. Suitable for logistics transportation, textile, garage, electronic industry.

Features:

- General mounting mode
- Bright status indicator

Technical Data:

Operating voltage	10 ... 30 VDC
Ripple voltage	≤ 10%
No-load current	Opposed: ≤ 25 mA; Others: ≤ 15 mA
Output current	≤ 100 mA
Protective circuit	Reverse polarity protection, short circuit protection, overload protection
Sensitivity	Adjustable, with single-turn knob
Output indicator	Red LED
Steady state indicator	Green LED
Ambient temperature	-25 ... 65 °C
Storage temperature	-40 ... 70 °C
Voltage withstanding	1000 V/AC 50/60Hz 60s
Insulation impedence	≥ 50 MΩ (500 VDC)
Shock resistance	Complex amplitude 1.5 mm 10 ... 50Hz (2hr X, Y,Z respectively)
Impact resistance	500m/S² (50G) 3 times X, Y, Z respectively
Protection class	IP67
Housing material	PC+PBT

Photoelectric Sensors - Barrel OP18

Type:

Detection mode	Type	Distance	Light source	Frequency	Output	Switching mode	Connection	Wiring
Opposed	OP18-S6 (emitter)	10 m	Infrared	— —	— —	— —	2 m cable	Fig.1
	OP18-EVP6 (receiver)		— —	100 Hz	PNP	NO+NC	2 m cable	Fig.7
	OP18-EVN6 (receiver)		— —	100 Hz	NPN	NO+NC	2 m cable	Fig.8
	OP18-S6Q (emitter)	10 m	Infrared	— —	— —	— —	M12 connector	Fig.2
	OP18-EVP6Q (receiver)		— —	100 Hz	PNP	NO+NC	M12 connector	Fig.9
	OP18-EVN6Q (receiver)		— —	100 Hz	NPN	NO+NC	M12 connector	Fig.10

The detection distance corresponds to the reflector RB50*50-1 (purchased separately)

Retro-reflective	OP18-RVP6	3 m	Infrared	100 Hz	PNP	NO+NC	2 m cable	Fig.3
	OP18-RVN6	3 m	Infrared	100 Hz	NPN	NO+NC	2 m cable	Fig.4
	OP18-RVP6Q	3 m	Infrared	100 Hz	PNP	NO+NC	M12 connector	Fig.5
	OP18-RVN6Q	3 m	Infrared	100 Hz	NPN	NO+NC	M12 connector	Fig.6
Polarized retro-reflective	OP18-RPVP6	3 m	Red	800 Hz	PNP	NO+NC	2 m cable	Fig.3
	OP18-RPVN6	3 m	Red	800 Hz	NPN	NO+NC	2 m cable	Fig.4
	OP18-RPVP6Q	3 m	Red	800 Hz	PNP	NO+NC	M12 connector	Fig.5
	OP18-RPVN6Q	3 m	Red	800 Hz	NPN	NO+NC	M12 connector	Fig.6

Diffused	OP18-K100VP6	100 mm	Infrared	100 Hz	PNP	NO+NC	2 m cable	Fig.3
	OP18-K100VN6	100 mm	Infrared	100 Hz	NPN	NO+NC	2 m cable	Fig.4
	OP18-K100VP6Q	100 mm	Infrared	100 Hz	PNP	NO+NC	M12 connector	Fig.5
	OP18-K100VN6Q	100 mm	Infrared	100 Hz	NPN	NO+NC	M12 connector	Fig.6
	OP18-K200VP6	200 mm	Infrared	100 Hz	PNP	NO+NC	2 m cable	Fig.3
	OP18-K200VN6	200 mm	Infrared	100 Hz	NPN	NO+NC	2 m cable	Fig.4
	OP18-K200VP6Q	200 mm	Infrared	100 Hz	PNP	NO+NC	M12 connector	Fig.5
	OP18-K200VN6Q	200 mm	Infrared	100 Hz	NPN	NO+NC	M12 connector	Fig.6
	OP18-K400VP6	400 mm	Infrared	100 Hz	PNP	NO+NC	2 m cable	Fig.3
	OP18-K400VN6	400 mm	Infrared	100 Hz	NPN	NO+NC	2 m cable	Fig.4
	OP18-K400VP6Q	400 mm	Infrared	100 Hz	PNP	NO+NC	M12 connector	Fig.5
	OP18-K400VN6Q	400 mm	Infrared	100 Hz	NPN	NO+NC	M12 connector	Fig.6
	OP18-K600VP6	600 mm	Infrared	100 Hz	PNP	NO+NC	2 m cable	Fig.3
	OP18-K600VN6	600 mm	Infrared	100 Hz	NPN	NO+NC	2 m cable	Fig.4
	OP18-K600VP6Q	600 mm	Infrared	100 Hz	PNP	NO+NC	M12 connector	Fig.5
	OP18-K600VN6Q	600 mm	Infrared	100 Hz	NPN	NO+NC	M12 connector	Fig.6

Diffuse reflective vitreous body detect	OP18-TK50VP6	50mm	Infrared	100 Hz	PNP	NO+NC	2 m cable	Fig.3
	OP18-TK50VN6	50mm	Infrared	100 Hz	NPN	NO+NC	2 m cable	Fig.4
	OP18-TK50VP6Q	50mm	Infrared	100 Hz	PNP	NO+NC	M12 connector	Fig.5
	OP18-TK50VN6Q	50mm	Infrared	100 Hz	NPN	NO+NC	M12 connector	Fig.6
	OP18-TK100VP6	100mm	Infrared	100 Hz	PNP	NO+NC	2 m cable	Fig.3
	OP18-TK100VN6	100mm	Infrared	100 Hz	NPN	NO+NC	2 m cable	Fig.4
	OP18-TK100VP6Q	100mm	Infrared	100 Hz	PNP	NO+NC	M12 connector	Fig.5
	OP18-TK100VN6Q	100mm	Infrared	100 Hz	NPN	NO+NC	M12 connector	Fig.6

Wiring:

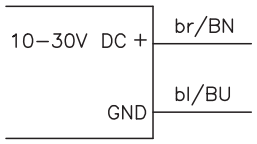


Fig.1

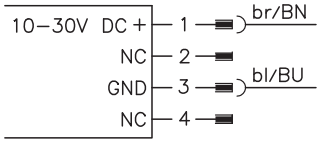


Fig.2

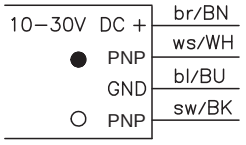


Fig.3

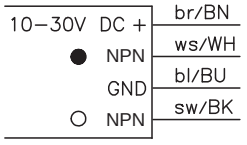


Fig.4

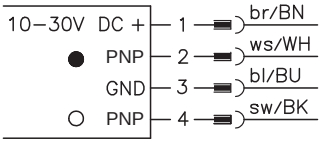


Fig.5

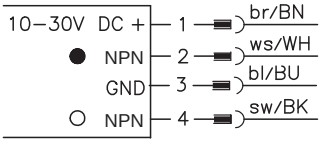


Fig.6

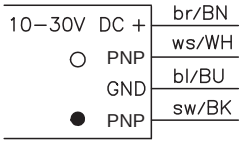


Fig.7

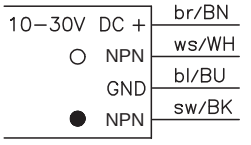


Fig.8

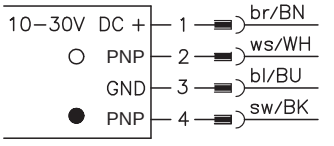


Fig.9

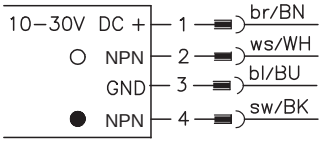
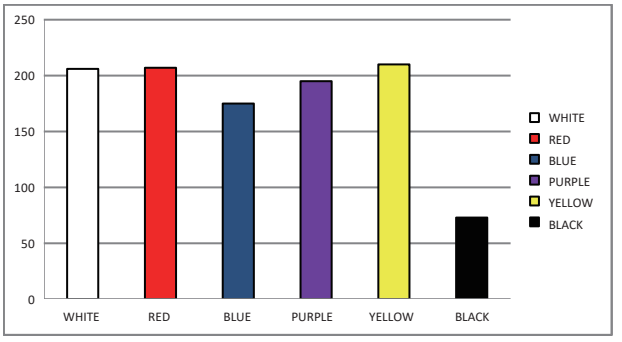


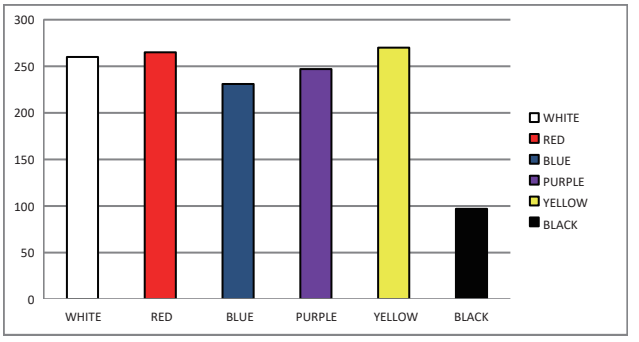
Fig.10

Attenuation figure

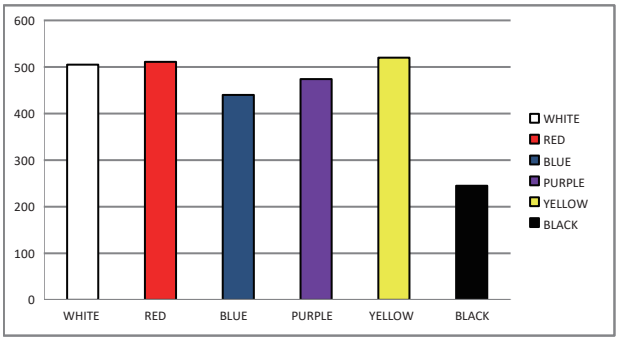
OP18-K100VP6



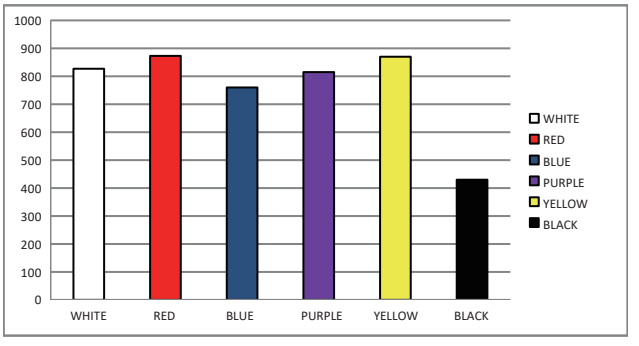
OP18-K200VP6



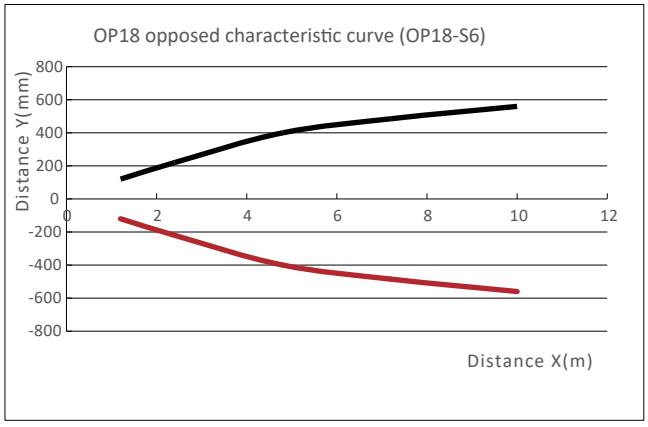
OP18-K400VP6

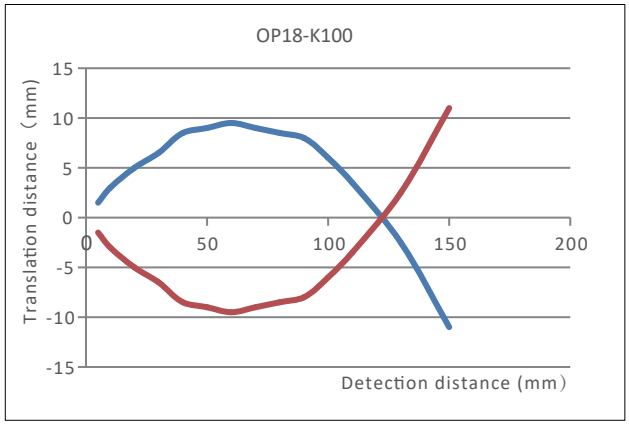


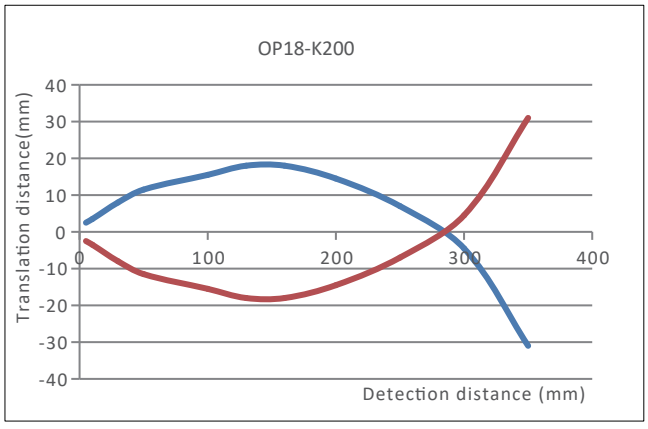
OP18-K600VP6

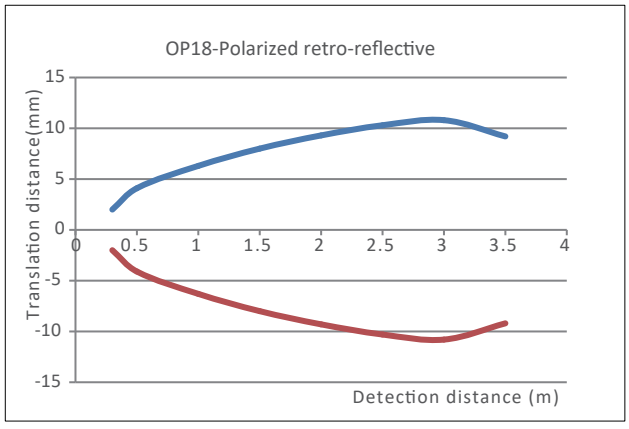


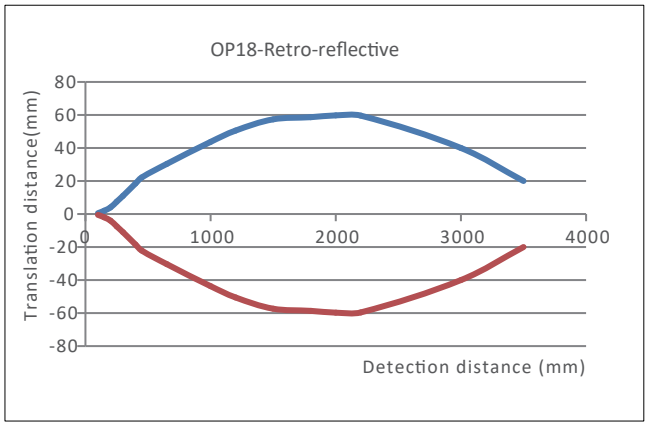
Translation characteristic curve

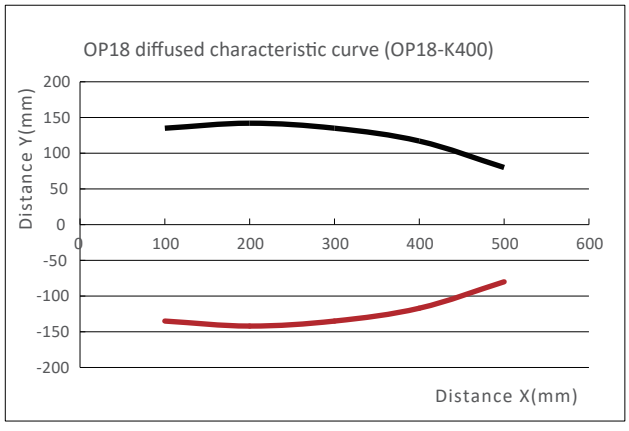


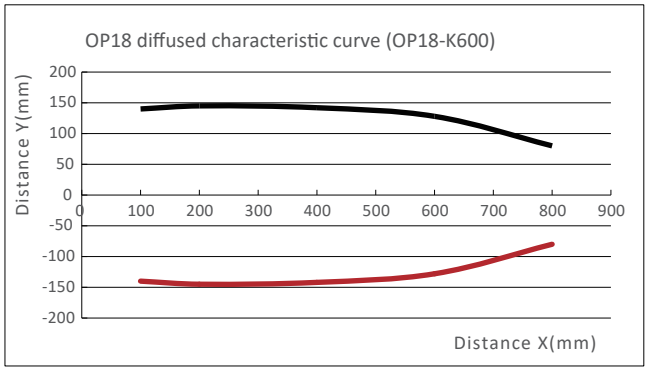






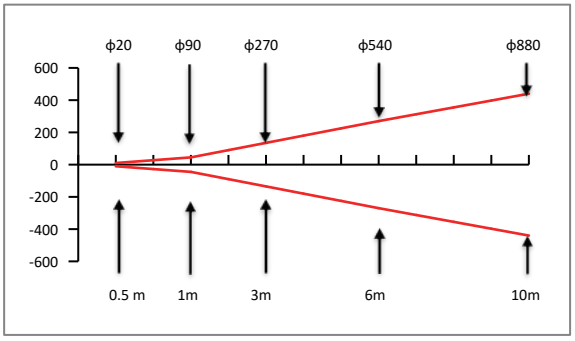




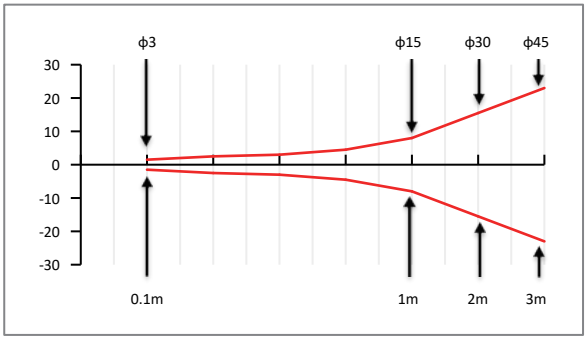


Beam Pattern :

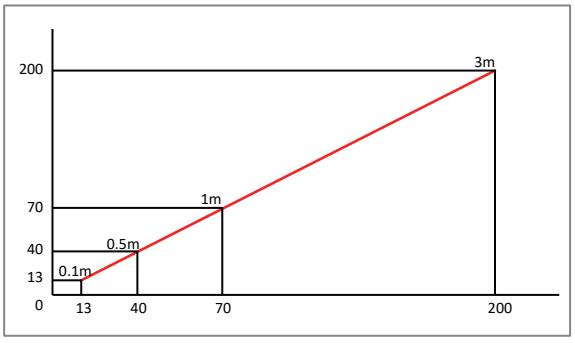
OP18-S6 (mm)



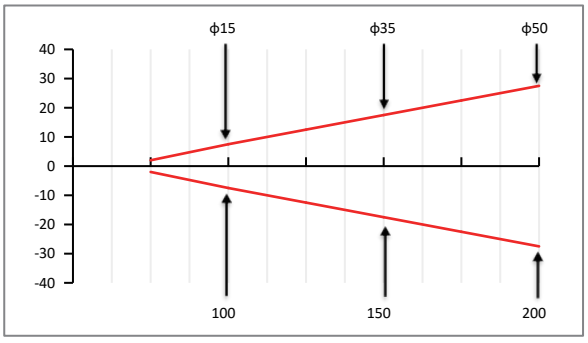
OP18-R (mm)



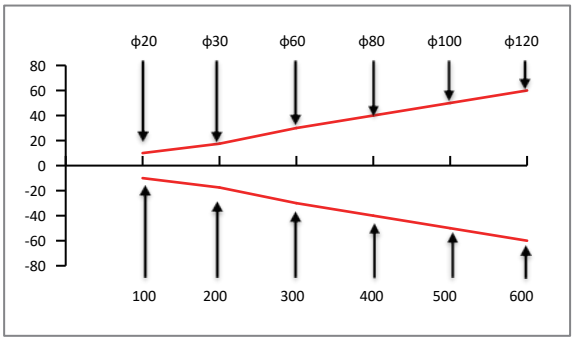
OP18-RP (mm)



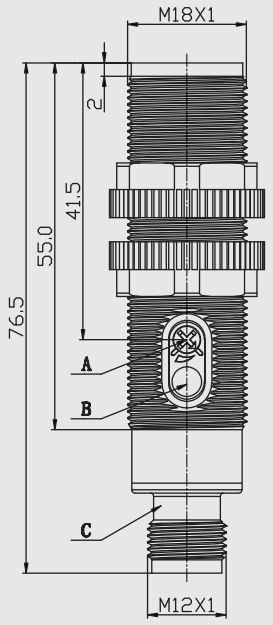
OP18-K100/200 (mm)



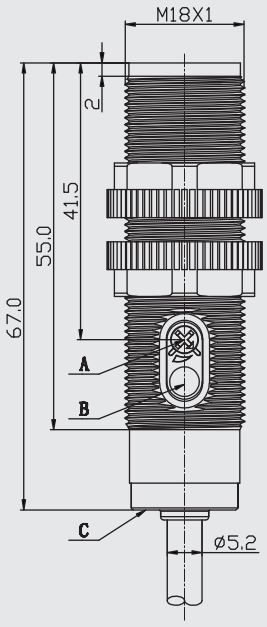
OP18-K400/600 (mm)



Dimensions:



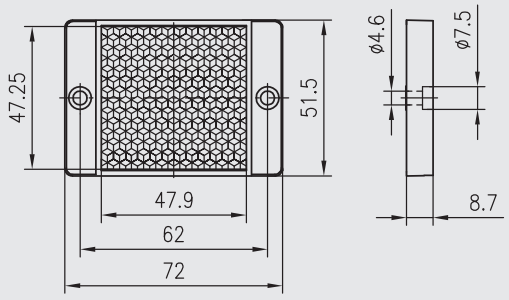
A Sensitivity regulation
B Steady state indicator
C Output indicator



A Sensitivity regulation
B Steady state indicator
C Output indicator

Reflector (optional):

RB50x50-1



Photoelectric Sensors - Barrel OM18

Description:

M18 barrel mounting mode, metal housing.

Suitable for logistics transportation, food&beverage, printing, small equipment and others.

Features:

- Strong impact resistance
- 60m laser opposed

Technical Data:

Operating voltage	10 ... 30 VDC
Ripple voltage	≤ 10%
Light source	Red laser (650 nm)/class 1
No-load current	Opposed: ≤ 25 mA; Others: ≤ 15 mA
Output current	≤ 100 mA
Protective circuit	Reverse polarity protection, short circuit protection, overload protection
Sensitivity	Adjustable, with single-turn knob
Output indicator	Red LED
Steady state indicator	Green LED
Ambient temperature	-25 ... 65 °C
Storage temperature	-40 ... 70 °C
Voltage resistance	1000 V/AC 50/60Hz 60s
Insulation impedence	≥ 50 MΩ (500 VDC)
Shock resistance	Complex amplitude 1.5mm 10... 50Hz (2hr X, Y, Z respectively)
Impact resistance	500m/S^2 (50G) 3 times X, Y, Z respectively
Protection class	IP67
Housing material	Brass nickel-plated

Photoelectric Sensors - Barrel OM18

Type:

Detection mode	Type	Distance	Light source	Frequency	Output	Switching mode	Connection	Wiring
Opposed	OM18-S6(emitter)	10 m	Infrared	— —	— —	— —	2 m cable	Fig.1
	OM18-EVP6（receiver）		— —	100 Hz	PNP	NO+NC	2 m cable	Fig.7
	OM18-EVN6（receiver）		— —	100 Hz	NPN	NO+NC	2 m cable	Fig.8
	OM18-S6Q (emitter)	10 m	Infrared	— —	— —	— —	M12 connector	Fig.2
	OM18-EVP6Q（receiver）		— —	100 Hz	PNP	NO+NC	M12 connector	Fig.9
	OM18-EVN6Q（receiver）		— —	100 Hz	NPN	NO+NC	M12 connector	Fig.10
	OM18-SL306	30 m	laser	— —	— —	— —	2 m cable	Fig.1
	OM18-EL30VP6		laser	800 Hz	PNP	NO+NC	2 m cable	Fig.7
	OM18-EL30VN6		laser	800 Hz	NPN	NO+NC	2 m cable	Fig.8
	OM18-SL306Q	30 m	laser	— —	— —	— —	M12 connector	Fig.2
	OM18-EL30VP6Q		laser	800 Hz	PNP	NO+NC	M12 connector	Fig.9
	OM18-EL30VN6Q		laser	800 Hz	NPN	NO+NC	M12 connector	Fig.10
	OM18-SL606	60 m	laser	— —	— —	— —	2 m cable	Fig.1
	OM18-EL60VP6		laser	800 Hz	PNP	NO+NC	2 m cable	Fig.7
	OM18-EL60VN6		laser	800 Hz	NPN	NO+NC	2 m cable	Fig.8
	OM18-SL606Q	60 m	laser	— —	— —	— —	M12 connector	Fig.2
	OM18-EL60VP6Q		laser	800 Hz	PNP	NO+NC	M12 connector	Fig.9
	OM18-EL60VN6Q		laser	800 Hz	NPN	NO+NC	M12 connector	Fig.10

The detection distance corresponds to the reflector RB50*50-1 (purchased separately)

Retro-reflective	OM18-RVP6	3 m	Infrared	100 Hz	PNP	NO+NC	2 m cable	Fig.3
	OM18-RVN6	3 m	Infrared	100 Hz	NPN	NO+NC	2 m cable	Fig.4
	OM18-RVP6Q	3 m	Infrared	100 Hz	PNP	NO+NC	M12 connector	Fig.5
	OM18-RVN6Q	3 m	Infrared	100 Hz	NPN	NO+NC	M12 connector	Fig.6
Polarized retro-reflective	OM18-RPVP6	3 m	Red	800 Hz	PNP	NO+NC	2 m cable	Fig.3
	OM18-RPVN6	3 m	Red	800 Hz	NPN	NO+NC	2 m cable	Fig.4
	OM18-RPVP6Q	3 m	Red	800 Hz	PNP	NO+NC	M12 connector	Fig.5
	OM18-RPVN6Q	3 m	Red	800 Hz	NPN	NO+NC	M12 connector	Fig.6

Type:

Detection mode	Type	Distance	Light source	Frequency	Output	Switching mode	Connection	Wiring
Diffused	OM18-K100VP6	100 mm	Infrared	100 Hz	PNP	NO+NC	2 m cable	Fig.3
	OM18-K100VN6	100 mm	Infrared	100 Hz	NPN	NO+NC	2 m cable	Fig.4
	OM18-K100VP6Q	100 mm	Infrared	100 Hz	PNP	NO+NC	M12 connector	Fig.5
	OM18-K100VN6Q	100 mm	Infrared	100 Hz	NPN	NO+NC	M12 connector	Fig.6
	OM18-K200VP6	200 mm	Infrared	100 Hz	PNP	NO+NC	2 m cable	Fig.3
	OM18-K200VN6	200 mm	Infrared	100 Hz	NPN	NO+NC	2 m cable	Fig.4
	OM18-K200VP6Q	200 mm	Infrared	100 Hz	PNP	NO+NC	M12 connector	Fig.5
	OM18-K200VN6Q	200 mm	Infrared	100 Hz	NPN	NO+NC	M12 connector	Fig.6
	OM18-K400VP6	400 mm	Infrared	100 Hz	PNP	NO+NC	2 m cable	Fig.3
	OM18-K400VN6	400 mm	Infrared	100 Hz	NPN	NO+NC	2 m cable	Fig.4
	OM18-K400VP6Q	400 mm	Infrared	100 Hz	PNP	NO+NC	M12 connector	Fig.5
	OM18-K400VN6Q	400 mm	Infrared	100 Hz	NPN	NO+NC	M12 connector	Fig.6
	OM18-K600VP6	600 mm	Infrared	100 Hz	PNP	NO+NC	2 m cable	Fig.3
	OM18-K600VN6	600 mm	Infrared	100 Hz	NPN	NO+NC	2 m cable	Fig.4
	OM18-K600VP6Q	600 mm	Infrared	100 Hz	PNP	NO+NC	M12 connector	Fig.5
	OM18-K600VN6Q	600 mm	Infrared	100 Hz	NPN	NO+NC	M12 connector	Fig.6

Diffuse reflective vitreous body detect	OM18-TK100VP6	100 mm	Infrared	100 Hz	PNP	NO+NC	2 m cable	Fig.3
	OM18-TK100VN6	100 mm	Infrared	100 Hz	NPN	NO+NC	2 m cable	Fig.4
	OM18-TK100VP6Q	100 mm	Infrared	100 Hz	PNP	NO+NC	M12 connector	Fig.5
	OM18-TK100VN6Q	100 mm	Infrared	100 Hz	NPN	NO+NC	M12 connector	Fig.6
	OM18-TK200VP6	200 mm	Infrared	100 Hz	PNP	NO+NC	2 m cable	Fig.3
	OM18-TK200VN6	200 mm	Infrared	100 Hz	NPN	NO+NC	2 m cable	Fig.4
	OM18-TK200VP6Q	200 mm	Infrared	100 Hz	PNP	NO+NC	M12 connector	Fig.5
	OM18-TK200VN6Q	200 mm	Infrared	100 Hz	NPN	NO+NC	M12 connector	Fig.6

Photoelectric Sensors - Barrel OM18

Wiring:

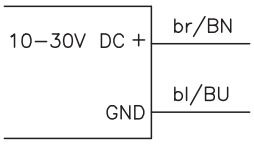


Fig.1

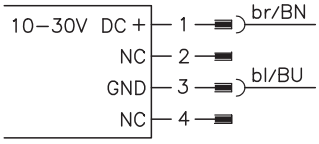


Fig.2

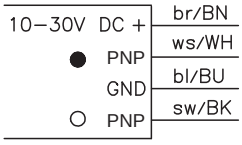


Fig.3

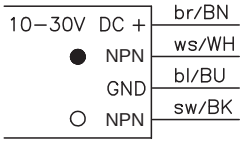


Fig.4

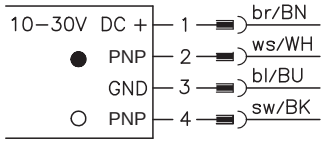


Fig.5

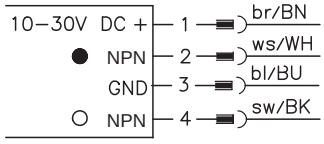


Fig.6

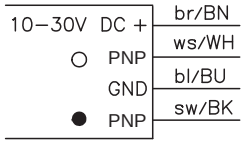


Fig.7

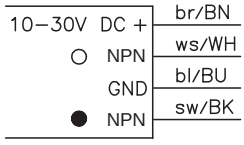


Fig.8

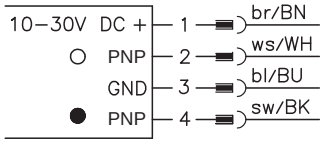


Fig.9

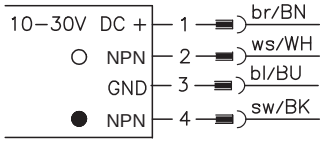
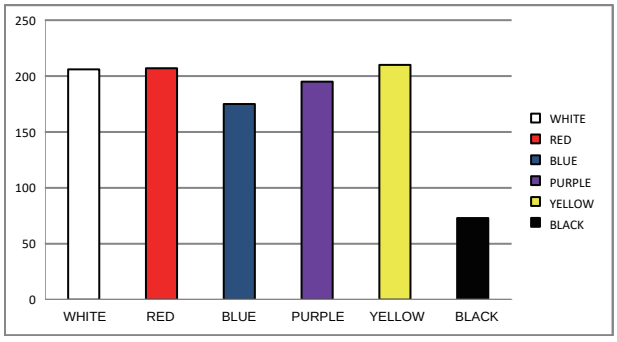


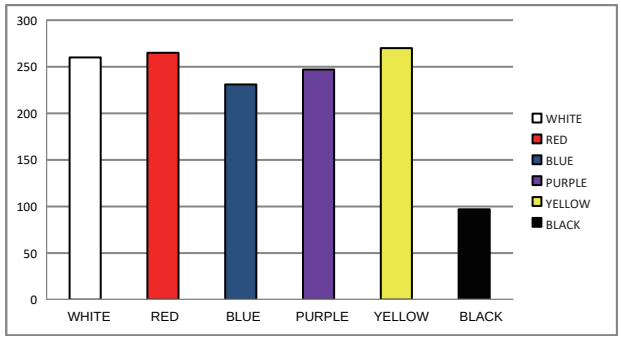
Fig.10

Attenuation figure:

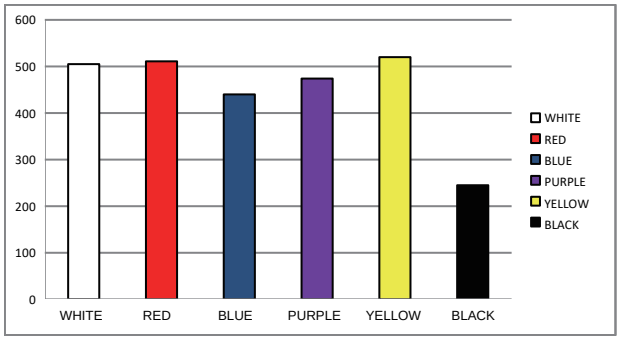
OM18-K100VP6



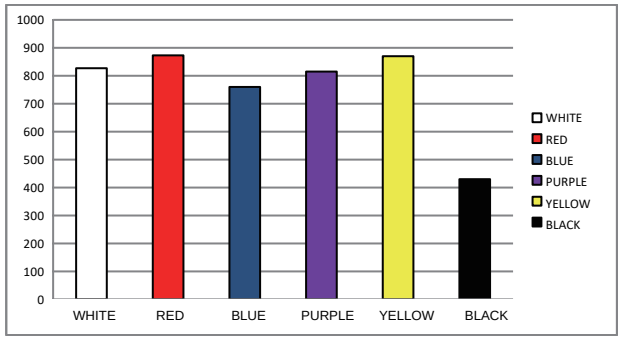
OM18-K200VP6



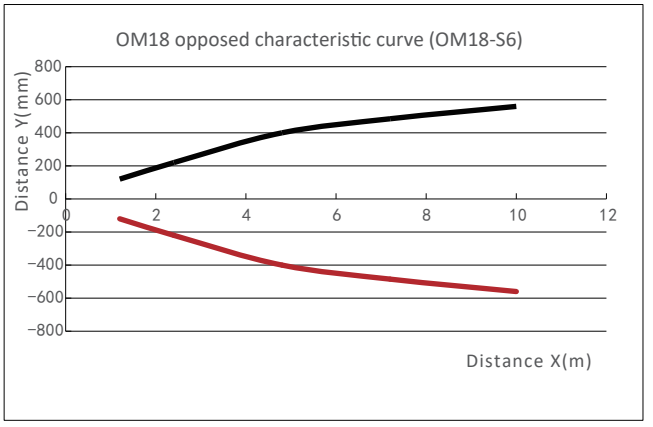
OM18-K400VP6

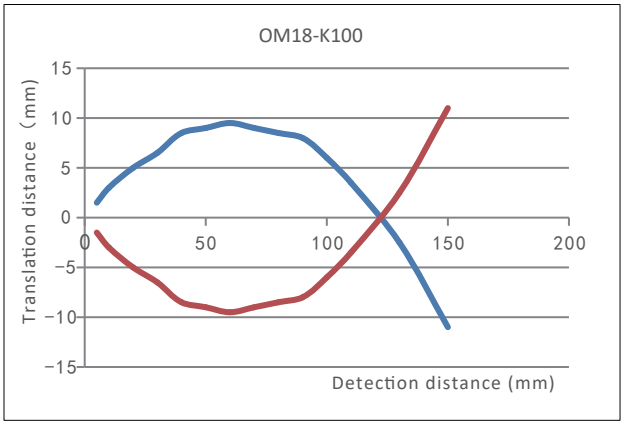


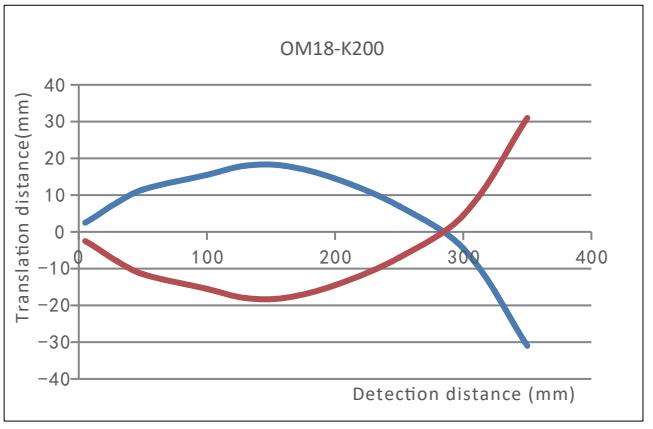
OM18-K600VP6

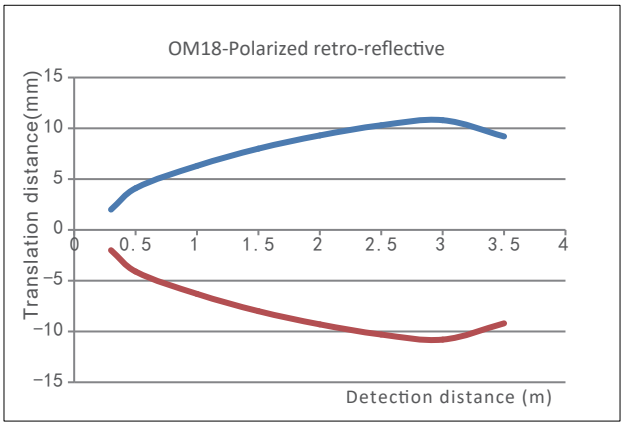


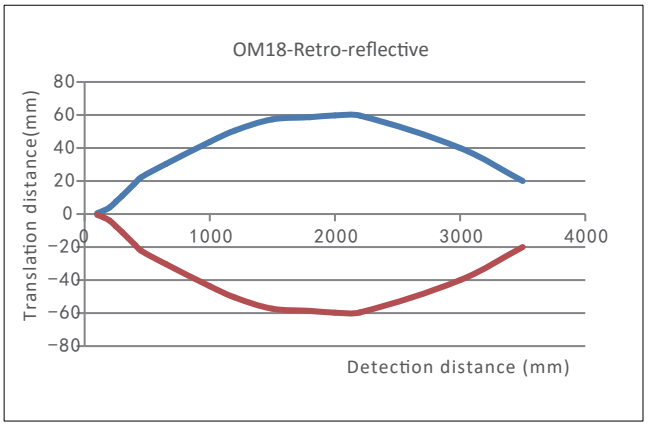
Translation characteristic curve:

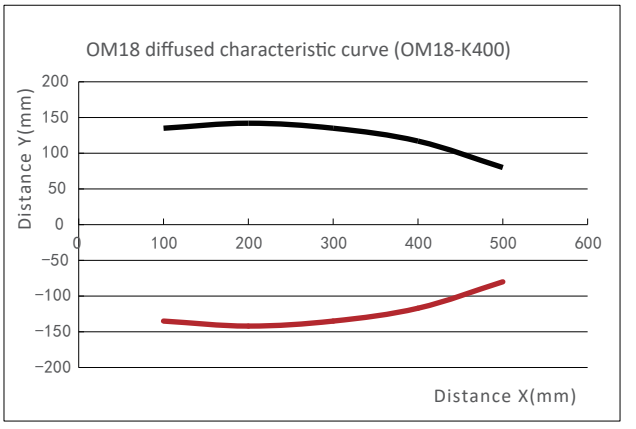


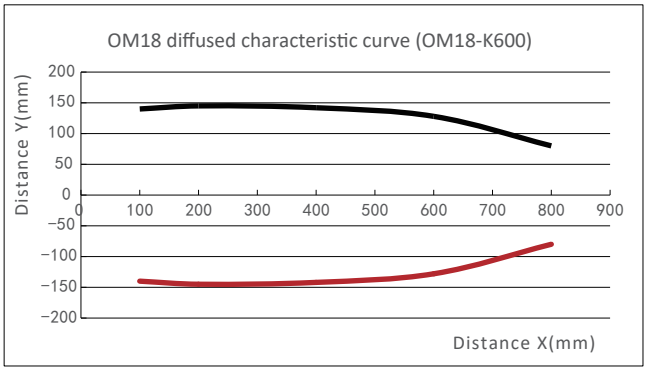






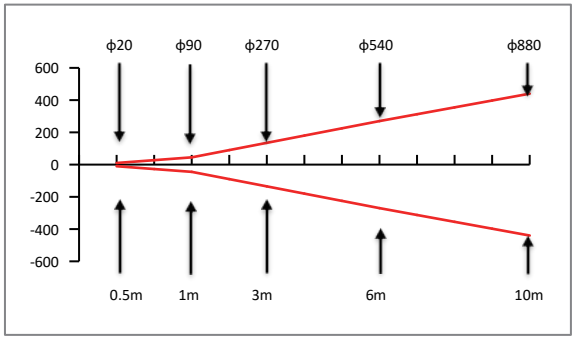




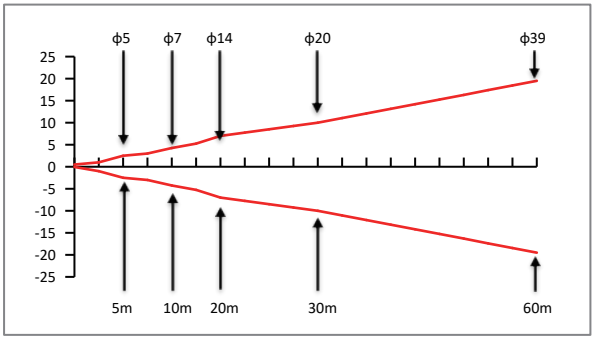


Beam Pattern:

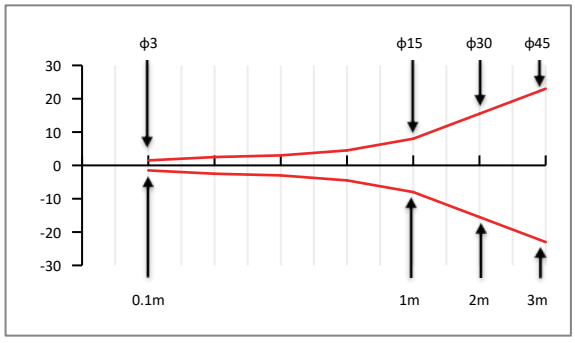
OM18-S6 (mm)



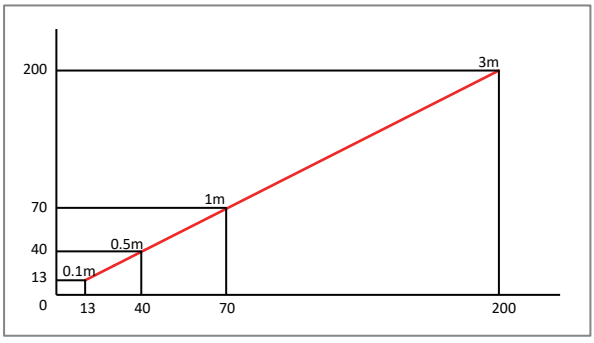
OM18-SL (mm)



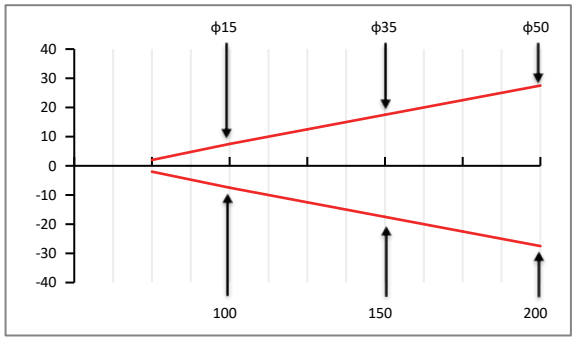
OM18-R (mm)



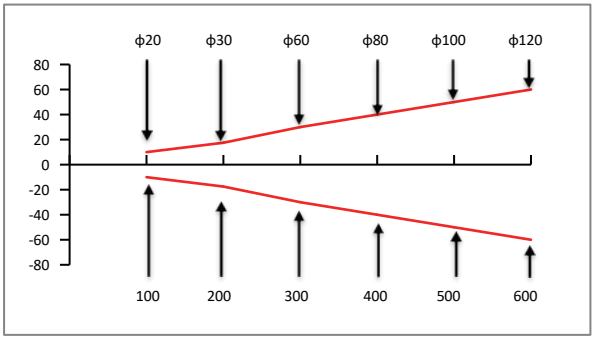
OM18-RP (mm)



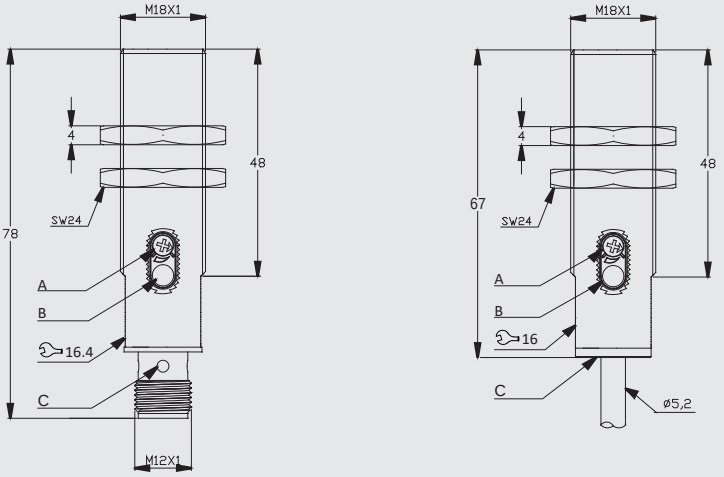
OM18-K100/200 (mm)



OM18-K400/600 (mm)



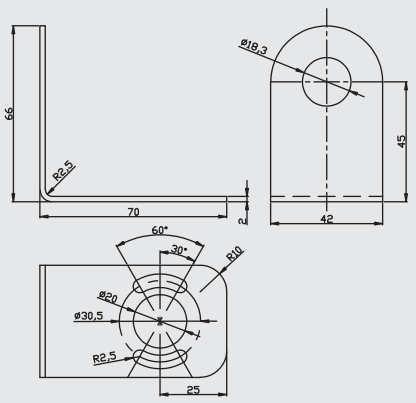
Dimensions:



A Sensitivity adjustment
B Steady state indicator
C Output indicator
Wrench slot

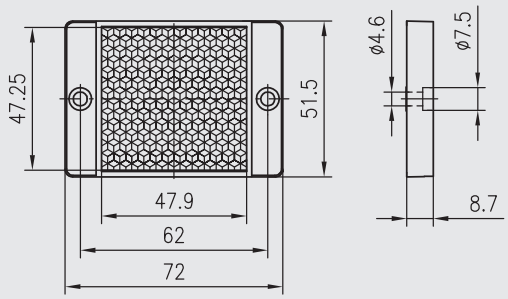
Mounting bracket (optional):

EOM18-1



Reflector (optional):

RB50x50-1



Photoelectric Sensors - Compact OG18

Description:

M18 barrel mounting mode, length 40mm, according to the needs of use, can provide red, infrared opposed products. Suitable for logistics transportation, gates, packaging and AGV.

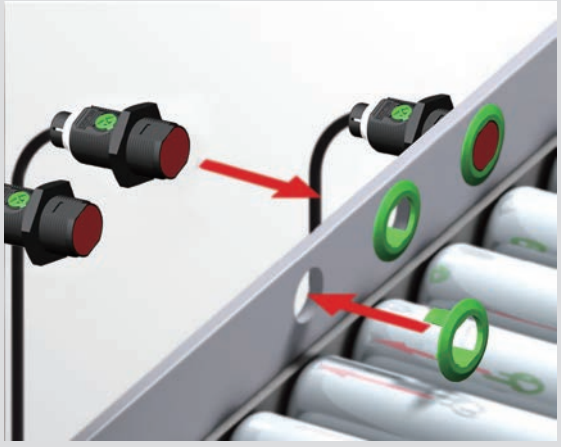
Features:

- Compact size
- Long sensing range
- Visible red LED light source

Sensor function description:

The embedded mounting bracket accessory enables the sensor to be flush mounted on the surface of the equipment, saving mounting time and reducing occupancy space

Clear and bright red LED visible light source, clear illumination position and long-distance position detection, suitable for various equipment applications



Type:

Detection mode	Type	Distance	Light source	Frequency	Output	Switching mode	Connection	Wiring
Opposed	OG18-S6 (emitter)	30 m	Infrared	— —	— —	— —	2 m cable	Fig. 1
	OG18-ECP6 (receiver)		— —	800 Hz	PNP	Light-on / Dark-on	2 m cable	Fig. 3
	OG18-ECN6 (receiver)		— —	800 Hz	NPN	Light-on / Dark-on	2 m cable	Fig. 2
	OG18-S6Q (emitter)	30 m	Infrared	— —	— —	— —	M12 connector	Fig. 6
	OG18-ECP6Q (receiver)		— —	800 Hz	PNP	Light-on / Dark-on	M12 connector	Fig. 8
	OG18-ECN6Q (receiver)		— —	800 Hz	NPN	Light-on / Dark-on	M12 connector	Fig. 7
Retro-reflective	OG18-RCP6	4 m	Red	800 Hz	PNP	Light-on / Dark-on	2 m cable	Fig. 3
	OG18-RCN6	4 m	Red	800 Hz	NPN	Light-on / Dark-on	2 m cable	Fig. 2
	OG18-RCP6Q	4 m	Red	800 Hz	PNP	Light-on / Dark-on	M12 connector	Fig. 8
	OG18-RCN6Q	4 m	Red	800 Hz	NPN	Light-on / Dark-on	M12 connector	Fig. 7
Polarized retro-reflective	OG18-RPCP6	4 m	Red	800 Hz	PNP	Light-on / Dark-on	2 m cable	Fig. 3
	OG18-RPCN6	4 m	Red	800 Hz	NPN	Light-on / Dark-on	2 m cable	Fig. 2
	OG18-RPCP6Q	4 m	Red	800 Hz	PNP	Light-on / Dark-on	M12 connector	Fig. 8
	OG18-RPCN6Q	4 m	Red	800 Hz	NPN	Light-on / Dark-on	M12 connector	Fig. 7
Diffused	OG18-K200CP6	200 mm	Red	800 Hz	PNP	Light-on / Dark-on	2 m cable	Fig. 3
	OG18-K200CN6	200 mm	Red	800 Hz	NPN	Light-on / Dark-on	2 m cable	Fig. 2
	OG18-K200CP6Q	200 mm	Red	800 Hz	PNP	Light-on / Dark-on	M12 connector	Fig. 8
	OG18-K200CN6Q	200 mm	Red	800 Hz	NPN	Light-on / Dark-on	M12 connector	Fig. 7
	OG18-K400CP6	400 mm	Red	800 Hz	PNP	Light-on / Dark-on	2 m cable	Fig. 3
	OG18-K400CN6	400 mm	Red	800 Hz	NPN	Light-on / Dark-on	2 m cable	Fig. 2
	OG18-K400CP6Q	400 mm	Red	800 Hz	PNP	Light-on / Dark-on	M12 connector	Fig. 8
	OG18-K400CN6Q	400 mm	Red	800 Hz	NPN	Light-on / Dark-on	M12 connector	Fig. 7
	OG18-K600CP6	600 mm	Red	800 Hz	PNP	Light-on / Dark-on	2 m cable	Fig. 3
	OG18-K600CN6	600 mm	Red	800 Hz	NPN	Light-on / Dark-on	2 m cable	Fig. 2
	OG18-K600CP6Q	600 mm	Red	800 Hz	PNP	Light-on / Dark-on	M12 connector	Fig. 8
	OG18-K600CN6Q	600 mm	Red	800 Hz	NPN	Light-on / Dark-on	M12 connector	Fig. 7
Fixed distance BGS	OG18-AK50VP6	5...50 mm	Red	800 Hz	PNP	NO+NC	2 m cable	Fig. 4
	OG18-AK50VN6	5...50 mm	Red	800 Hz	NPN	NO+NC	2 m cable	Fig. 5
	OG18-AK50VP6Q	5...50 mm	Red	800 Hz	PNP	NO+NC	M12 connector	Fig. 9
	OG18-AK50VN6Q	5...50 mm	Red	800 Hz	NPN	NO+NC	M12 connector	Fig. 10
	OG18-AK100VP6	8...100 mm	Red	800 Hz	PNP	NO+NC	2 m cable	Fig. 4
	OG18-AK100VN6	8...100 mm	Red	800 Hz	NPN	NO+NC	2 m cable	Fig. 5
	OG18-AK100VP6Q	8...100 mm	Red	800 Hz	PNP	NO+NC	M12 connector	Fig. 9
	OG18-AK100VN6Q	8...100 mm	Red	800 Hz	NPN	NO+NC	M12 connector	Fig. 10
	OG18-AK150VP6	10...150 mm	Red	800 Hz	PNP	NO+NC	2 m cable	Fig. 4
	OG18-AK150VN6	10...150 mm	Red	800 Hz	NPN	NO+NC	2 m cable	Fig. 5
	OG18-AK150VP6Q	10...150 mm	Red	800 Hz	PNP	NO+NC	M12 connector	Fig. 9
	OG18-AK150VN6Q	10...150 mm	Red	800 Hz	NPN	NO+NC	M12 connector	Fig. 10
	OG18-AK200VP6	10...200 mm	Red	800 Hz	PNP	NO+NC	2 m cable	Fig. 4
	OG18-AK200VN6	10...200 mm	Red	800 Hz	NPN	NO+NC	2 m cable	Fig. 5
	OG18-AK200VP6Q	10...200 mm	Red	800 Hz	PNP	NO+NC	M12 connector	Fig. 9
	OG18-AK200VN6Q	10...200 mm	Red	800 Hz	NPN	NO+NC	M12 connector	Fig. 10

Photoelectric Sensors - Compact OG18

Technical Data:

Operating voltage	10 ... 30 VDC
Ripple voltage	≤ 10 %
Light source	Red laser (650 nm)/class 1
No-load current	Opposed: ≤ 25 mA; Others: ≤ 15 mA
Load current	≤ 200 mA
Black and white attenuation	< 3 mm (AK50); < 10 mm (AK100); < 18 mm (AK150); < 23 mm (AK200)
Spot size	5 mm (AK50); 8 mm (AK100); 11 mm (AK150); 15 mm (AK200);
Protective circuit	Reverse polarity protection, short circuit protection, overload protection
Sensitivity	Adjustable, with single-turn knob. Fixed distance products are not adjustable.
Output indicator	Red LED
Steady state indicator	Green LED
Ambient temperature	-25 ... 55 °C
Storage temperature	-40 ... 70 °C
Voltage resistance	1000 V/AC 50/60Hz 60s
Insulation impedence	≥ 50MΩ (500VDC)
Shock resistance	Complex amplitude 1.5mm 10... 50Hz (2hr X, Y, Z respectively)
Impact resistance	500m/S^2 (50G) 3 times X, Y, Z respectively
Protection class	IP67
Housing material	PBT+ABS

Wiring:

Pre-wired cable

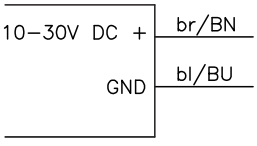


Fig. 1

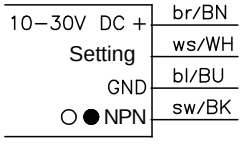


Fig. 2

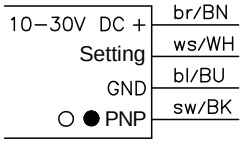


Fig. 3

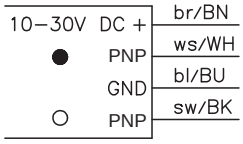


Fig. 4

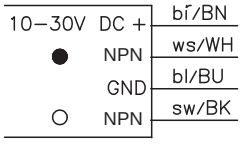


Fig. 5

M12 connector

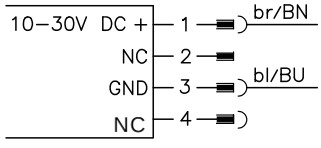


Fig. 6

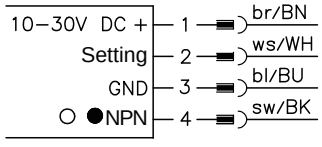


Fig. 7

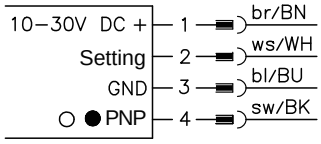


Fig. 8

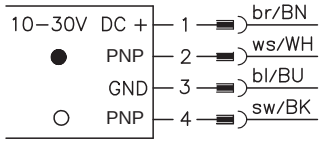


Fig. 9

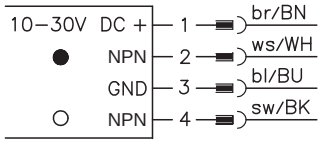
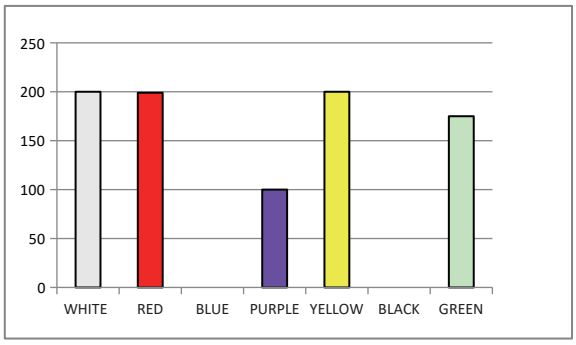


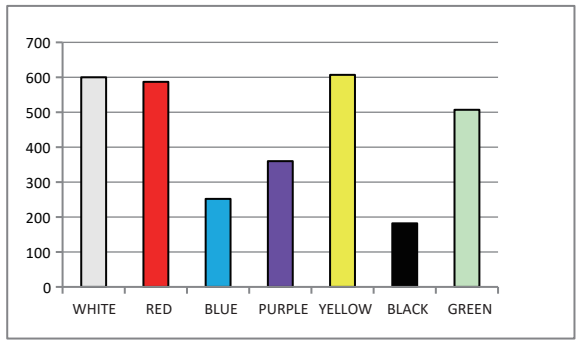
Fig. 10

Attenuation figure:

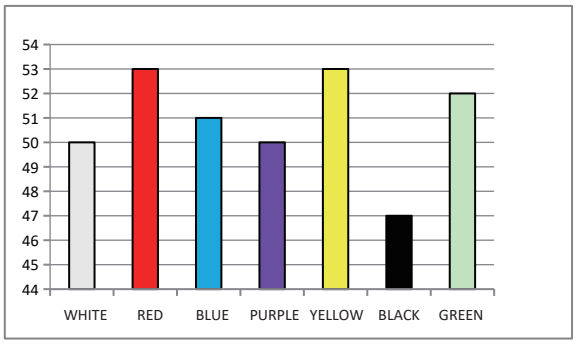
OG18-K200



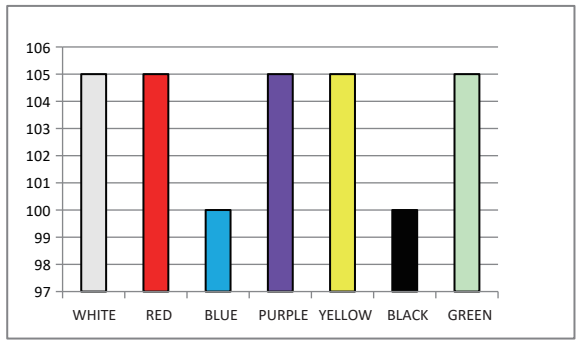
OG18-K600



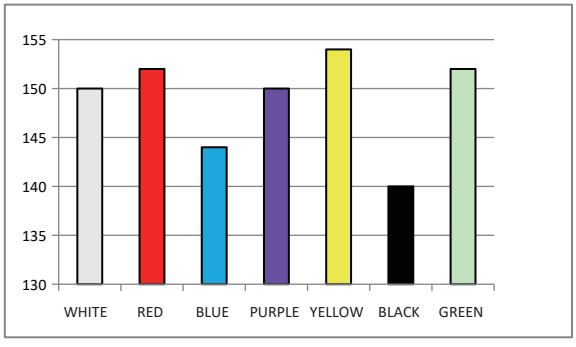
OG18-AK50



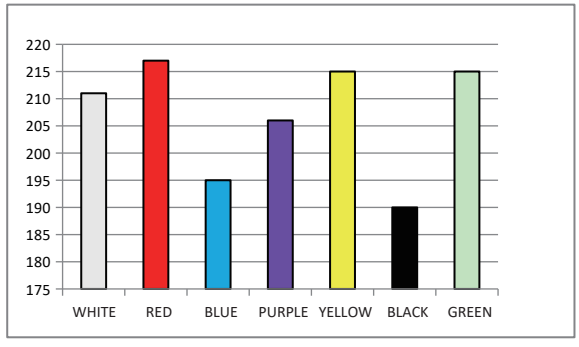
OG18-AK100



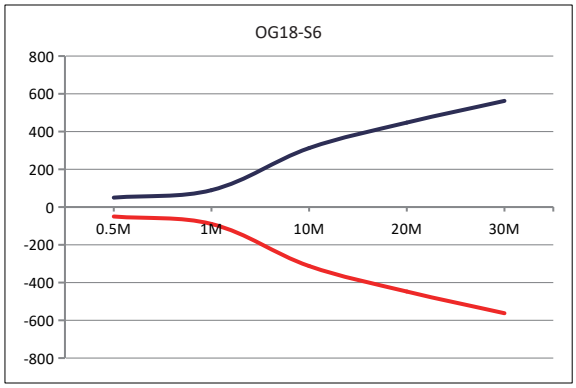
OG18-AK150

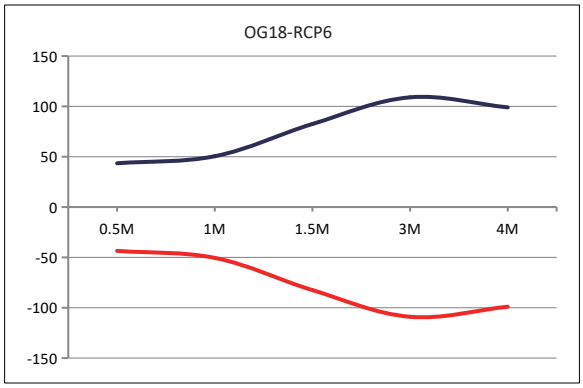


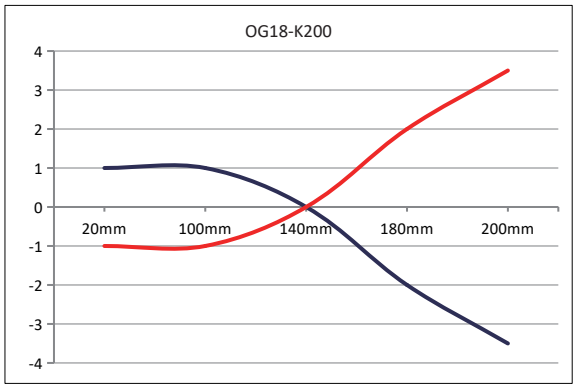
OG18-AK200

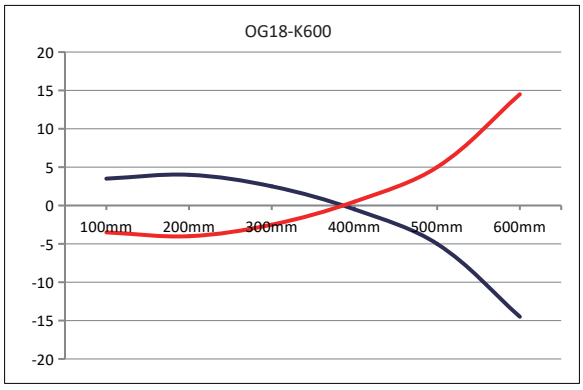


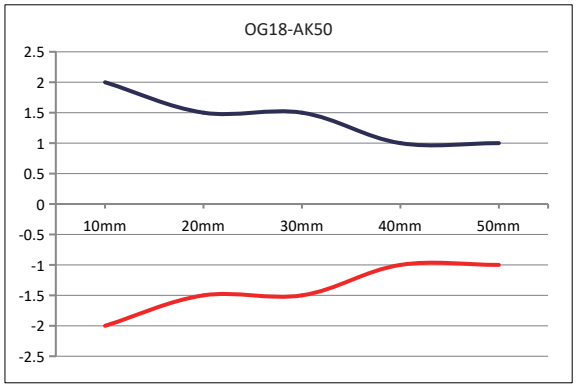
Translation characteristic curve :

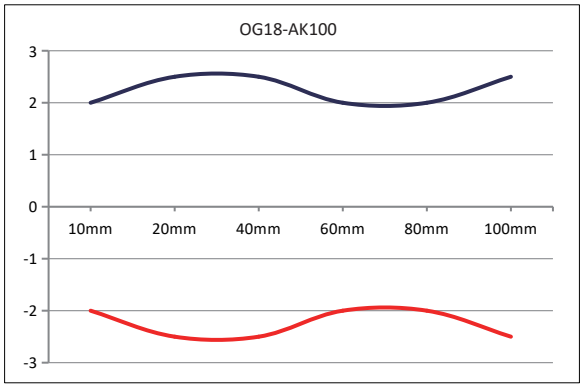


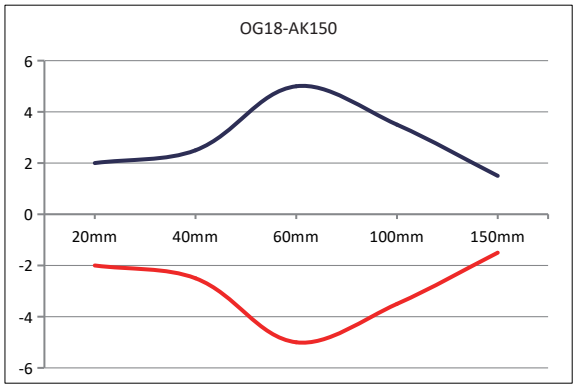


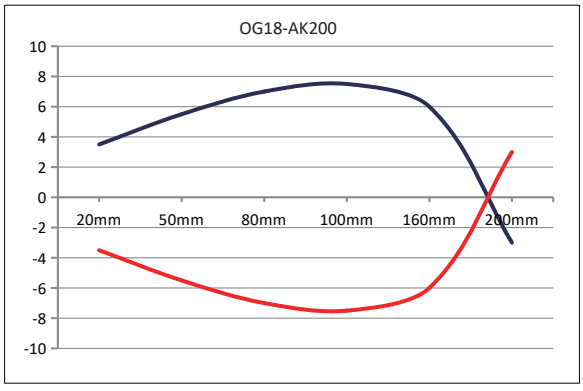






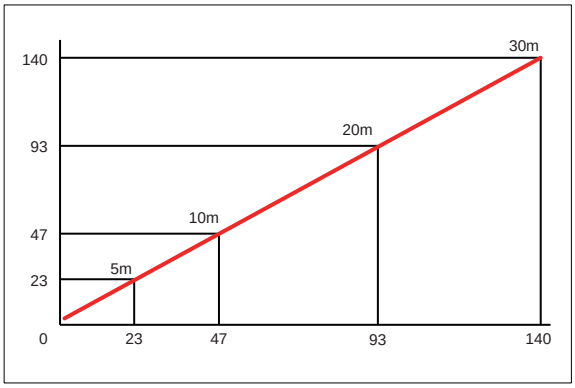




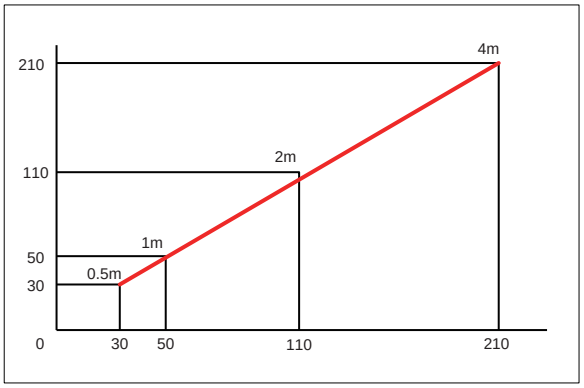


Beam Pattern :

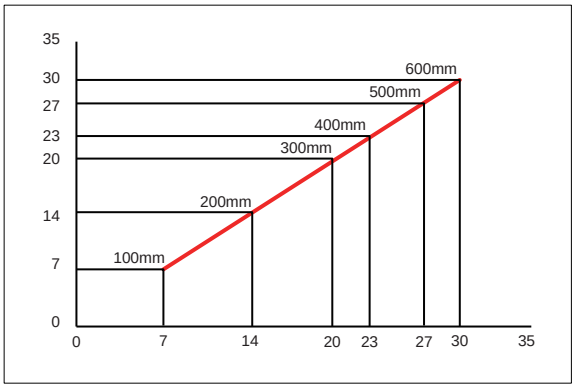
OG18-S6 (cm)



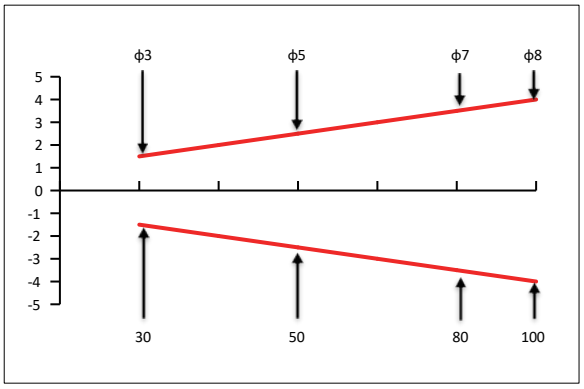
OG18-RP/R (mm)



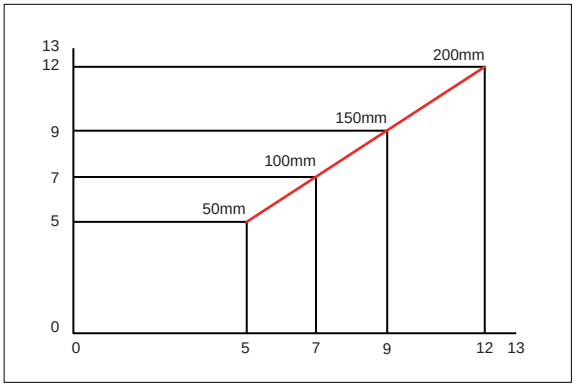
OG18-K (mm)



OG18-AK50/100 (mm)

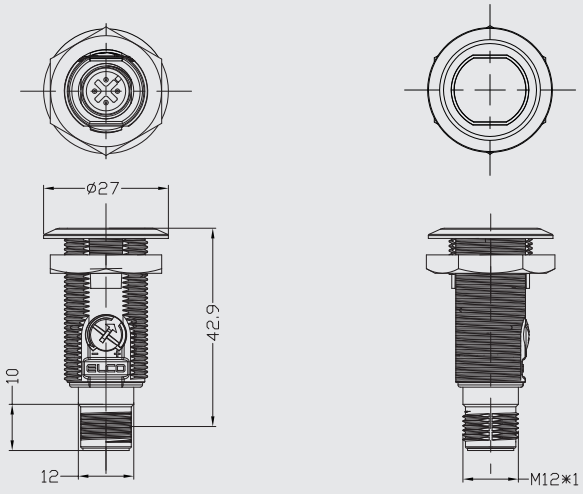


OG18-AK150/200 (mm)

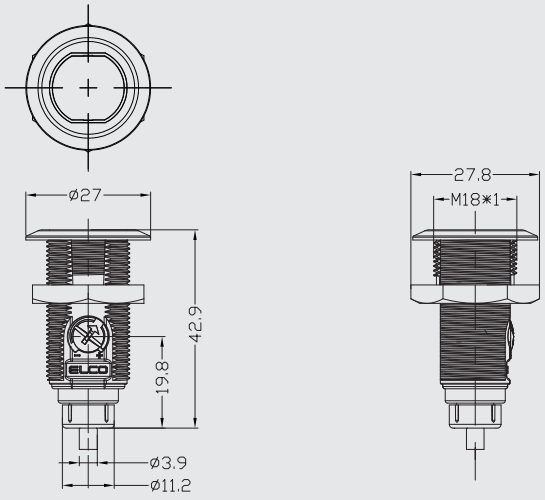


Dimensions:

M12 connector

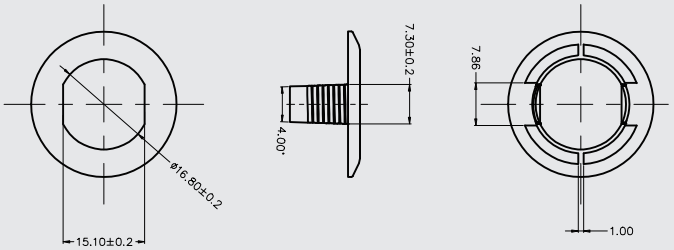


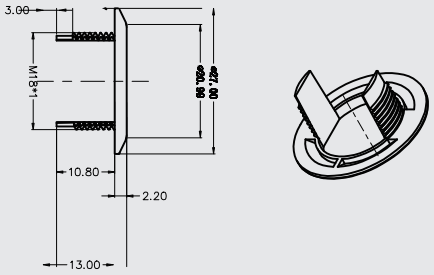
2m cable



Mounting bracket (standard):

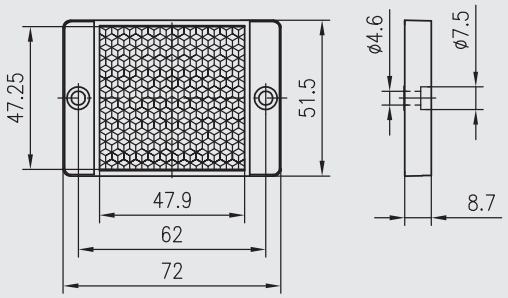
EOG18-1





Reflector (optional):

RB50x50-1



Photoelectric Sensors - Compact OSQ18

Description:

Optional mounting methods: mounting hole for barrel series or screw for rectangular series, 30m long distance opposed, laser beam products. Set the distance BGS type products have excellent black and white attenuation characteristics, suitable for automotive parts, packaging, logistics transportation, metal processing and others.

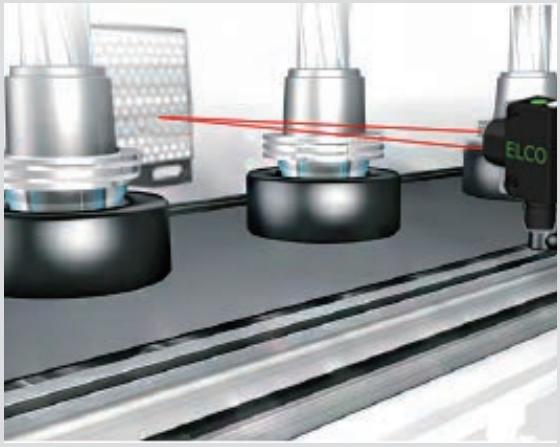
Features:

- Compact size
- Long sensing range
- Visible red beam, laser beam

Sensor function description:

The laser beam opposed, the ultra-fine spot does not diverge. Close mounting does not interfere with each other. Multiple pairs of side-by-side mounted sensors measure carton's height which is economical and practical.

Polarized retro-reflective photoelectric sensor is suitable for automotive, metal processing, printing and other industries, can stably detect highly reflective objects.



Type:

Detection mode	Type	Distance	Light source	Frequency	Output	Switching mode	Connection	Wiring
Opposed	OSQ18-S6 (emitter)	25 m	Infrared	— —	— —	— —	2 m cable	Fig.1
	OSQ18-EVP6 (receiver)		— —	800 Hz	PNP	NO+NC	2 m cable	Fig.3
	OSQ18-EVN6 (receiver)		— —	800 Hz	NPN	NO+NC	2 m cable	Fig.4
	OSQ18-S6Q (emitter)	25 m	Infrared	— —	— —	— —	M12 connector	Fig.2
	OSQ18-EVP6Q (receiver)		— —	800 Hz	PNP	NO+NC	M12 connector	Fig.5
	OSQ18-EVN6Q (receiver)		— —	800 Hz	NPN	NO+NC	M12 connector	Fig.6
	OSQ18-SL306 (emitter)	30 m	laser	— —	— —	— —	2 m cable	Fig.1
	OSQ18-EL30VP6 (receiver)		— —	800 Hz	PNP	NO+NC	2 m cable	Fig.3
	OSQ18-EL30VN6 (receiver)		— —	800 Hz	NPN	NO+NC	2 m cable	Fig.4
	OSQ18-SL306Q (emitter)	30 m	laser	— —	— —	— —	M12 connector	Fig.2
	OSQ18-EL30VP6Q (receiver)		— —	800 Hz	PNP	NO+NC	M12 connector	Fig.5
	OSQ18-EL30VN6Q (receiver)		— —	800 Hz	NPN	NO+NC	M12 connector	Fig.6
Retro-reflective	OSQ18-RVP6	3.5 m	Red	800 Hz	PNP	NO+NC	2 m cable	Fig.3
	OSQ18-RVN6	3.5 m	Red	800 Hz	NPN	NO+NC	2 m cable	Fig.4
	OSQ18-RVP6Q	3.5 m	Red	800 Hz	PNP	NO+NC	M12 connector	Fig.5
	OSQ18-RVN6Q	3.5 m	Red	800 Hz	NPN	NO+NC	M12 connector	Fig.6
Polarized retro-reflective	OSQ18-RPVP6	3.5 m	Red	800 Hz	PNP	NO+NC	2 m cable	Fig.3
	OSQ18-RPVN6	3.5 m	Red	800 Hz	NPN	NO+NC	2 m cable	Fig.4
	OSQ18-RPVP6Q	3.5 m	Red	800 Hz	PNP	NO+NC	M12 connector	Fig.5
	OSQ18-RPVN6Q	3.5 m	Red	800 Hz	NPN	NO+NC	M12 connector	Fig.6
Laser Polarized retro-reflective	OSQ18-RPLVP6	0.1...8m	laser	800 Hz	PNP	NO+NC	2 m cable	Fig.3
	OSQ18-RPLVN6	0.1...8m	laser	800 Hz	NPN	NO+NC	2 m cable	Fig.4
Diffused	OSQ18-K200VP6	200 mm	Red	800 Hz	PNP	NO+NC	2m cable	Fig.7
	OSQ18-K200VN6	200 mm	Red	800 Hz	NPN	NO+NC	2m cable	Fig.8
	OSQ18-K200VP6Q	200 mm	Red	800 Hz	PNP	NO+NC	M12 connector	Fig.9
	OSQ18-K200VN6Q	200mm	Red	800 Hz	NPN	NO+NC	M12 connector	Fig.10
	OSQ18-K400VP6	400 mm	Red	800 Hz	PNP	NO+NC	2 m cable	Fig.7
	OSQ18-K400VN6	400 mm	Red	800 Hz	NPN	NO+NC	2 m cable	Fig.8
	OSQ18-K400VP6Q	400 mm	Red	800 Hz	PNP	NO+NC	M12 connector	Fig.9
	OSQ18-K400VN6Q	400 mm	Red	800 Hz	NPN	NO+NC	M12 connector	Fig.10
	OSQ18-K600VP6	600 mm	Red	800 Hz	PNP	NO+NC	2 m cable	Fig.7
	OSQ18-K600VN6	600 mm	Red	800 Hz	NPN	NO+NC	2 m cable	Fig.8
	OSQ18-K600VP6Q	600 mm	Red	800 Hz	PNP	NO+NC	M12 connector	Fig.9
	OSQ18-K600VN6Q	600 mm	Red	800 Hz	NPN	NO+NC	M12 connector	Fig.10

Photoelectric Sensors - Compact OSQ18

Type:

Detection mode	Type	Distance	Light source	Frequency	Output	Switching mode	Connection	Wiring
BGS	OSQ18-AK50VP6	5...50 mm	Red	800 Hz	PNP	NO+NC	2 m cable	Fig.7
	OSQ18-AK50VN6	5...50 mm	Red	800 Hz	NPN	NO+NC	2 m cable	Fig.8
	OSQ18-AK50VP6Q	5...50 mm	Red	800 Hz	PNP	NO+NC	M12 connector	Fig.9
	OSQ18-AK50VN6Q	5...50 mm	Red	800 Hz	NPN	NO+NC	M12 connector	Fig.10
	OSQ18-AK100VP6	8...100 mm	Red	800 Hz	PNP	NO+NC	2 m cable	Fig.7
	OSQ18-AK100VN6	8...100 mm	Red	800 Hz	NPN	NO+NC	2 m cable	Fig.8
	OSQ18-AK100VP6Q	8...100 mm	Red	800 Hz	PNP	NO+NC	M12 connector	Fig.9
	OSQ18-AK100VN6Q	8...100 mm	Red	800 Hz	NPN	NO+NC	M12 connector	Fig.10
	OSQ18-AK150VP6	10...150 mm	Red	800 Hz	PNP	NO+NC	2 m cable	Fig.7
	OSQ18-AK150VN6	10...150 mm	Red	800 Hz	NPN	NO+NC	2 m cable	Fig.8
	OSQ18-AK150VP6Q	10...150 mm	Red	800 Hz	PNP	NO+NC	M12 connector	Fig.9
	OSQ18-AK150VN6Q	10...150 mm	Red	800 Hz	NPN	NO+NC	M12 connector	Fig.10
	OSQ18-AK200VP6	10...200 mm	Red	800 Hz	PNP	NO+NC	2 m cable	Fig.7
	OSQ18-AK200VN6	10...200 mm	Red	800 Hz	NPN	NO+NC	2 m cable	Fig.8
	OSQ18-AK200VP6Q	10...200 mm	Red	800 Hz	PNP	NO+NC	M12 connector	Fig.9
	OSQ18-AK200VN6Q	10...200 mm	Red	800 Hz	NPN	NO+NC	M12 connector	Fig.10

Technical Data:

Operating voltage	10 ... 30 VDC
Ripple voltage	≤ 10 %
Light source	Red laser (650 nm)/class 1
No-load current	Opposed: ≤ 25 mA; Others: ≤ 15 mA
Load current	≤ 200 mA
Black and white attenuation	< 3 mm (AK50); < 10 mm (AK100); < 15 mm (AK150)
Spot size	5 mm (AK50); 8 mm (AK100); 10 mm (AK150)
Protective circuit	Reverse polarity protection, short circuit protection, overload protection
Sensitivity	Adjustable, with single-turn knob. Fixed distance products are not adjustable.
Output indicator	Red LED
Steady state indicator	Green LED
Ambient temperature	-25...55°C
Storage temperature	-40...70°C
Voltage resistance	1000 V/AC 50/60Hz 60s
Insulation impedence	≥ 50 MΩ (500VDC)
Shock resistance	Complex amplitude 1.5mm 10... 50Hz (2hr X, Y, Z respectively)
Impact resistance	500m/S^2 (50G) 3 times X, Y, Z respectively
Protection class	IP67
Housing material	PBT+ABS

Wiring:

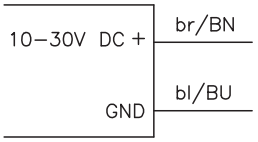


Fig. 1

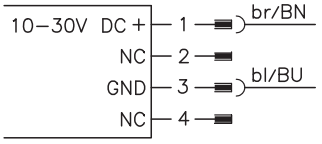


Fig. 2

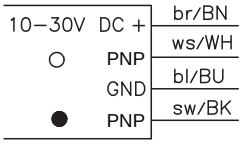


Fig. 3

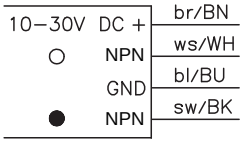


Fig. 4

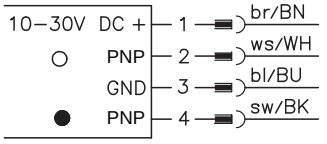


Fig. 5

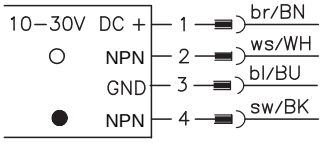


Fig. 6

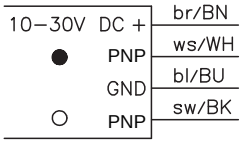


Fig. 7

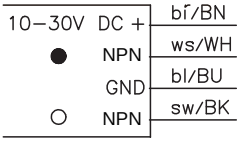


Fig. 8

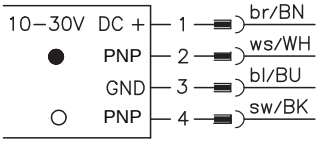


Fig. 9

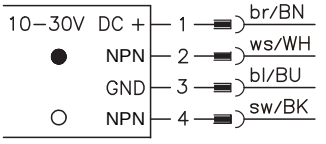
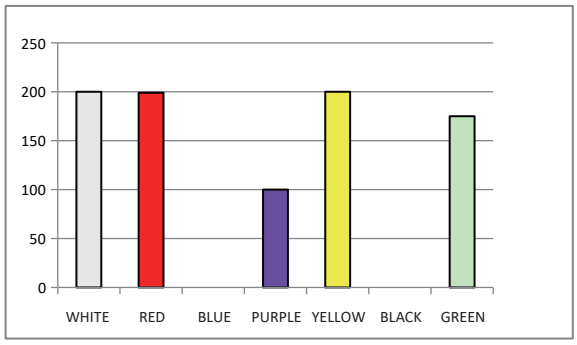


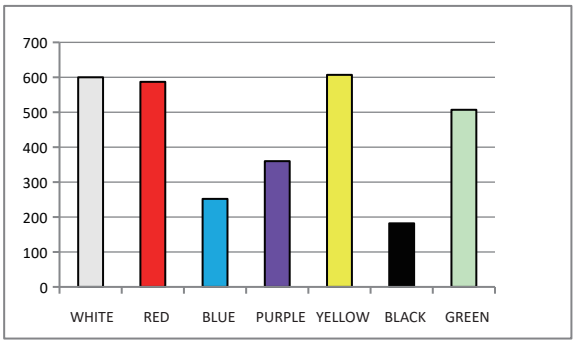
Fig. 10

Attenuation figure :

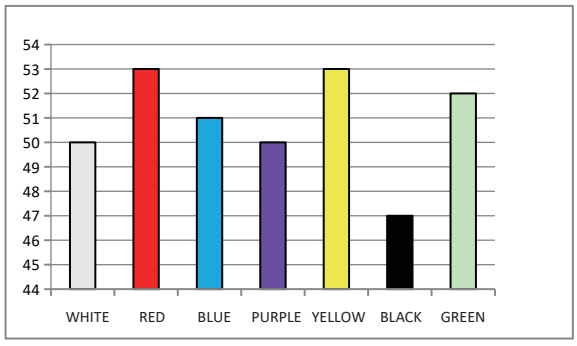
OSQ18-K200



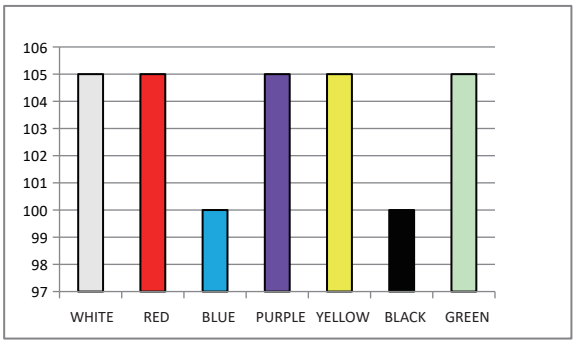
OSQ18-K600



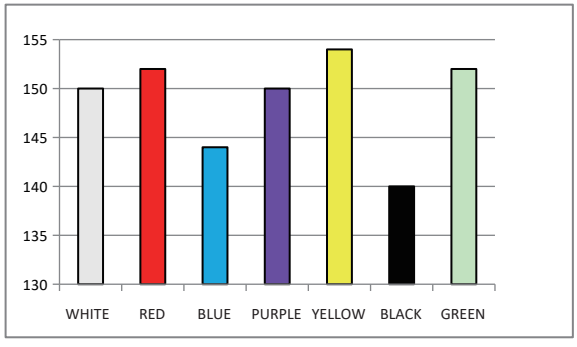
OSQ18-AK50



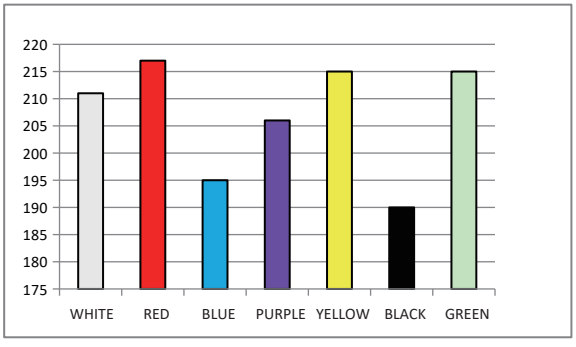
OSQ18-AK100



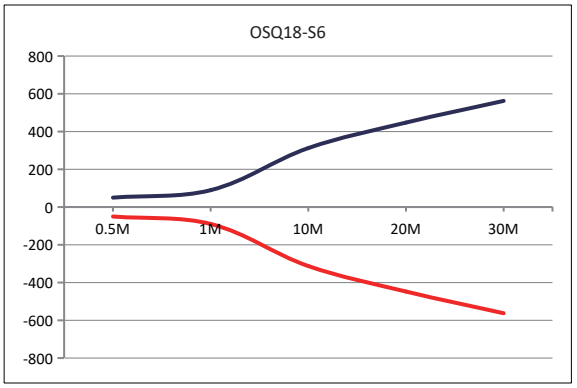
OSQ18-AK150

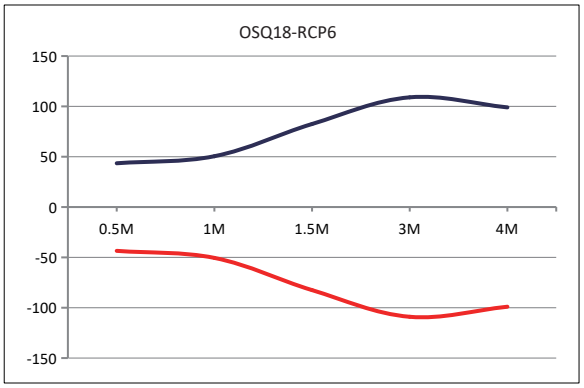


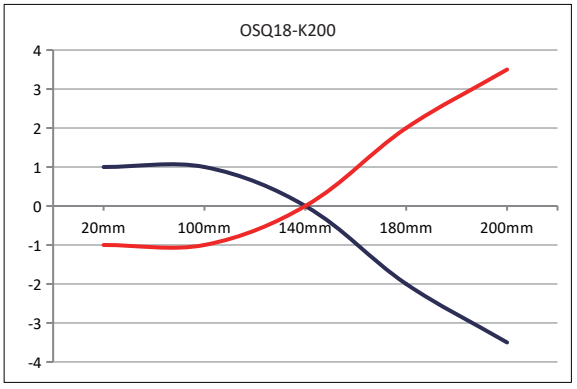
OSQ18-AK200

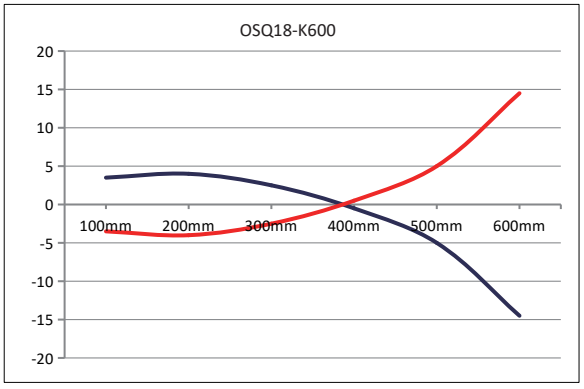


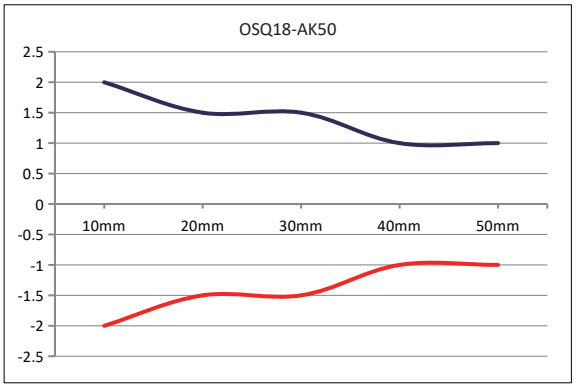
Translation characteristic curve :

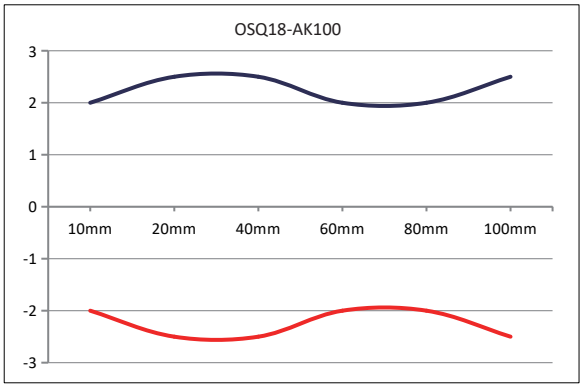


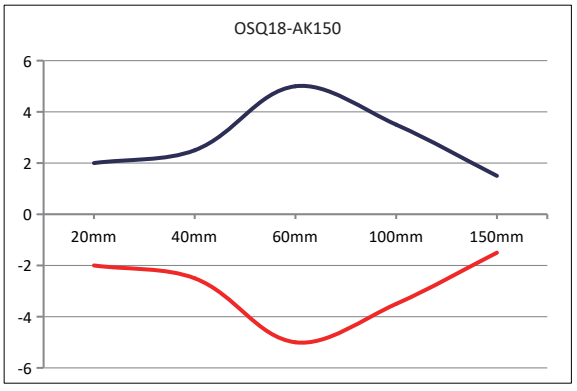


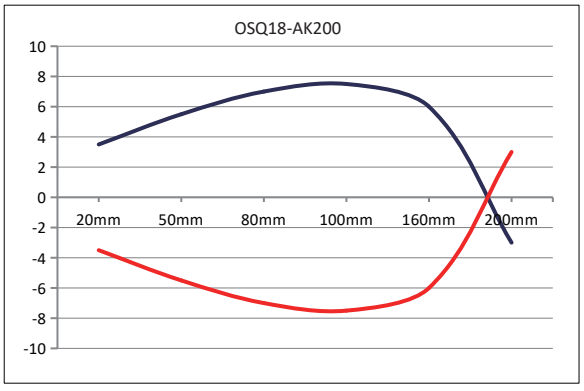






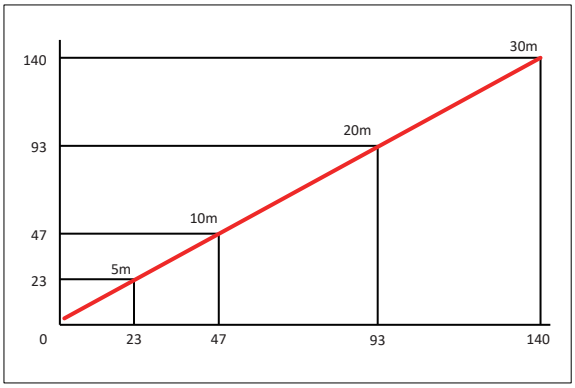




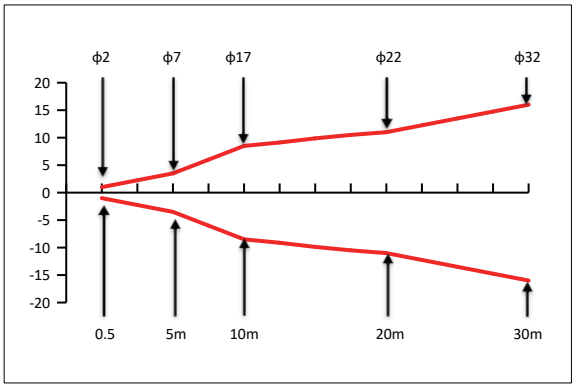


Beam Pattern:

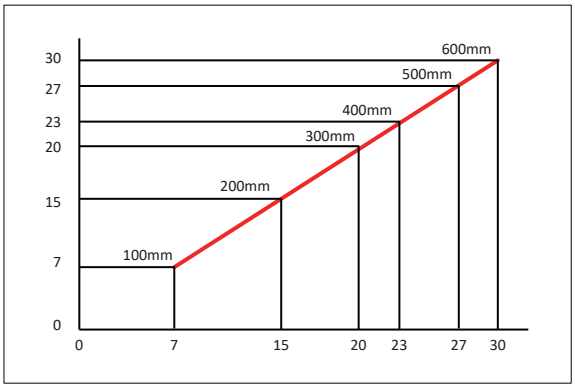
OSQ18-S6 (cm)



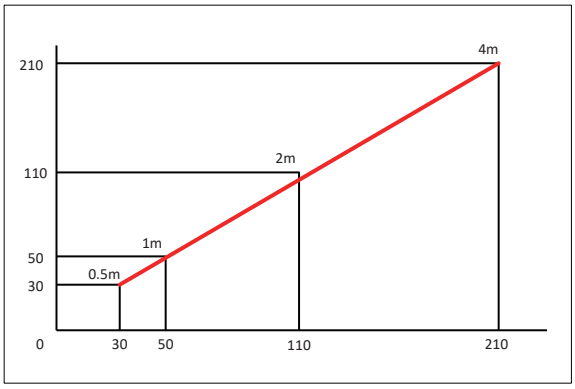
OSQ18-SL (mm)



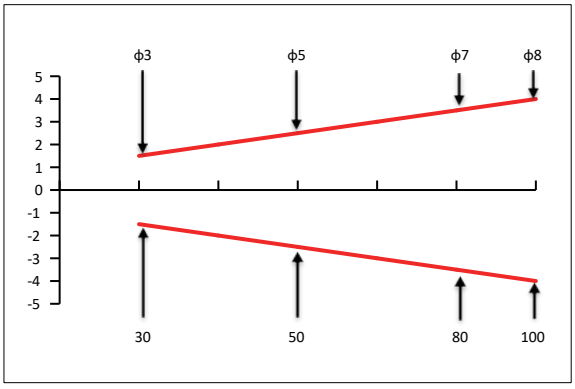
OSQ18-K (mm)



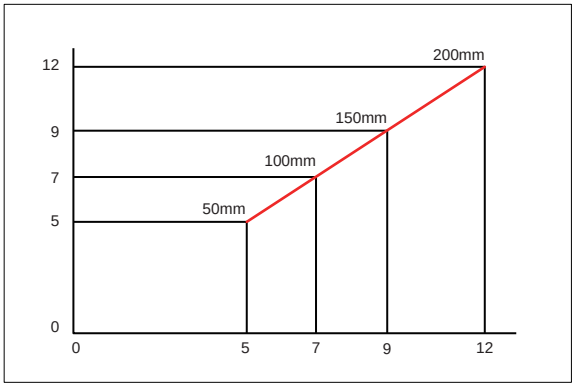
OSQ18-RP/R (mm)



OSQ18-AK50/100 (mm)

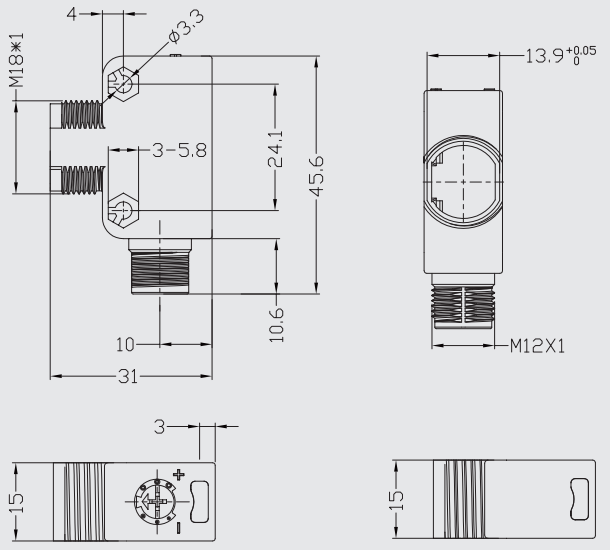


OSQ18-AK150/200 (mm)

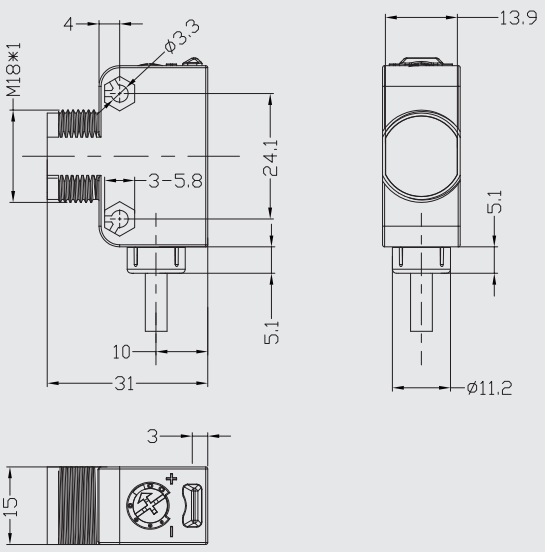


Dimensions:

M12 connector

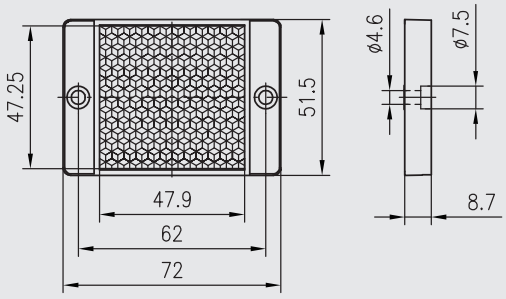


2m cable



Reflector (optional) :

RB50x50-1



Photoelectric Sensors - thin size OS4

Description:

The thin design is very suitable for limited mounting space requirement in electronic, semiconductor and other industries. BGS products have excellent black-and-white attenuation characteristics, Suitable for detecting non-bright surface objects.

Features:

- Red beam
- Mounting hole Φ2, built-in metal parts,strong and long life-time
- IP67

Type:

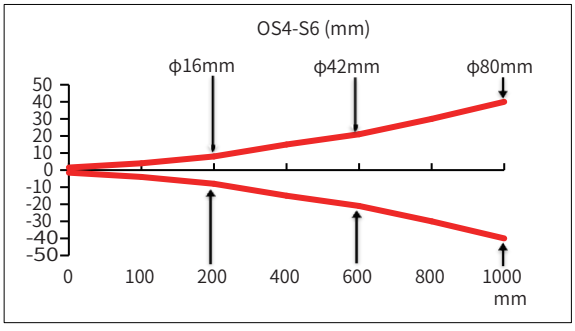
Detection mode	Type	Distance	Light source	Frequency	Output	Switching mode	Connection	Wiring
Front Opposed	OS4-S6 (emitter)	1m	Red	— —	— —	— —	2m cable	Fig.1
	OS4-SS6 (emitter)		Point light	— —	— —	— —	2m cable	Fig.1
	OS4-ELN6 (receiver)		— —	800Hz	NPN	Light on	2m cable	Fig.2
	OS4-EDN6 (receiver)		— —	800Hz	NPN	Dark on	2m cable	Fig.3
	OS4-ELP6 (receiver)		— —	800Hz	PNP	Light on	2m cable	Fig.4
	OS4-EDP6 (receiver)		— —	800Hz	PNP	Dark on	2m cable	Fig.5
Side Opposed	OS4B-S6 (emitter)	1m	Red	— —	— —	— —	2m cable	Fig.1
	OS4B-ELN6 (receiver)		— —	800Hz	NPN	Light on	2m cable	Fig.2
	OS4B-EDN6 (receiver)		— —	800Hz	NPN	Dark on	2m cable	Fig.3
	OS4B-ELP6 (receiver)		— —	800Hz	PNP	Light on	2m cable	Fig.4
	OS4B-EDP6 (receiver)		— —	800Hz	PNP	Dark on	2m cable	Fig.5
BGS	OS4-AK15LN6	4...15mm	Red	800Hz	NPN	Light on	2m cable	Fig.2
	OS4-AK15DN6		Red	800Hz	NPN	Dark on	2m cable	Fig.3
	OS4-AK15LP6		Red	800Hz	PNP	Light on	2m cable	Fig.4
	OS4-AK15DP6		Red	800Hz	PNP	Dark on	2m cable	Fig.5
	OS4-AK30LN6	5...30mm	Red	800Hz	NPN	Light on	2m cable	Fig.2
	OS4-AK30DN6		Red	800Hz	NPN	Dark on	2m cable	Fig.3
	OS4-AK30LP6		Red	800Hz	PNP	Light on	2m cable	Fig.4
	OS4-AK30DP6		Red	800Hz	PNP	Dark on	2m cable	Fig.5
	OS4-AKS15LN6	4...15mm	Point light	800Hz	NPN	Light on	2m cable	Fig.2
	OS4-AKS15DN6		Point light	800Hz	NPN	Dark on	2m cable	Fig.3
	OS4-AKS15LP6		Point light	800Hz	PNP	Light on	2m cable	Fig.4
	OS4-AKS15DP6		Point light	800Hz	PNP	Dark on	2m cable	Fig.5
	OS4-AKS30LN6	5...30mm	Point light	800Hz	NPN	Light on	2m cable	Fig.2
	OS4-AKS30DN6		Point light	800Hz	NPN	Dark on	2m cable	Fig.3
	OS4-AKS30LP6		Point light	800Hz	PNP	Light on	2m cable	Fig.4
	OS4-AKS30DP6		Point light	800Hz	PNP	Dark on	2m cable	Fig.5

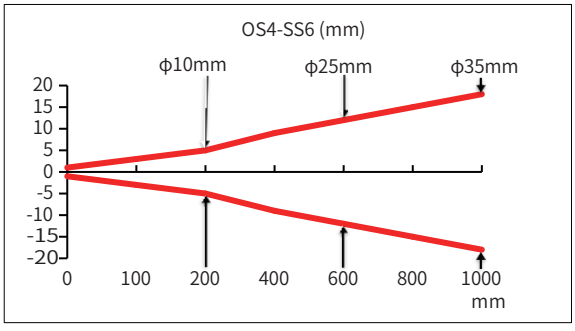
*Background suppression： Object with 90% remission (based on standard white, DIN 5033).

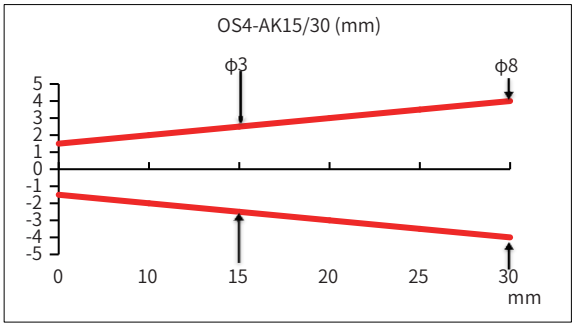
Technical Data:

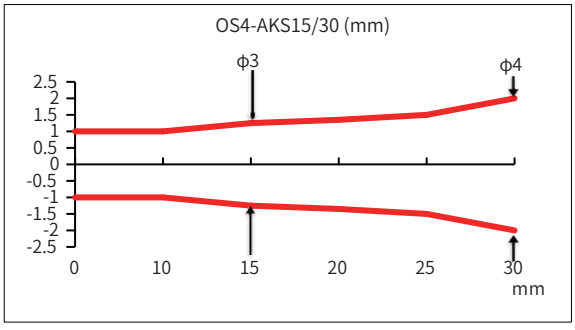
Operating voltage	10...30VDC
Ripple voltage	≤10%
Output type	PNP/NPN (Depends on the model)
Switch mode	Light on/dark on (Depends on the model)
No-load current	≤20mA
load current	≤50mA
Light source	Small red beam (630nm)
Spot size	4mm@30mm (point light BGS), 8mm@30mm (red beam BGS), 35mm@1m (point light opposed), 80mm@1m (beam opposed)
Connection	2m cable
Output indicator	Red LED
Power indicator	Green LED
Housing material	PC+PBT
Lens material	PC
Protection class	IP67
Ambient temperature	-10...+55°C
Storage temperature	-40...+70°C
Protection circuit	Reverse polarity protection, short circuit protection, overload protection, voltage shock protection
Voltage withstanding	650VAC <1mA
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

Beam Pattern :









Wiring:

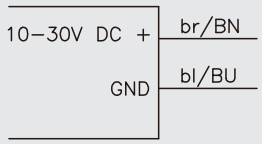


Fig.1

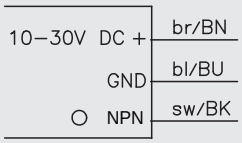


Fig.2

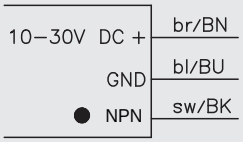


Fig.3

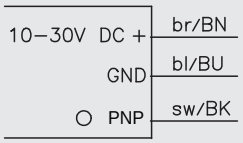


Fig.4

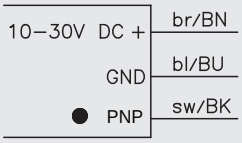
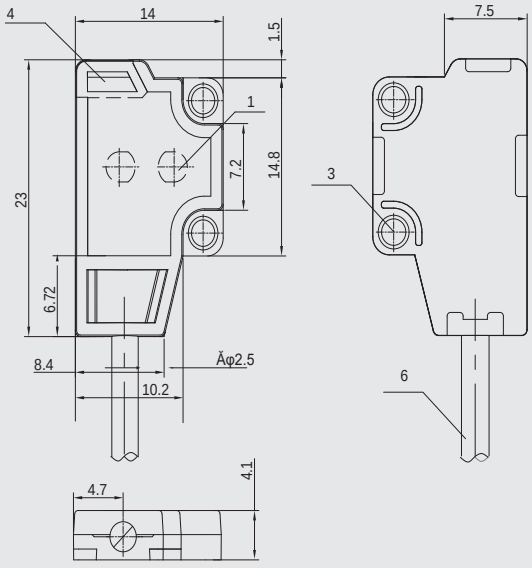


Fig.5

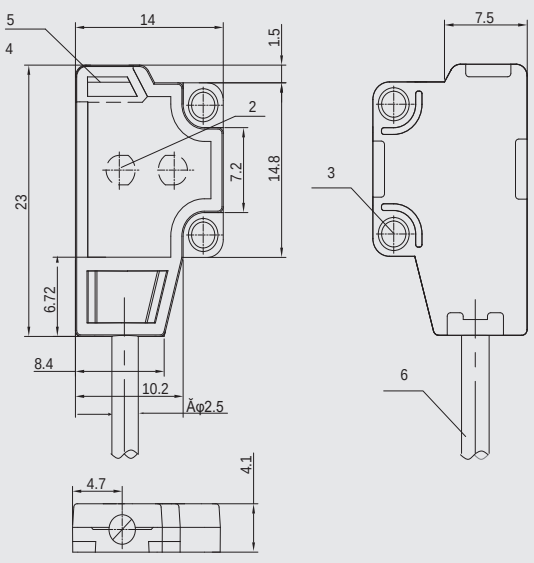
Dimensions:

Front opposed:

Emitter:



Receiver:

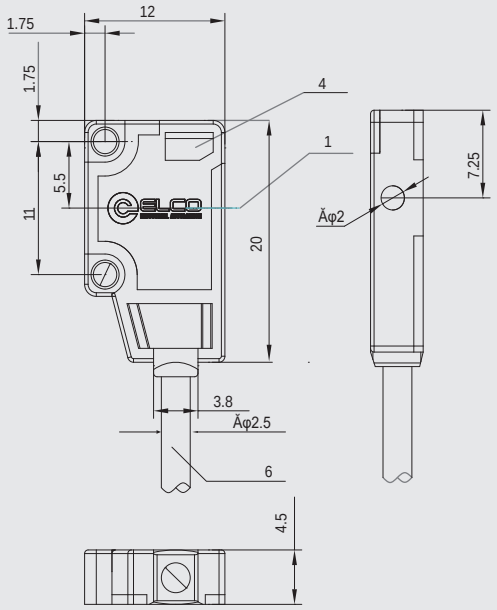


1	Emitter optic axis
2	Receiver optic axis
3	Mounting hole ϕ2mm
4	Green LED: power on
5	Red LED: on/off
6	Connection: 2m cable

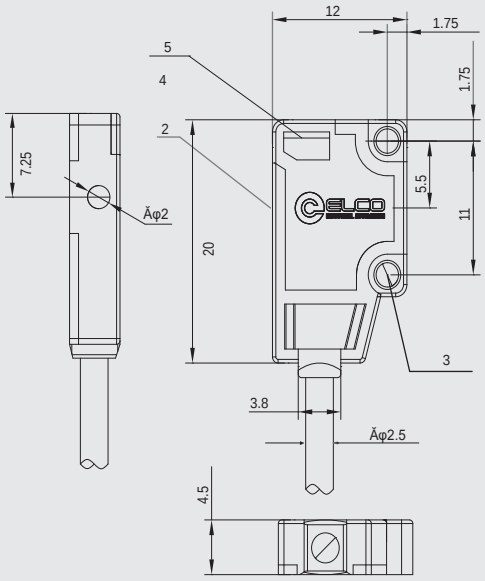
Dimensions:

Side opposed:

Emitter:

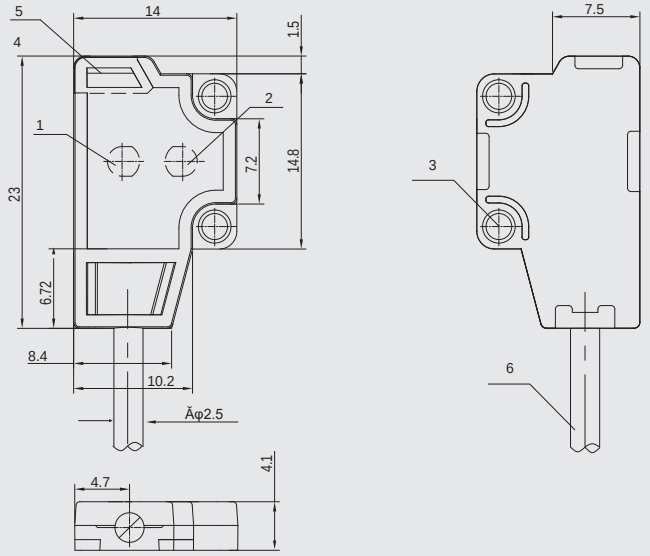


Receiver:



1	Emitter optic axis
2	Receiver optic axis
3	Mounting hole ϕ2mm
4	Green LED: power on
5	Red LED: on/off
6	Connection: 2m cable

BGS:



1	Emitter optic axis
2	Receiver optic axis
3	Mounting hole ϕ2mm
4	Green LED: power on
5	Red LED: on/off
6	Connection: 2m cable

Photoelectric Sensors - Mini OS22

Description:

The compact design is very suitable for limited mounting space requirement in electronic, semiconductor and other industries. BGS products have excellent black-and-white attenuation characteristics, suitable for detecting non-bright surface objects.

Features:

- Small red beam
- Mounting hole Φ3, built-in metal parts,strong and long life-time
- Small red beam, Vcsel laser

Type:

Detection mode	Type	Distance	Light source	Frequency	Output	Switching mode	Connection	Wiring
Opposed	OS22-S6 (emitter)	1m	Red	— —	— —	— —	2m cable	Fig.1
	OS22-SS6 (emitter)		Point light	— —	— —	— —	2m cable	Fig.1
	OS22-ELN6 (receiver)		— —	800Hz	NPN	Light on	2m cable	Fig.2
	OS22-EDN6 (receiver)		— —	800Hz	NPN	Dark on	2m cable	Fig.3
	OS22-ELP6 (receiver)		— —	800Hz	PNP	Light on	2m cable	Fig.4
	OS22-EDP6 (receiver)		— —	800Hz	PNP	Dark on	2m cable	Fig.5
	OS22-SVL6/I (emitter)	2m	Infrared	— —	— —	— —	2m cable	Fig.1
	OS22-ELN6/I (receiver)		— —	800Hz	NPN	Light on	2m cable	Fig.2
	OS22-EDN6/I (receiver)		— —	800Hz	NPN	Dark on	2m cable	Fig.3
	OS22-ELP6/I (receiver)		— —	800Hz	PNP	Light on	2m cable	Fig.4
	OS22-EDP6/I (receiver)		— —	800Hz	PNP	Dark on	2m cable	Fig.5
BGS	OS22-AK15LN6	4...15mm	Red	800Hz	NPN	Light on	2m cable	Fig.2
	OS22-AK15DN6		Red	800Hz	NPN	Dark on	2m cable	Fig.3
	OS22-AK15LP6		Red	800Hz	PNP	Light on	2m cable	Fig.4
	OS22-AK15DP6		Red	800Hz	PNP	Dark on	2m cable	Fig.5
	OS22-AK30LN6	5...30mm	Red	800Hz	NPN	Light on	2m cable	Fig.2
	OS22-AK30DN6		Red	800Hz	NPN	Dark on	2m cable	Fig.3
	OS22-AK30LP6		Red	800Hz	PNP	Light on	2m cable	Fig.4
	OS22-AK30DP6		Red	800Hz	PNP	Dark on	2m cable	Fig.5
	OS22-AK120LN6	10...120mm	Red	800Hz	NPN	Light on	2m cable	Fig.2
	OS22-AK120DN6		Red	800Hz	NPN	Dark on	2m cable	Fig.3
	OS22-AK120LP6		Red	800Hz	PNP	Light on	2m cable	Fig.4
	OS22-AK120DP6		Red	800Hz	PNP	Dark on	2m cable	Fig.5
	OS22-AKS15LN6	4...15mm	Point light	200Hz	NPN	Light on	2m cable	Fig.2
	OS22-AKS15DN6		Point light	200Hz	NPN	Dark on	2m cable	Fig.3
	OS22-AKS15LP6		Point light	200Hz	PNP	Light on	2m cable	Fig.4
	OS22-AKS15DP6		Point light	200Hz	PNP	Dark on	2m cable	Fig.5

Type:

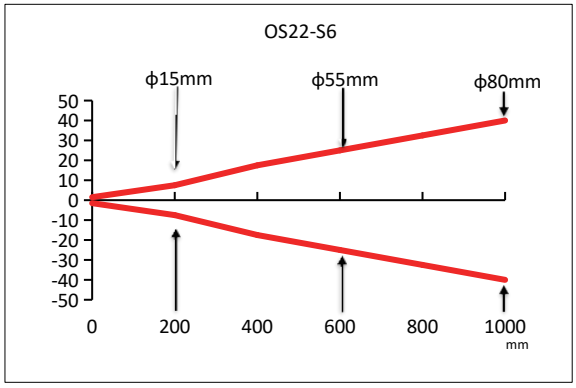
Detection mode	Type	Distance	Light source	Frequency	Output	Switching mode	Connection	Wiring
BGS	OS22-AKS30LN6	5...30mm	Point light	200Hz	NPN	Light on	2m cable	Fig.2
	OS22-AKS30DN6		Point light	200Hz	NPN	Dark on	2m cable	Fig.3
	OS22-AKS30LP6		Point light	200Hz	PNP	Light on	2m cable	Fig.4
	OS22-AKS30DP6		Point light	200Hz	PNP	Dark on	2m cable	Fig.5
BGS	OS22-AKS120LN6	10...120mm	Point light	200Hz	NPN	Light on	2m cable	Fig.2
	OS22-AKS120DN6		Point light	200Hz	NPN	Dark on	2m cable	Fig.3
	OS22-AKS120LP6		Point light	200Hz	PNP	Light on	2m cable	Fig.4
	OS22-AKS120DP6		Point light	200Hz	PNP	Dark on	2m cable	Fig.5

Technical Data:

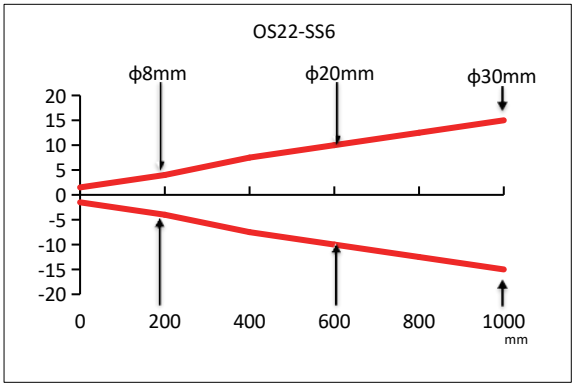
Operating voltage	10...30VDC
Ripple voltage	≤10%
Output type	PNP/NPN (Depends on the model)
Switch mode	Light on/dark on (Depends on the model)
Sensing distance adjustment	AK15, AK30 fixed; AK120 adjustable by potentiometer
Current consumption	≤18mA
load current	≤100mA
Black/white attenuation	<3mm(AK15, AK30) ; <15mm(AK120)
Spot size	4mm@30mm（point light BGS）；8mm@120mm（Red BGS） 30mm@1m（point light opposed）；80mm@1m（Red beam opposed）
Light source	Small red beam (630nm)
Output indicator	Red LED
Power indicator	Green LED
Housing material	PC+PBT
Protection class	IP67
Ambient temperature	-10...+50°C
Storage temperature	-40...+70°C
Protection circuit	Reverse polarity protection, short circuit protection, voltage shock protection（1KV/0.5J）
Voltage withstanding	650V/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
Environment light immue	Sunlight interference ≤10000Lux; filament lamp ≤5000Lux, light in dark environment ≥300Lux

Beam Pattern :

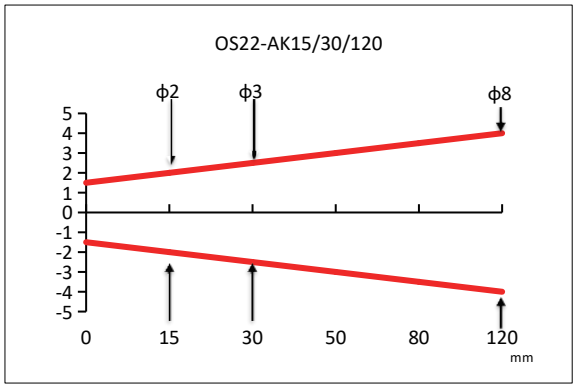
OS22-S6 (mm)



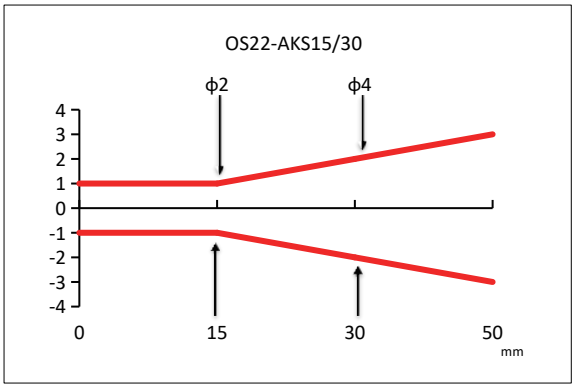
OS22-SS6 (mm)



OS22-AK15/30/120 (mm)



OS22-AKS15/30 (mm)



Wiring:

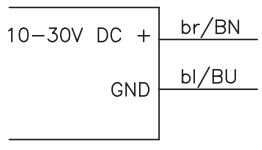


Fig.1

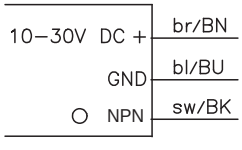


Fig.2

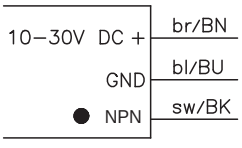


Fig.3

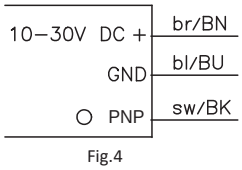


Fig.4

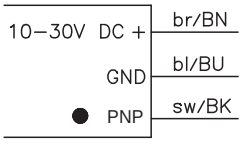
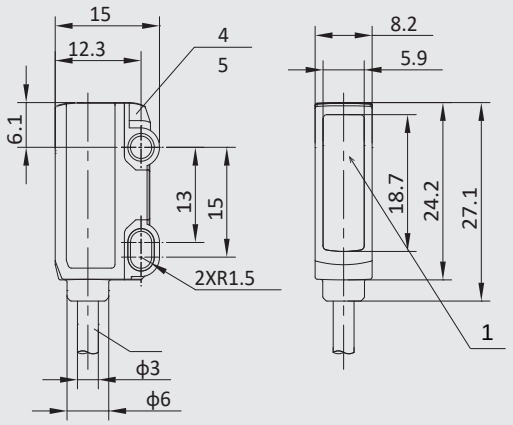
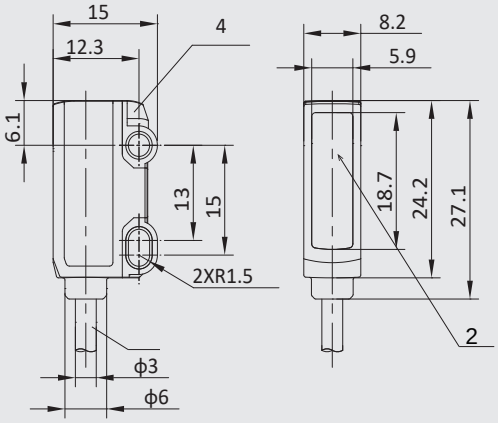


Fig.5

Dimensions:

Opposed:

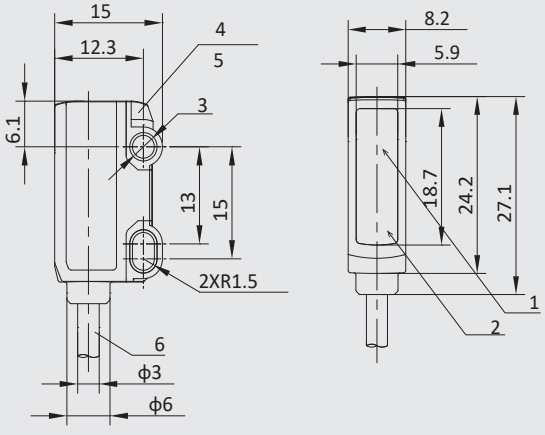




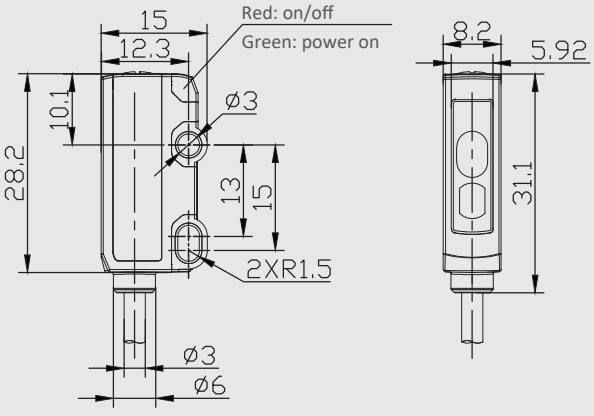
1	Emitter optic axis
2	Receiver optic axis
3	Mounting hole ϕ3mm
4	Green LED: power on
5	Red LED: on/off
6	Connection: cable

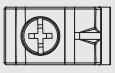
BGS：

Fixed



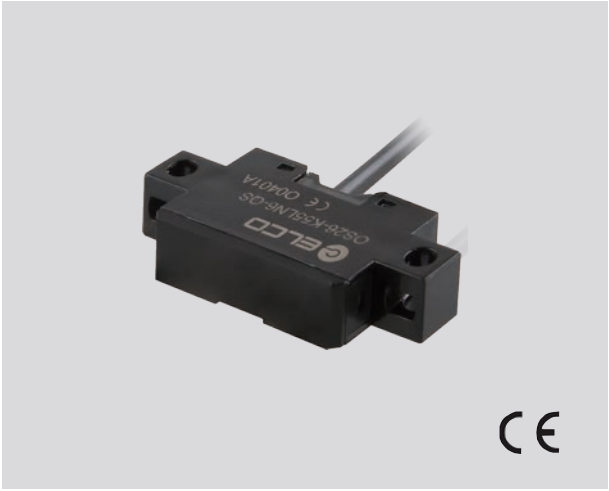
Adjustable





1	Emitter optic axis
2	Receiver optic axis
3	Mounting hole ϕ3mm
4	Green LED: power on
5	Red LED: on/off
6	Connection: cable

Photoelectric Sensors - Rectangular OS26



Description:

The compact body meets the needs of electronics, photovoltaic, semiconductor and other industries.The product has excellent black and white detection characteristics and can be stably inspected,Measurement of black and shiny objects, etc.

Features:

- The body is small and compact
- Limited reflective type, infrared light source

Type:

Detection mode	Type	Distance	Light source	Frequency	Output	Switching mode	Connection	Wiring
Defined reflection	OS26-K55LN6QS	10...55mm	Infrared	150Hz	NPN	Light on	QS-3 pin terminal	Fig. 1
	OS26-K55DN6QS	10...55mm	Infrared	150Hz	NPN	Dark on	QS-3 pin terminal	Fig. 2
	OS26-K55LP6QS	10...55mm	Infrared	150Hz	PNP	Light on	QS-3 pin terminal	Fig. 3
	OS26-K55DP6QS	10...55mm	Infrared	150Hz	PNP	Dark on	QS-3 pin terminal	Fig. 4

Technical Data:

Operating voltage	10...30VDC
Ripple voltage	≤10%
Light source	850nm
Output type	PNP/NPN
Switch mode	Light on/dark on
Sensing distance adjustment	Fixed distance products are not adjustable
Current consumption	≤20mA
load current	≤50mA
Output indicator	Red LED
Power indicator	Green LED
Storage temperature	-20...+80°C
Ambient temperature	-10...+60°C
Protection class	IP50
Protection circuit	Reverse polarity protection, short circuit protection, voltage shock protection（1KV/0.5J）
Voltage withstanding	650V/AC/ 50/60Hz 60s
Insulation impedence	≥20MΩ(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
Environment light immue	Sunlight interference ≤10000Lux； Incandescent lamp ≤5000Lux
Housing material	PC+PMMA

*Note: The plug-in comes with a QS-3-720 cable as standard

Wiring:

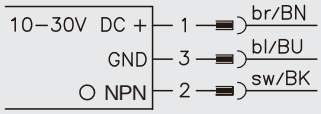


Fig.1

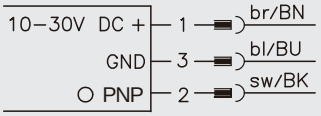


Fig.3

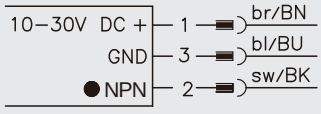


Fig.2

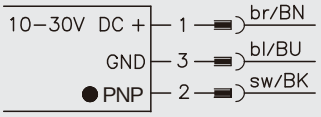
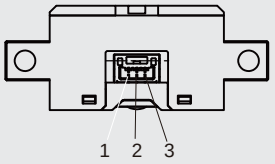
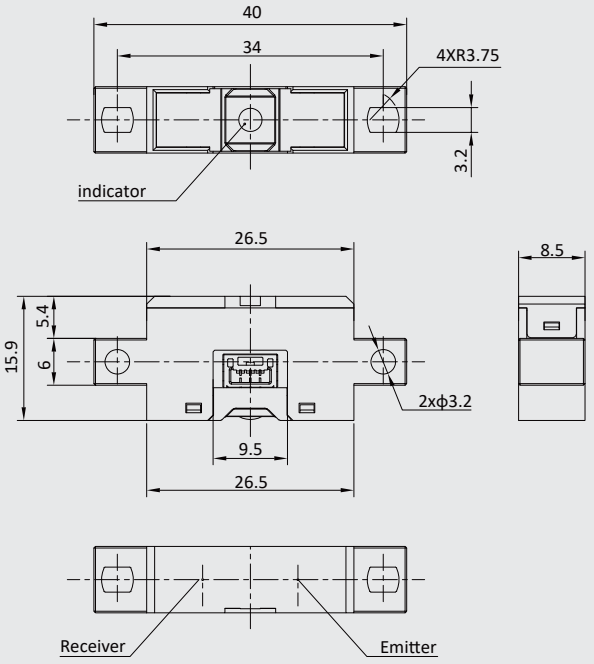


Fig.4



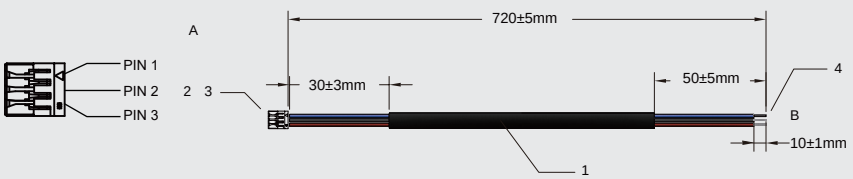
Terminal number	
1	0V
2	Vout
3	24V

Dimensions:



Accessories

QS-3-720



Photoelectric Sensors - Rectangular OS10

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 Mask machine, ATM machine, logistics transportation, new energy 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

Type:

Detection mode	Type	Distance	Light source	Frequency	Output	Switching mode	Connection	Wiring
Opposed	OS10-S6 (emitter)	30m	Infrared	— —	— —	— —	2m cable	Fig. 1
	OS10-ECN6(receiver)		— —	800Hz	NPN	Light on/dark on	2m cable	Fig. 2
	OS10-ECP6(receiver)		— —	800Hz	PNP	Light on/dark on	2m cable	Fig. 3
	OS10-S6Q8(emitter)	30m	Infrared	— —	— —	— —	M8 connector, 4-pin	Fig. 4
	OS10-ECN6Q8(receiver)		— —	800Hz	NPN	Light on/dark on	M8 connector, 4-pin	Fig. 5
	OS10-ECP6Q8(receiver)		— —	800Hz	PNP	Light on/dark on	M8 connector, 4-pin	Fig. 6
	OS10-S6/R (emitter)	25m	Red	— —	— —	— —	2m cable	Fig. 1
	OS10-ECN6/R(receiver)		— —	800Hz	NPN	Light on/dark on	2m cable	Fig. 2
	OS10-ECP6/R(receiver)		— —	800Hz	PNP	Light on/dark on	2m cable	Fig. 3
	OS10-S6Q8/R(emitter)	25m	Red	— —	— —	— —	M8 connector, 4-pin	Fig. 4
	OS10-ECN6Q8/R(receiver)		— —	800Hz	NPN	Light on/dark on	M8 connector, 4-pin	Fig. 5
	OS10-ECP6Q8/R(receiver)		— —	800Hz	PNP	Light on/dark on	M8 connector, 4-pin	Fig. 6
Polarized retro-reflective	OS10-RPCN6	3m	Red	800Hz	NPN	Light on/dark on	2m cable	Fig. 2
	OS10-RPCP6	3m	Red	800Hz	PNP	Light on/dark on	2m cable	Fig. 3
	OS10-RPCN6Q8	3m	Red	800Hz	NPN	Light on/dark on	M8 connector, 4-pin	Fig. 5
	OS10-RPCP6Q8	3m	Red	800Hz	PNP	Light on/dark on	M8 connector, 4-pin	Fig. 6
Diffused	OS10-K1000CN6	20...1000mm	Red	800Hz	NPN	Light on/dark on	2m cable	Fig. 2
	OS10-K1000CP6	20...1000mm	Red	800Hz	PNP	Light on/dark on	2m cable	Fig. 3
	OS10-K1000CN6Q8	20...1000mm	Red	800Hz	NPN	Light on/dark on	M8 connector, 4-pin	Fig. 5
	OS10-K1000CP6Q8	20...1000mm	Red	800Hz	PNP	Light on/dark on	M8 connector, 4-pin	Fig. 6
BGS	OS10-AK65CN6	6...65mm	Red	400Hz	NPN	Light on/dark on	2m cable	Fig. 2
	OS10-AK65CP6	6...65mm	Red	400Hz	PNP	Light on/dark on	2m cable	Fig. 3
	OS10-AK65CN6Q8	6...65mm	Red	400Hz	NPN	Light on/dark on	M8 connector, 4-pin	Fig. 5
	OS10-AK65CP6Q8	6...65mm	Red	400Hz	PNP	Light on/dark on	M8 connector, 4-pin	Fig. 6
	OS10-AK150CN6	6...150mm	Red	400Hz	NPN	Light on/dark on	2m cable	Fig. 2
	OS10-AK150CP6	6...150mm	Red	400Hz	PNP	Light on/dark on	2m cable	Fig. 3
	OS10-AK150CN6Q8	6...150mm	Red	400Hz	NPN	Light on/dark on	M8 connector, 4-pin	Fig. 5
	OS10-AK150CP6Q8	6...150mm	Red	400Hz	PNP	Light on/dark on	M8 connector, 4-pin	Fig. 6

Type:

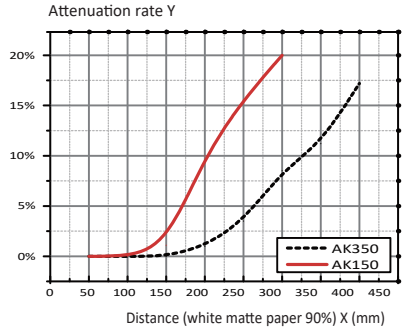
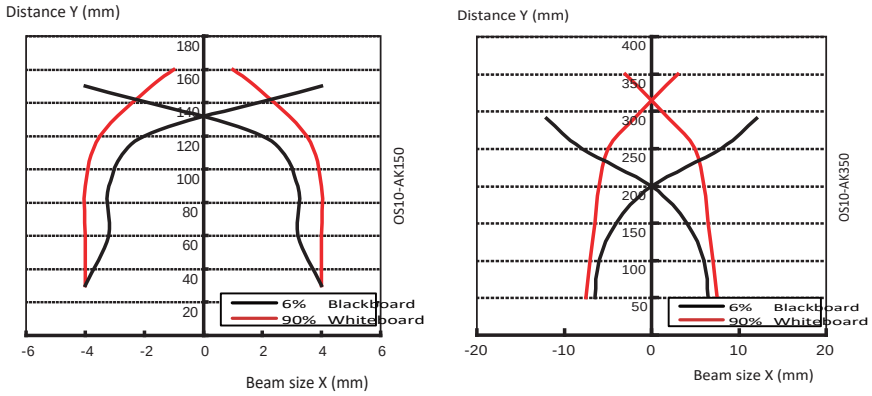
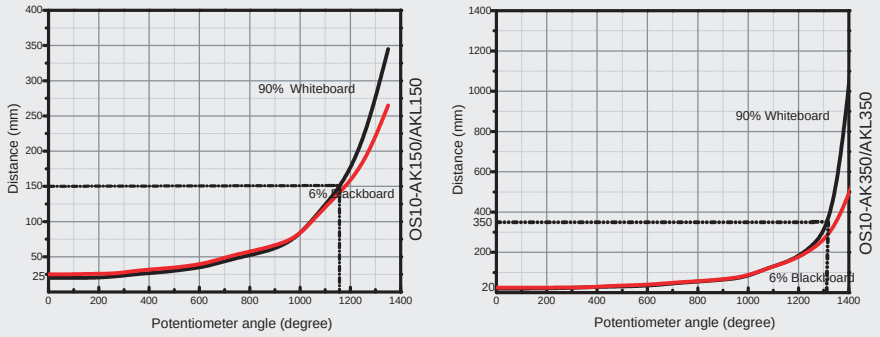
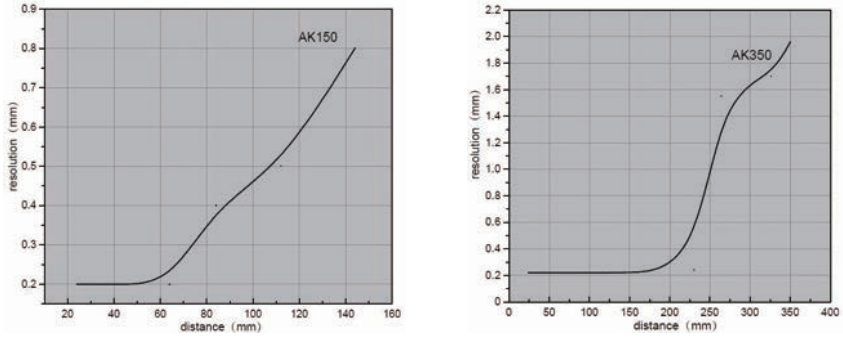
Detection mode	Type	Distance	Light source	Frequency	Output	Switching mode	Connection	Wiring
BGS	OS10-AK350CN6	6...350mm	Red	400Hz	NPN	Light on/dark on	2m cable	Fig. 2
	OS10-AK350CP6	6...350mm	Red	400Hz	PNP	Light on/dark on	2m cable	Fig. 3
	OS10-AK350CN6Q8	6...350mm	Red	400Hz	NPN	Light on/dark on	M8 connector, 4-pin	Fig. 5
	OS10-AK350CP6Q8	6...350mm	Red	400Hz	PNP	Light on/dark on	M8 connector, 4-pin	Fig. 6
Opposed	OS10-SL6 (emitter)	30m	Laser	— —	— —	— —	2m cable	Fig. 1
	OS10-ELCN6(receiver)		— —	800Hz	NPN	Light on/dark on	2m cable	Fig. 2
	OS10-ELCP6(receiver)		— —	800Hz	PNP	Light on/dark on	2m cable	Fig. 3
	OS10-SL6Q8 (emitter)	30m	Laser	— —	— —	— —	M8 connector, 4-pin	Fig. 4
	OS10-ELCN6Q8 (receiver)		— —	800Hz	NPN	Light on/dark on	M8 connector, 4-pin	Fig. 5
	OS10-ELCP6Q8 (receiver)		— —	800Hz	PNP	Light on/dark on	M8 connector, 4-pin	Fig. 6
Polarized retro-reflective	OS10-RPLCN6	5m	Laser	800Hz	NPN	Light on/dark on	2m cable	Fig. 2
	OS10-RPLCP6	5m	Laser	800Hz	PNP	Light on/dark on	2m cable	Fig. 3
	OS10-RPLCN6Q8	5m	Laser	800Hz	NPN	Light on/dark on	M8 connector, 4-pin	Fig. 5
	OS10-RPLCP6Q8	5m	Laser	800Hz	PNP	Light on/dark on	M8 connector, 4-pin	Fig. 6
BGS	OS10-AKL150CN6	6...150mm	Laser	400Hz	NPN	Light on/dark on	2m cable	Fig. 2
	OS10-AKL150CP6	6...150mm	Laser	400Hz	PNP	Light on/dark on	2m cable	Fig. 3
	OS10-AKL150CN6Q8	6...150mm	Laser	400Hz	NPN	Light on/dark on	M8 connector, 4-pin	Fig. 5
	OS10-AKL150CP6Q8	6...150mm	Laser	400Hz	PNP	Light on/dark on	M8 connector, 4-pin	Fig. 6
	OS10-AKL350CN6	6...350mm	Laser	400Hz	NPN	Light on/dark on	2m cable	Fig. 2
	OS10-AKL350CP6	6...350mm	Laser	400Hz	PNP	Light on/dark on	2m cable	Fig. 3
	OS10-AKL350CN6Q8	6...350mm	Laser	400Hz	NPN	Light on/dark on	M8 connector, 4-pin	Fig. 5
	OS10-AKL350CP6Q8	6...350mm	Laser	400Hz	PNP	Light on/dark on	M8 connector, 4-pin	Fig. 6

Technical Data:

Operating voltage	10...30VDC
Ripple voltage	≤10%
Light source	Red laser (650 nm)/class 1
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
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
Protection class	IP67
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/S^2 (50G) 3 times X,Y,Z respectively

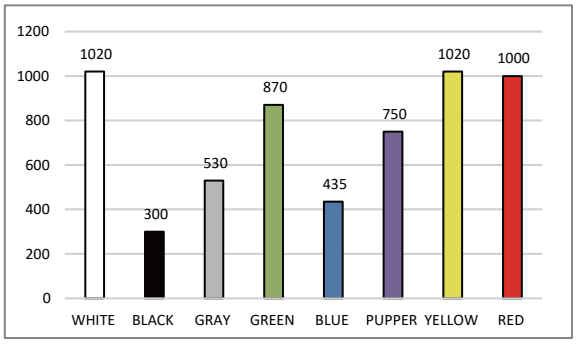
Photoelectric Sensors - Rectangular OS10

Product Features:

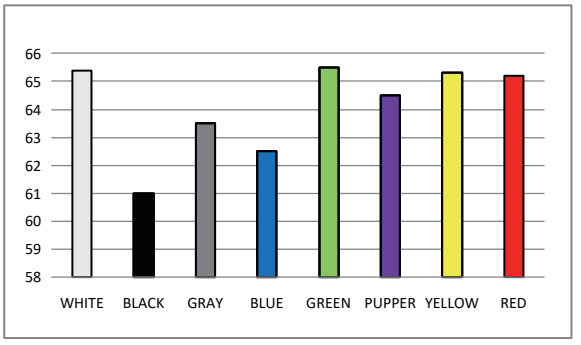
Precise distance setting High resolution	Multi-turn potentiometer for accurate setting. Detect a workpiece with a thickness of up to 0.2 mm, such as a business card (the object to be tested is standard white).
BGS function	For workpieces of different colors and materials, the detection distance is basically the same. For a whiteboard with a reflectivity of 90% and a blackboard with a reflectivity of 6%, the distance attenuation is within 15%. 
Small spot	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.
High brightness light source	High-brightness LED red light source for easy identification of detection positions 
BGS	
Resolution	

Attenuation figure:

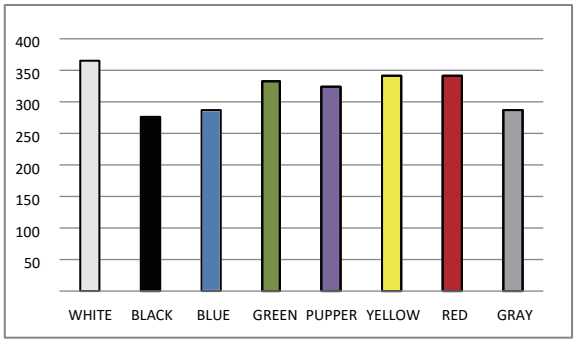
OS10-K1000



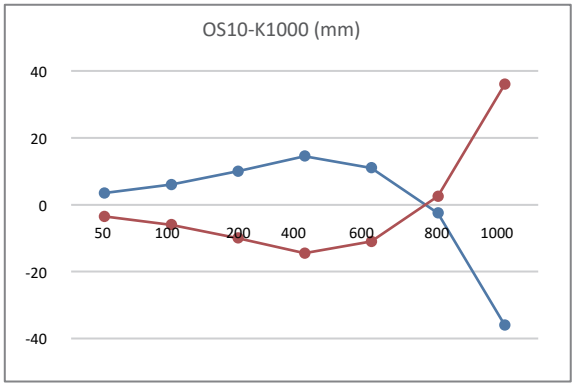
OS10-AK65

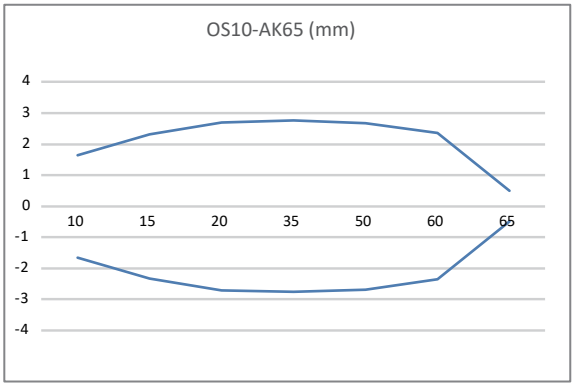


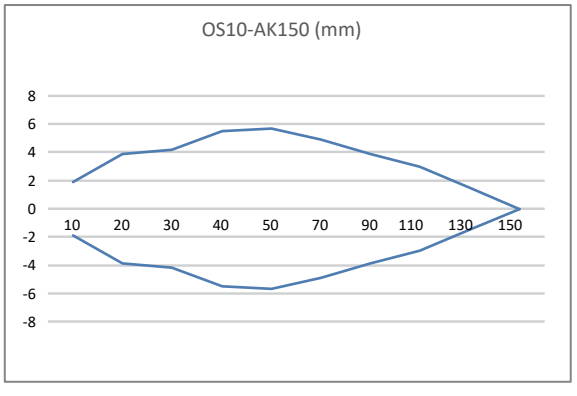
OS10-AK350

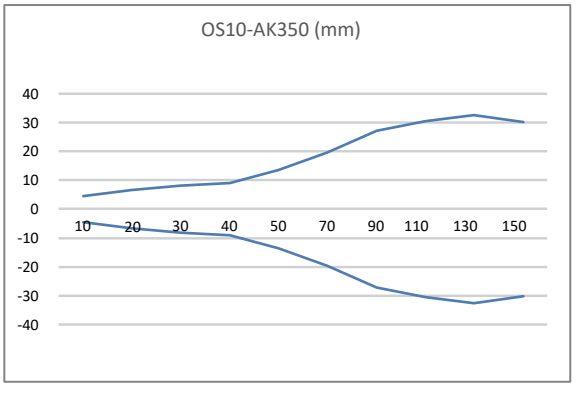


Translation characteristic curve:





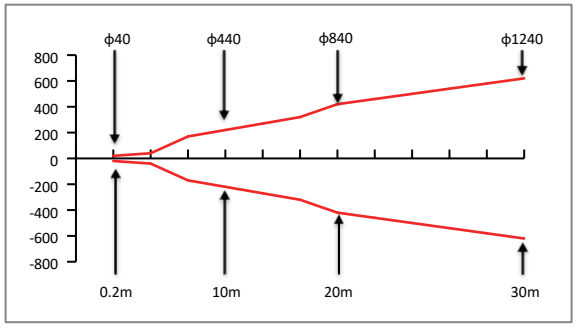




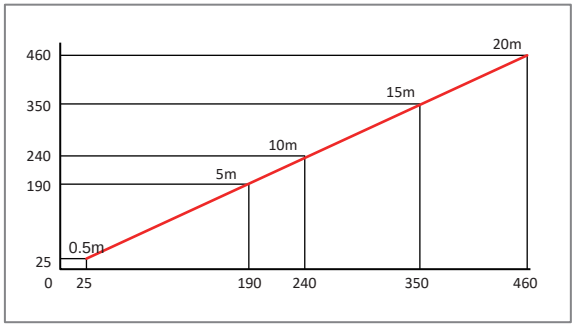
Photoelectric Sensors - Rectangular OS10

Beam Pattern:

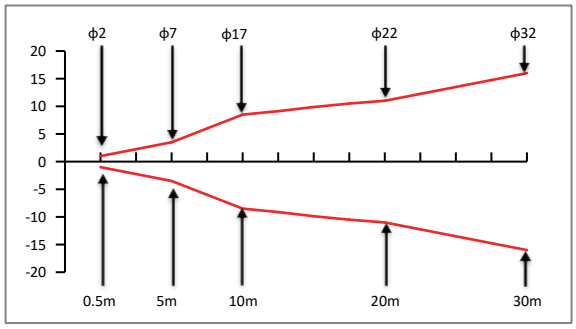
OS10-S6 (mm)



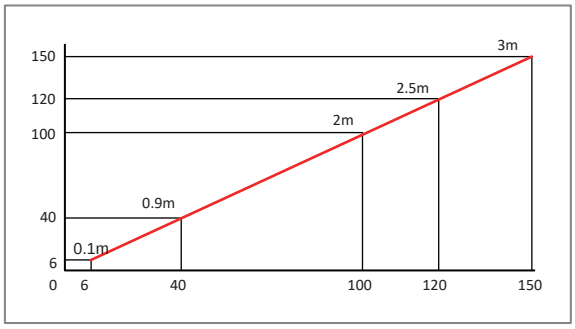
OS10-S6/R (mm)



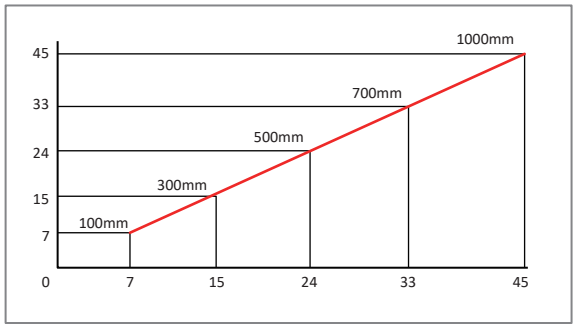
OS10--SL6 (mm)



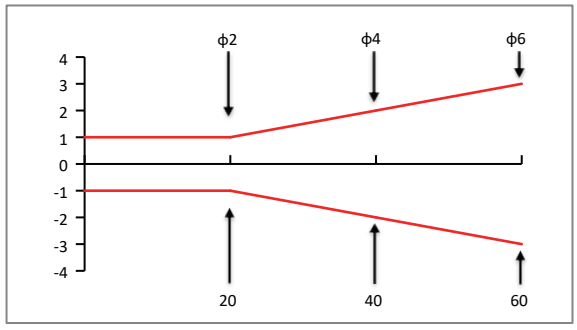
OS10-RP (mm)



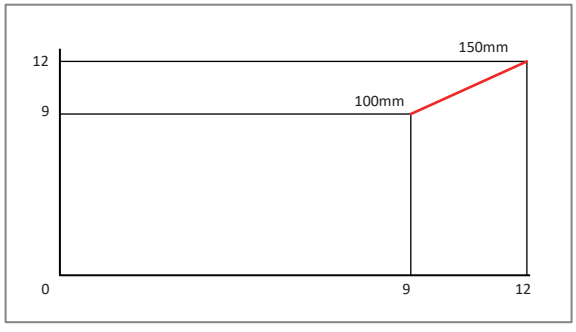
OS10-K1000 (mm)



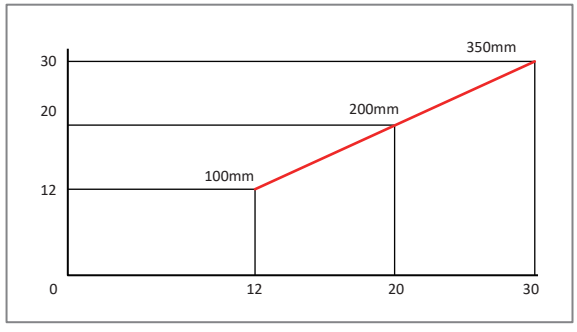
OS10-AK65 (mm)



OS10-AK150 (mm)

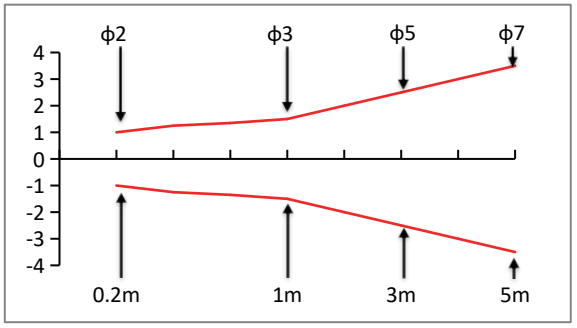


OS10-AK350 (mm)

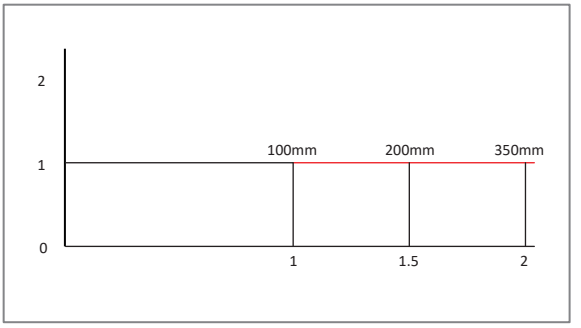


Beam Pattern：

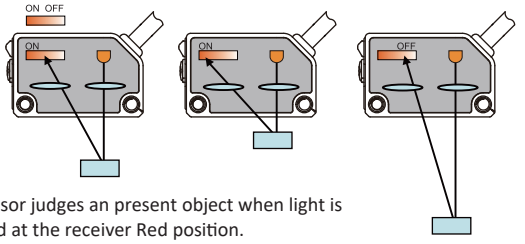
OS10-RPL (mm)



OS10S-AKL(AKL150|AKL350) (mm)



BGS - Background Suppression Function:	



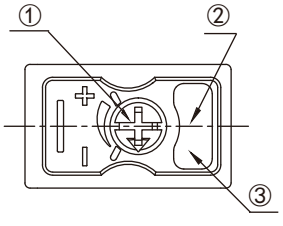
The sensor judges an present object when light is received at the receiver Red position.

Standard diffused mode photoelectric sensors detect 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.

Laser polarizer reverse operation guide:



Potentiometer	
Output indicator	Red LED
Stable indicator	Green LED

1. When the sensitivity is minimum, there is no response to the reflector or highlight objects.
2. Place the reflector to the demanding position, slowly increase the sensitivity from the minimum, still the red and green LEDs are both on, and the setting is completed.
3. When the sensitivity is maximum, if the product is triggered by the highlight object, the sensitivity needs to be reduced till the red and green LEDs turn on.

Wiring:

Cable

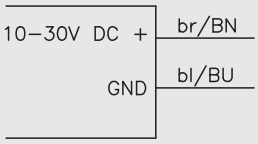


Fig. 1

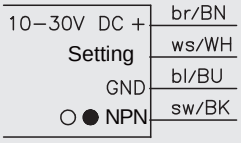


Fig. 2

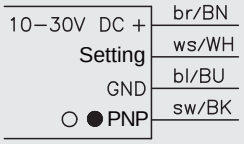


Fig. 3

M8 connector

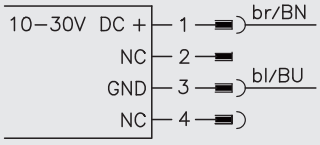


Fig. 4

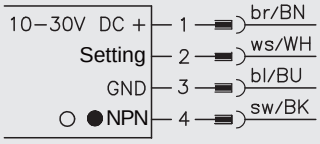


Fig. 5

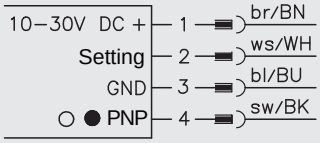
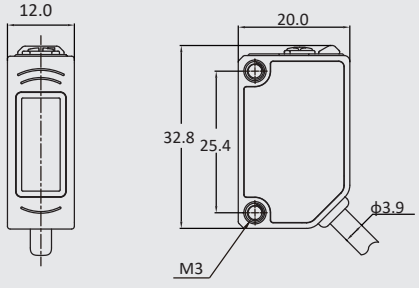


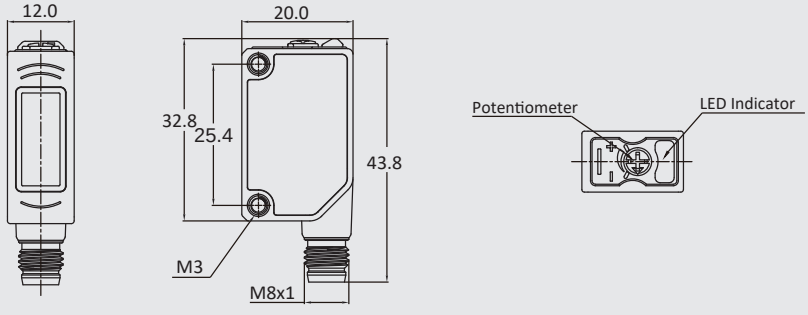
Fig. 6

Dimensions:

Cable



M8 connector



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	400Hz	NPN	Light on/dark on	2m cable	Fig.2
	OS10S-AK150CP6	6...150mm	Red	400Hz	PNP	Light on/dark on	2m cable	Fig.3
	OS10S-AK150CN6Q8	6...150mm	Red	400Hz	NPN	Light on/dark on	M8 connector, 4-pin	Fig.10
	OS10S-AK150CP6Q8	6...150mm	Red	400Hz	PNP	Light on/dark on	M8 connector, 4-pin	Fig.11
	OS10S-AK150CN6Q8.3	6...150mm	Red	400Hz	NPN	Light on/dark on	M8 connector, 3-pin	Fig.18
	OS10S-AK150CP6Q8.3	6...150mm	Red	400Hz	PNP	Light on/dark on	M8 connector, 3-pin	Fig.19
	OS10S-AK350CN6	6...350mm	Red	400Hz	NPN	Light on/dark on	2m cable	Fig.2
	OS10S-AK350CP6	6...350mm	Red	400Hz	PNP	Light on/dark on	2m cable	Fig.3
	OS10S-AK350CN6Q8	6...350mm	Red	400Hz	NPN	Light on/dark on	M8 connector, 4-pin	Fig.10
	OS10S-AK350CP6Q8	6...350mm	Red	400Hz	PNP	Light on/dark on	M8 connector, 4-pin	Fig.11
	OS10S-AK350CN6Q8.3	6...350mm	Red	400Hz	NPN	Light on/dark on	M8 connector, 3-pin	Fig.18
	OS10S-AK350CP6Q8.3	6...350mm	Red	400Hz	PNP	Light on/dark on	M8 connector, 3-pin	Fig.19

Photoelectric Sensors - Rectangular OS10S

Detection mode	Type	Distance	Light source	Frequency	Output	Switching mode	Connection	Wiring
BGS TOF	OS10S-AK1000CN6	50...1000mm	Infrared laser + Laser indication	30HZ	NPN	Light on/dark on	2m cable	Fig.2
	OS10S-AK1000CP6	50...1000mm	Infrared laser + Laser indication	30HZ	PNP	Light on/dark on	2m cable	Fig.3
	OS10S-AK1000CN6Q8	50...1000mm	Infrared laser + Laser indication	30HZ	NPN	Light on/dark on	M8 connector, 4-pin	Fig.10
	OS10S-AK1000CP6Q8	50...1000mm	Infrared laser + Laser indication	30HZ	PNP	Light on/dark on	M8 connector, 4-pin	Fig.11
	OS10S-AK1500CN6	50...1500mm	Infrared laser + Laser indication	30HZ	NPN	Light on/dark on	2m cable	Fig.2
	OS10S-AK1500CP6	50...1500mm	Infrared laser + Laser indication	30HZ	PNP	Light on/dark on	2m cable	Fig.3
	OS10S-AK1500CN6Q8	50...1500mm	Infrared laser + Laser indication	30HZ	NPN	Light on/dark on	M8 connector, 4-pin	Fig.10
	OS10S-AK1500CP6Q8	50...1500mm	Infrared laser + Laser indication	30HZ	PNP	Light on/dark on	M8 connector, 4-pin	Fig.11
	OS10S-AK4000CN6	50...4000mm	Infrared laser + Laser indication	30HZ	NPN	Light on/dark on	2m cable	Fig.2
	OS10S-AK4000CP6	50...4000mm	Infrared laser + Laser indication	30HZ	PNP	Light on/dark on	2m cable	Fig.3
	OS10S-AK4000CN6Q8	50...4000mm	Infrared laser + Laser indication	30HZ	NPN	Light on/dark on	M8 connector, 4-pin	Fig.10
	OS10S-AK4000CP6Q8	50...4000mm	Infrared laser + Laser indication	30HZ	PNP	Light on/dark on	M8 connector, 4-pin	Fig.11
	OS10S-AK1000LN6	50...1000mm	Infrared laser	10 HZ	NPN	Light on	2m cable	Fig.4
	OS10S-AK1000LP6	50...1000mm	Infrared laser	10 HZ	PNP	Light on	2m cable	Fig.5
	OS10S-AK1000DN6	50...1000mm	Infrared laser	10 HZ	NPN	Dark on	2m cable	Fig.6
	OS10S-AK1000DP6	50...1000mm	Infrared laser	10 HZ	PNP	Dark on	2m cable	Fig.7
	OS10S-AK1000LN6Q8	50...1000mm	Infrared laser	10 HZ	NPN	Light on	M8 connector, 4-pin	Fig.12
	OS10S-AK1000LP6Q8	50...1000mm	Infrared laser	10 HZ	PNP	Light on	M8 connector, 4-pin	Fig.13
	OS10S-AK1000DN6Q8	50...1000mm	Infrared laser	10 HZ	NPN	Dark on	M8 connector, 4-pin	Fig.14
	OS10S-AK1000DP6Q8	50...1000mm	Infrared laser	10 HZ	PNP	Dark on	M8 connector, 4-pin	Fig.15
	OS10S-AK1000LN6Q8.3	50...1000mm	Infrared laser	10 HZ	NPN	Light on	M8 connector, 3-pin	Fig.20
	OS10S-AK1000LP6Q8.3	50...1000mm	Infrared laser	10 HZ	PNP	Light on	M8 connector, 3-pin	Fig.21
	OS10S-AK1000DN6Q8.3	50...1000mm	Infrared laser	10 HZ	NPN	Dark on	M8 connector, 3-pin	Fig.22
	OS10S-AK1000DP6Q8.3	50...1000mm	Infrared laser	10 HZ	PNP	Dark on	M8 connector, 3-pin	Fig.23
	OS10S-AK1500LN6	50...1500mm	Infrared laser	10 HZ	NPN	Light on	2m cable	Fig.4
	OS10S-AK1500LP6	50...1500mm	Infrared laser	10 HZ	PNP	Light on	2m cable	Fig.5
	OS10S-AK1500DN6	50...1500mm	Infrared laser	10 HZ	NPN	Dark on	2m cable	Fig.6
	OS10S-AK1500DP6	50...1500mm	Infrared laser	10 HZ	PNP	Dark on	2m cable	Fig.7
	OS10S-AK1500LN6Q8	50...1500mm	Infrared laser	10 HZ	NPN	Light on	M8 connector, 4-pin	Fig.12
	OS10S-AK1500LP6Q8	50...1500mm	Infrared laser	10 HZ	PNP	Light on	M8 connector, 4-pin	Fig.13
	OS10S-AK1500DN6Q8	50...1500mm	Infrared laser	10 HZ	NPN	Dark on	M8 connector, 4-pin	Fig.14
	OS10S-AK1500DP6Q8	50...1500mm	Infrared laser	10 HZ	PNP	Dark on	M8 connector, 4-pin	Fig.15
	OS10S-AK1500LN6Q8.3	50...1500mm	Infrared laser	10 HZ	NPN	Light on	M8 connector, 3-pin	Fig.20
	OS10S-AK1500LP6Q8.3	50...1500mm	Infrared laser	10 HZ	PNP	Light on	M8 connector, 3-pin	Fig.21
	OS10S-AK1500DN6Q8.3	50...1500mm	Infrared laser	10 HZ	NPN	Dark on	M8 connector, 3-pin	Fig.22
	OS10S-AK1500DP6Q8.3	50...1500mm	Infrared laser	10 HZ	PNP	Dark on	M8 connector, 3-pin	Fig.23
	OS10S-AK4000LN6	50...4000mm	Infrared laser	10 HZ	NPN	Light on	2m cable	Fig.4
	OS10S-AK4000LP6	50...4000mm	Infrared laser	10 HZ	PNP	Light on	2m cable	Fig.5
	OS10S-AK4000DN6	50...4000mm	Infrared laser	10 HZ	NPN	Dark on	2m cable	Fig.6
	OS10S-AK4000DP6	50...4000mm	Infrared laser	10 HZ	PNP	Dark on	2m cable	Fig.7
	OS10S-AK4000LN6Q8	50...4000mm	Infrared laser	10 HZ	NPN	Light on	M8 connector, 4-pin	Fig.12
	OS10S-AK4000LP6Q8	50...4000mm	Infrared laser	10 HZ	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	10HZ	NPN	Dark on	M8 connector, 4-pin	Fig.14
	OS10S-AK4000DP6Q8	50...4000mm	Infrared laser	10HZ	PNP	Dark on	M8 connector, 4-pin	Fig.15
	OS10S-AK4000LN6Q8.3	50...4000mm	Infrared laser	10HZ	NPN	Light on	M8 connector, 3-pin	Fig.20
	OS10S-AK4000LP6Q8.3	50...4000mm	Infrared laser	10HZ	PNP	Light on	M8 connector, 3-pin	Fig.21
	OS10S-AK4000DN6Q8.3	50...4000mm	Infrared laser	10HZ	NPN	Dark on	M8 connector, 3-pin	Fig.22
	OS10S-AK4000DP6Q8.3	50...4000mm	Infrared laser	10HZ	PNP	Dark on	M8 connector, 3-pin	Fig.23

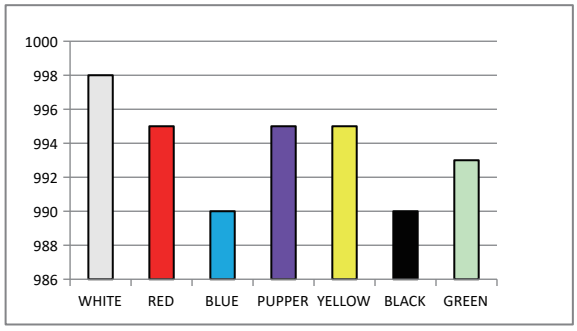
Detection mode	Type	Distance	Light source	Repeatability	Output	Measurement accuracy	Connection	Wiring
BGS TOF	OS10S-K4000/485	50...4000mm	Infrared laser	10mm	485	30mm	2m cable	Fig.8
	OS10S-K4000/485/R-0.2-Q8	50...4000mm	Infrared laser	10mm	485	30mm	M8 Pigtail	Fig.16
	OS10S-K4000/UR	50...4000mm	Infrared laser	10mm	UR	30mm	2m cable	Fig.9

Technical Data:

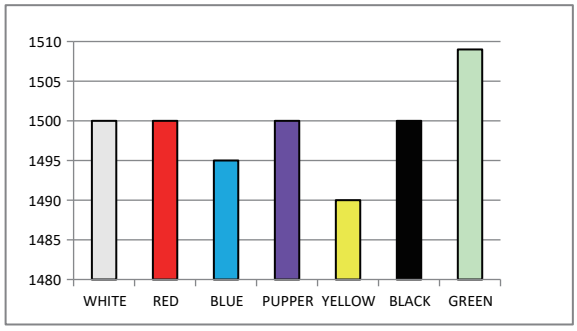
Operating voltage	10...30VDC/5VDC
Ripple voltage	≤10%
Light source	630 nm red beam(opposed, retroreflective, AK350 diffused); TOF infrared laser (940 nm)/class 1
Output type	PNP / NPN
Switch mode	LO/DO optional (opposed, retroreflective, AK350 diffused); LO/DO (AK1000 / AK1500 / AK4000)
No-load current	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 impedence	≥50MΩ（500VDC)
Shock resistance	Complex amplitude 1.5mm 10... 50Hz (2hr X, Y,Z respectively)
Impact resistance	500m/s^2(50G) 3 times X,Y,Z respectively
Protection class	IP67

Attenuation figure:

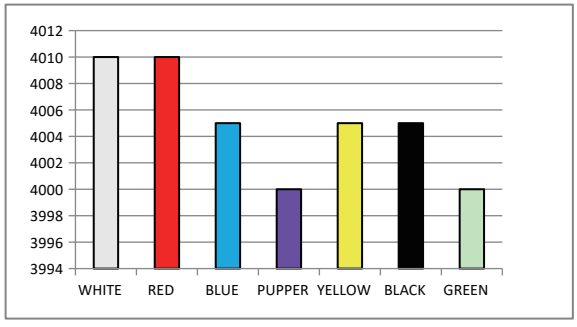
OS10S-AK1000



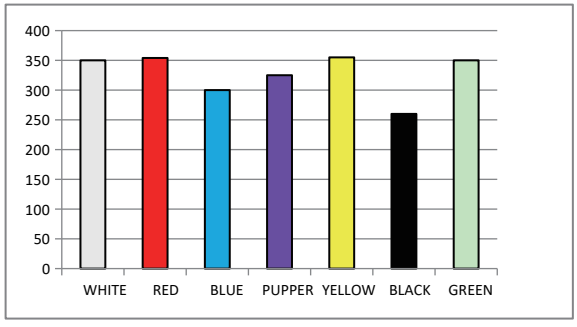
OS10S-AK1500



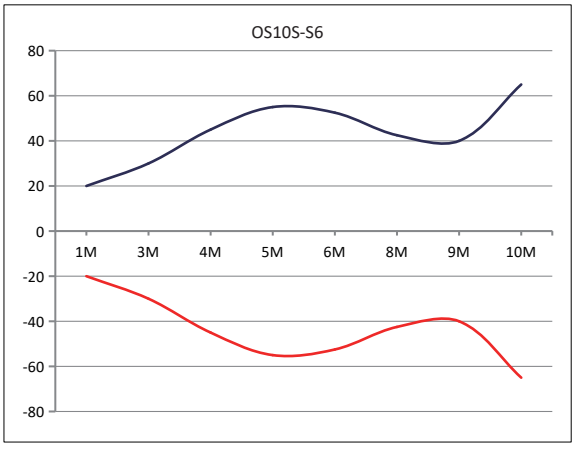
OS10S-AK4000

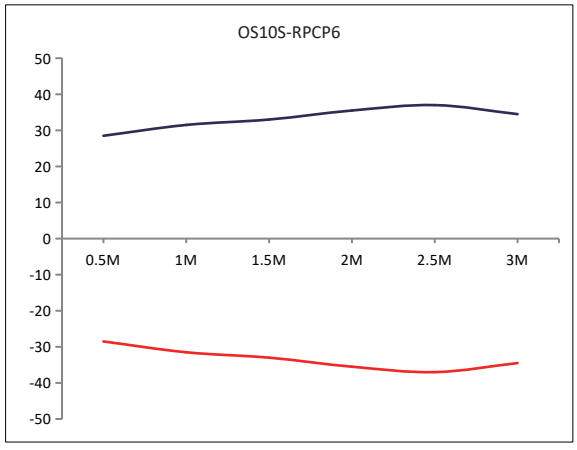


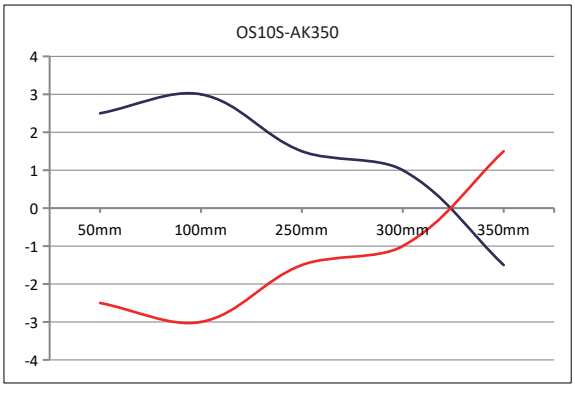
OS10S-AK350

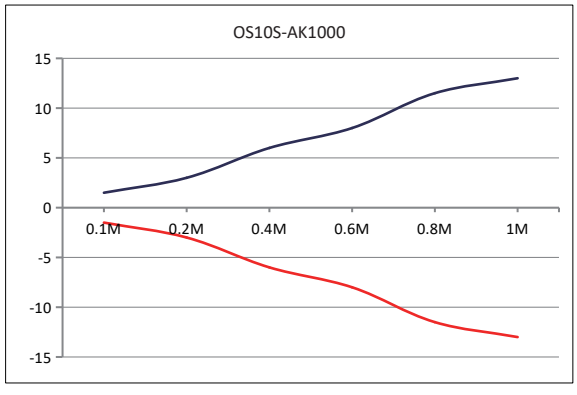


Translation characteristic curve:

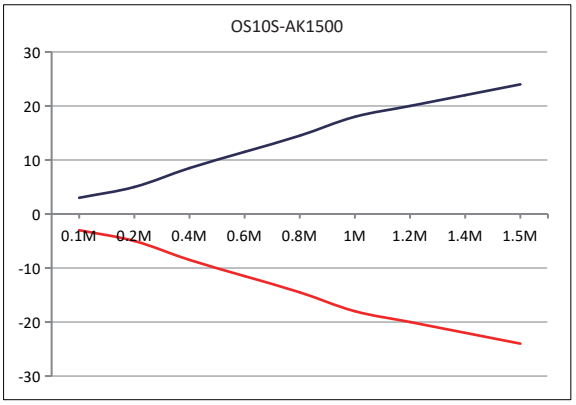


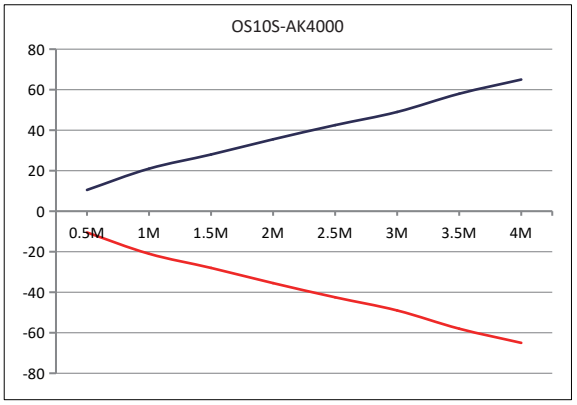






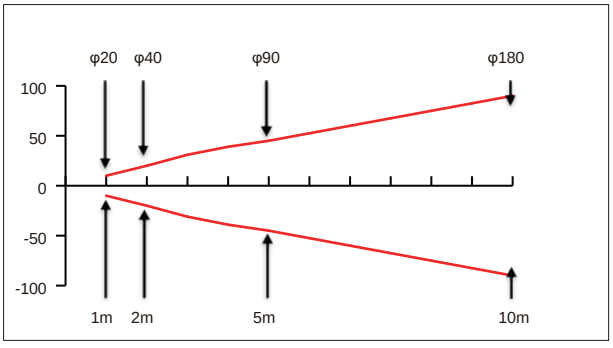
Translation characteristic curve：



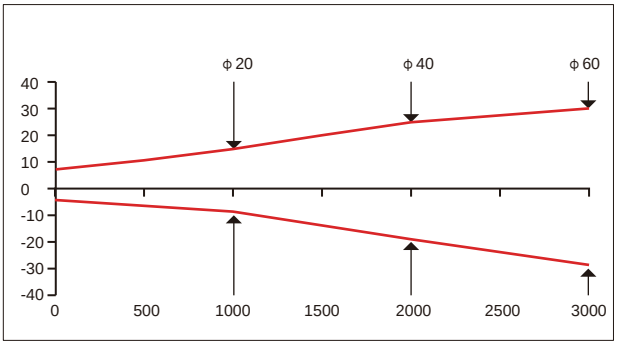


Beam Pattern：

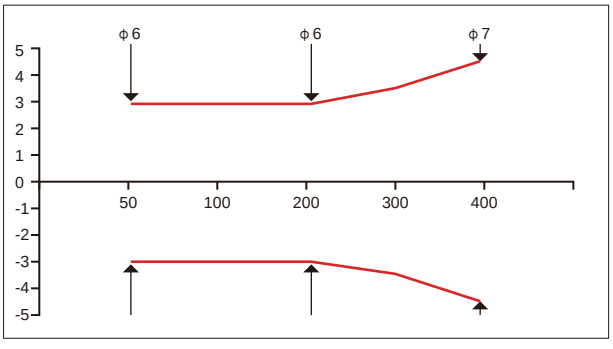
OS10S-S6 (mm)



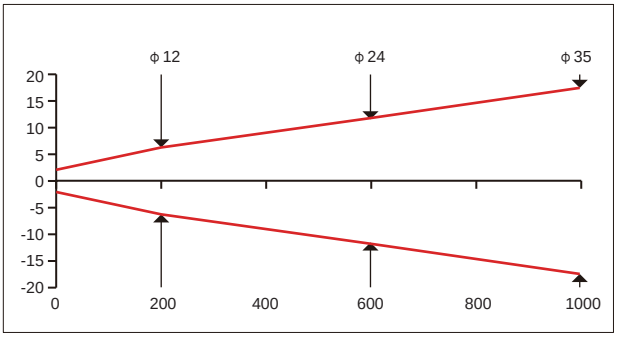
OS10S-PR (mm)



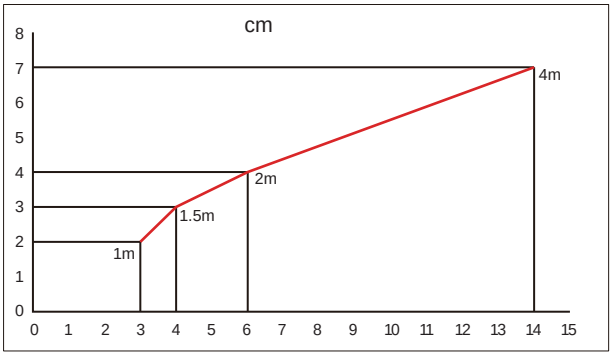
OS10S-AK350 (mm)



OS10S-AK1000 (mm)



OS10S-AK1500/4000 (cm)



Wiring:

Cable

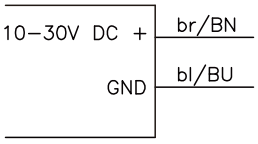


Fig.1

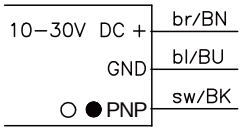


Fig.3

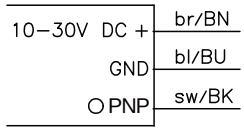


Fig.5

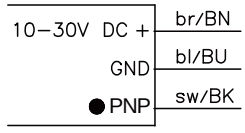


Fig.7

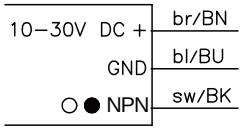


Fig.2

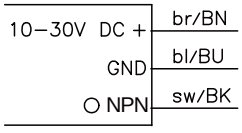


Fig.4

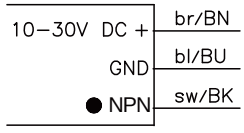


Fig.6

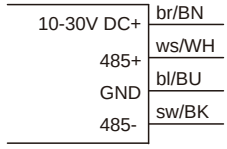


Fig.8

M8 connector

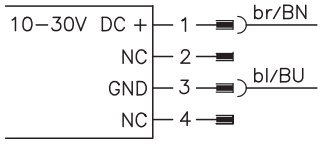


Fig.9

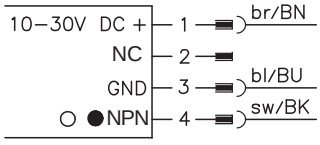


Fig.10

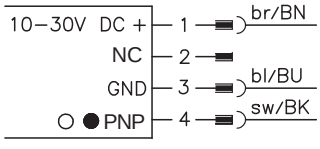


Fig.11

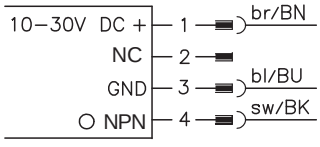


Fig.12

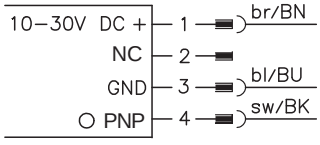


Fig.13

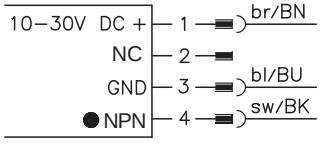


Fig.14

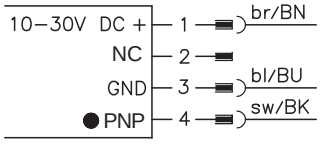


Fig.15

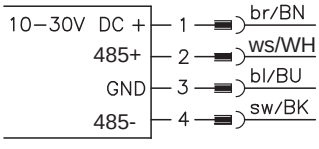


Fig.16

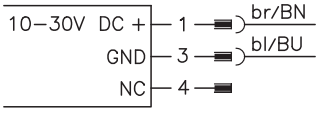


Fig.17

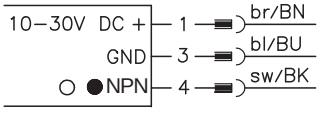


Fig.18

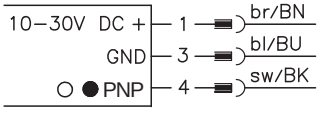


Fig.19

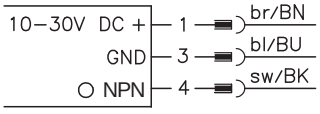


Fig.20

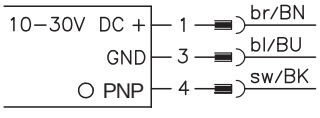


Fig.21

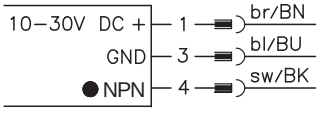


Fig.22

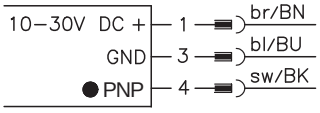
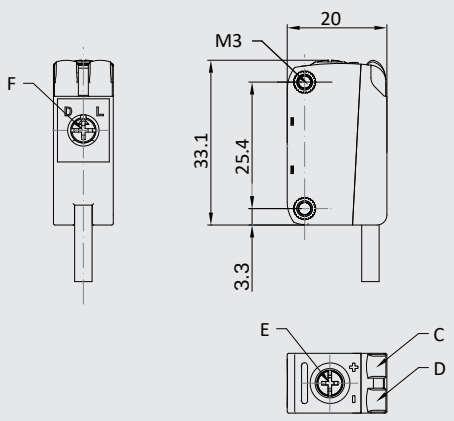


Fig.23

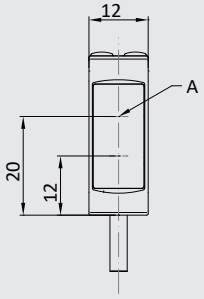
Dimensions:(Cable)

BGS

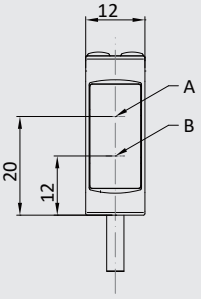


A: Receiver
B: Emitter
C: Output indicator
D: Steady state indicator
E: Adjustor for distance
F: Adjustor for LO/DO

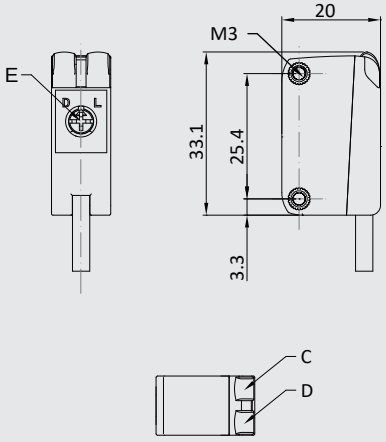
Opposed / Polarized retroreflective



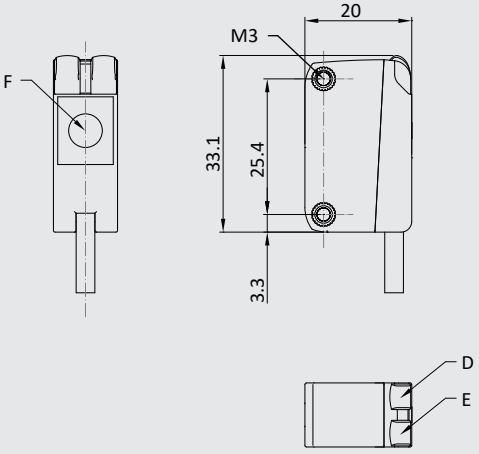
Opposed:
A: Receiver, emitter
C: Output indicator
D: Steady state indicator
E: Adjustor for LO/DO



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



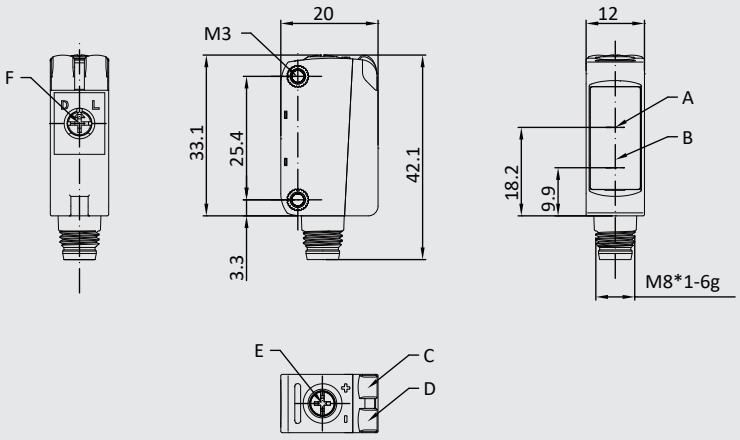
BGS TOF



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

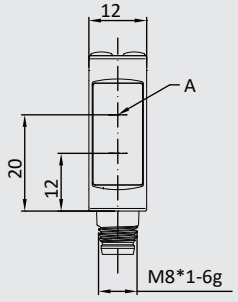
Dimensions:(M8 connector)

BGS

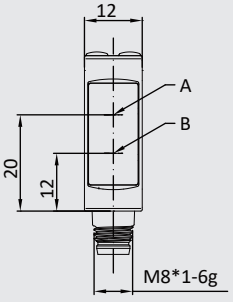


A:Receiver
B:Emitter
C:Output indicator
D:Steady state indicator
E:Adjustor for distance
F:Adjustor for LO/DO

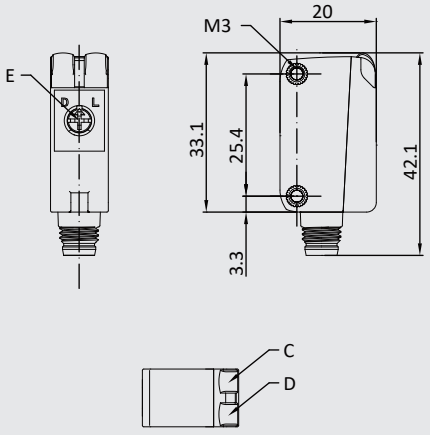
Opposed / Polarized retroreflective



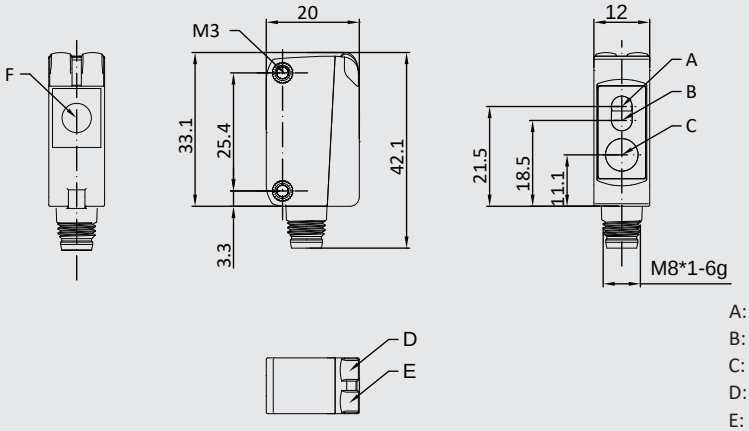
Opposed:
A: Receiver, emitter
C: Output indicator
D: Steady state indicator
E: Adjustor for LO/DO



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

Photoelectric Sensors - Rectangular OS10U

Description:

The compact body meets the needs of electronics, photovoltaic, semiconductor and other industries for compact space.The product has excellent black and white detection characteristics and can stably detect different colors,The object to be measured.

Features:

- Triangulation ranging principle, high detection accuracy
- Φ3 mounting holes, built-in metal parts, sturdy and long life
- Multiple output types

Type:

Type	Distance	Light source	Frequency	Output	Resolution	Connection	Wiring
OS10U-KL300CB6	30... 300mm	red laser	100Hz	push-pull	0.1mm	2m cable	Fig.1
OS10U-KL300/485	30... 300mm	red laser	— —	RS485	0.1mm	2m cable	Fig.2
OS10U-KL300/IO	30... 300mm	red laser	— —	IO-Link	0.1mm	2m cable	Fig.3

Technical Data:

Operating voltage	10 ... 30 V DC
Light source	Red laser (655 nm)/class 1
Output type	Push-Pull, RS485, IO-Link
Switch mode	Light on/dark on
Distance adjustment	Teach button
Power	0.5W
load current	≤100mA
Output indicator	Red LED
Power indicator	Green LED
Measurement accuracy	30mm-100mm (Repeatability 2mm) 100mm-300mm (Repeatability 5mm)
Spot diameter	1.2*1mm@100mm 0.8*1mm@250mm 1*1.2mm@300mm
Storage temperature	-25 °C ... +75 °C
Operating temperature	-20 °C ... +50 °C
Protection class	IP67
Protection circuit	Reverse polarity protection, short circuit protection, voltage impulse protection（1KV/0.5J）
Voltage withstanding	650V/AC/ 50/60Hz 60s
Insulation impedence	≥20MΩ(500VDC)
Shock resistance	Complex amplitude 1.5mm 10... 50Hz (2hr X, Y,Z respectively)
Impact resistance	500m/S^2 (50G) 3 times X, Y, Z respectively
Environment light immue	Sunlight interference ≤10000Lux；Incandescent lamp ≤5000Lux
Housing	PC+PMMA

Wiring:

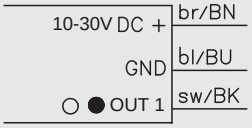


Fig.1

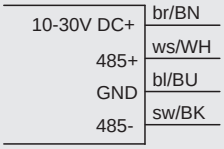


Fig.2

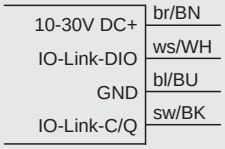
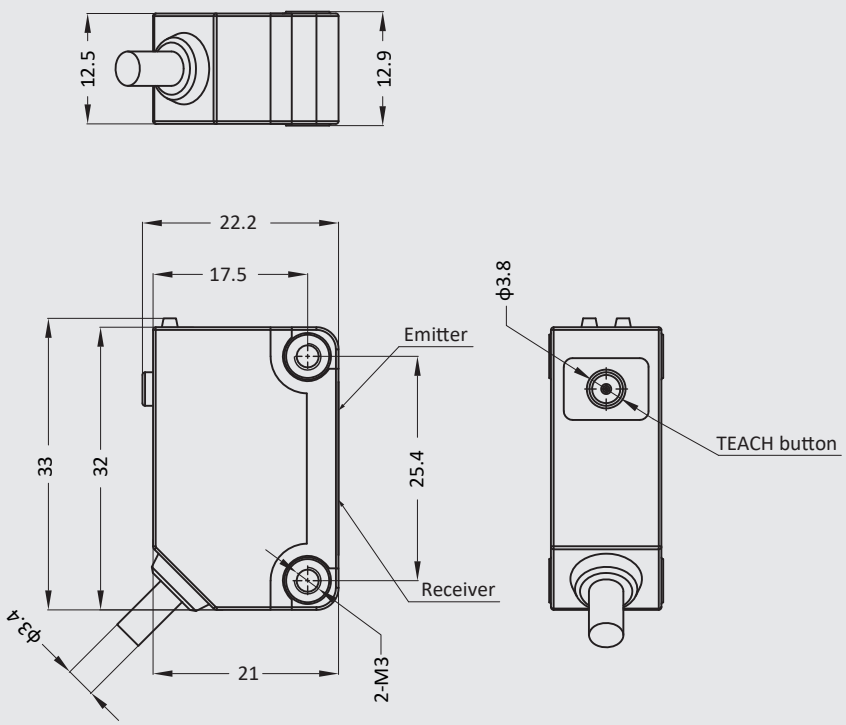


Fig.3

Dimensions:



Photoelectric Sensors - Rectangular OS20

Description:

High-performance mini rectangular photoelectric sensor can provide BGS detection, laser coaxial polarized retro-reflective detection and laser non-coaxial polarized retro-reflective detection and PCB detection. It is suitable for logistics, textile, glass machinery, food packaging and other applications.

Features:

- BGS is a product that provides the detection distance of Linear light source
- No dead zones in the coaxial axis、Precise location function
- AK300 Excellent black and white attenuation

Type:

Detection mode	Type	Distance	Light source	Frequency	Output	Switching mode	Connection	Wiring
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
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

Photoelectric Sensors - Rectangular OS20

Technical Data:

Operating voltage	10...30VDC
Ripple voltage	≤10%
Light source	Red laser (650 nm)/class 1
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

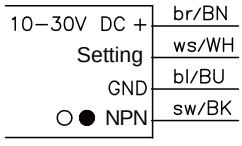


Fig.1

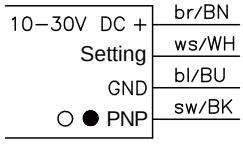


Fig.2

M8 connector

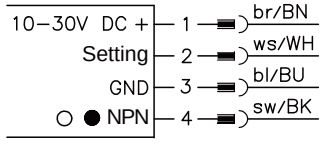


Fig.3

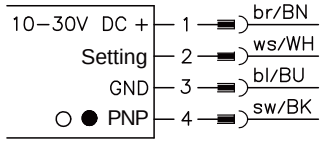
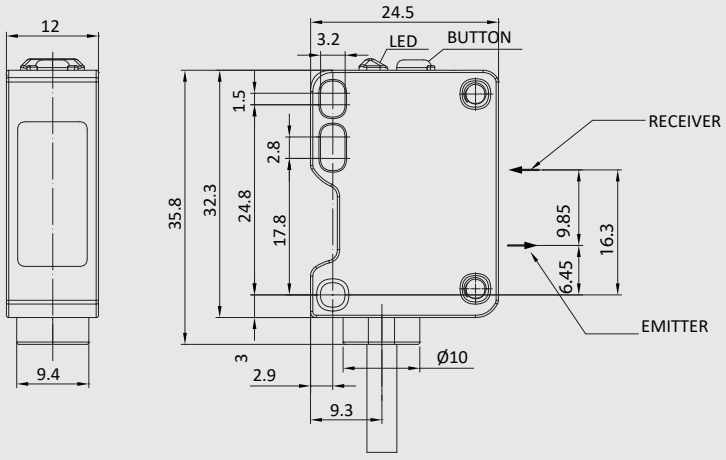


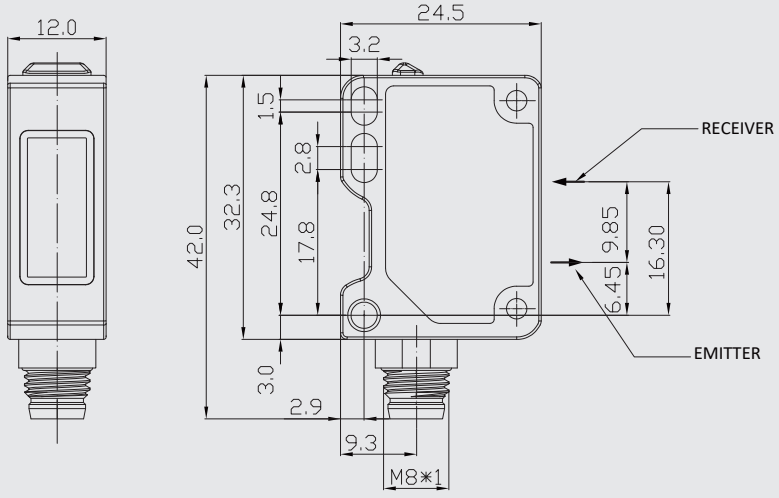
Fig.4

Dimensions:

Cable



M8 connector



Photoelectric Sensors - Rectangular OS50

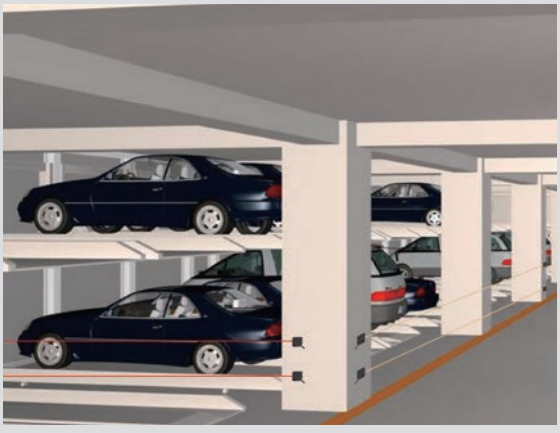
Description:

Rectangular 50*50mm; 60m sensing range for opposed mode; 10m sensing range for retro-reflective mode, 7m sensing range for diffused mode; Wide voltage power supply, relay output. Suitable for garage, warehousing, logistics, crane anti-collision, etc.

Features:

- Multiple output modes
- Long sensing range
- Flexible mounting

Sensor function description:



40m opposed for ultra-long distance detection, suitable for stereo garages, warehouses, 24-240V AC and DC power supply, relay output, no need for a separate 24V switching power supply.

Using a red LED light source that facilitates optical axis alignment, a 10m retro-reflective detection distance and a wide lateral width rolling shutter door can also be installed.

Type:

Detection mode	Type	Distance	Light source	Frequency	Output	Switching mode	Connection	Wiring
Opposed	OS50-S6 (emitter)	40m	Infrared	— —	— —	— —	2m cable	Fig.1
	OS50-EVP6 (receiver)		— —	800Hz	PNP	NO+NC		Fig.3
	OS50-EVN6 (receiver)		— —		NPN			Fig.4
	OS50-S6Q (emitter)	40m	Infrared	— —	— —	— —	M12 connector	Fig.2
	OS50-EVP6Q (receiver)		— —	800Hz	PNP	NO+NC		Fig.5
	OS50-EVN6Q (receiver)		— —		NPN			Fig.6
	OS50-S5 (emitter)	40m	Infrared	— —	— —	— —	2m cable	Fig.11
	OS50-EVR (receiver)		— —	50Hz	Relay	NO+NC		Fig.12
	OS50-S206 (emitter)	20m	Red	— —	— —	— —	2m cable	Fig.1
	OS50-E20VP6 (receiver)		— —	800Hz	PNP	NO+NC		Fig.3
	OS50-E20VN6 (receiver)		— —		NPN			Fig.4
	OS50-S206Q (emitter)	20m	Red	— —	— —	— —	M12 connector	Fig.2
	OS50-E20VP6Q (receiver)		— —	800Hz	PNP	NO+NC		Fig.5
	OS50-E20VN6Q (receiver)		— —		NPN			Fig.6
	OS50-S205 (emitter)	20m	Red	— —	— —	— —	2m cable	Fig.11
	OS50-E20VR5 (receiver)		— —	50Hz	Relay	NO+NC		Fig.12
	OS50-SL6 (emitter)	60m	Laser	— —	— —	— —	2m cable	Fig.1
	OS50-ELVP6 (receiver)		— —	800Hz	PNP	NO+NC		Fig.3
	OS50-ELVN6 (receiver)		— —		NPN			Fig.4
	OS50-SL6Q (emitter)	60m	Laser	— —	— —	— —	M12 connector	Fig.2
	OS50-ELVP6Q (receiver)		— —	800Hz	PNP	NO+NC		Fig.5
	OS50-ELVN6Q (receiver)		— —		NPN			Fig.6
	OS50-SL5 (emitter)	60m	Laser	— —	— —	— —	2m cable	Fig.11
	OS50-ELVR5 (receiver)		— —	50Hz	Relay	NO+NC		Fig.12

The detection distance corresponds to the reflector RB50*50-1

Retro-reflective	OS50-RVP6	10m	Red	800Hz	PNP	NO+NC	2m cable	Fig.3
	OS50-RVN6				NPN			Fig.4
	OS50-RVP6Q	10m	Red	800Hz	PNP	NO+NC	M12 connector	Fig.5
	OS50-RVN6Q				NPN			Fig.6
	OS50-RVR5	10m	Red	50Hz	Relay	NO+NC	2m cable	Fig.12
Polarized retro-reflective	OS50-RPVP6	6m	Red	800Hz	PNP	NO+NC	2m cable	Fig.3
	OS50-RPVN6				NPN			Fig.4
	OS50-RPVP6Q	6m	Red	800Hz	PNP	NO+NC	M12 connector	Fig.5
	OS50-RPVN6Q				NPN			Fig.6
	OS50-RPVR5	6m	Red	50Hz	Relay	NO+NC	2m cable	Fig.12

Type:

Detection mode	Type	Distance	Light source	Frequency	Output	Switching mode	Connection	Wiring
Diffused	OS50-K1000VP6	1000mm	Red	800Hz	PNP	NO+NC	2m cable	Fig.7
	OS50-K1000VN6				NPN			Fig.8
	OS50-K1000VP6Q	1000mm	Red	800Hz	PNP	NO+NC	M12 connector	Fig.9
	OS50-K1000VN6Q				NPN			Fig.10
	OS50-K1000VR5	1000mm	Red	50Hz	Relay	NO+NC	2m cable	Fig.12
	OS50-K2500VP6	2500mm	Infrared	800Hz	PNP	NO+NC	2m cable	Fig.7
	OS50-K2500VN6				NPN			Fig.8
	OS50-K2500VP6Q	2500mm	Infrared	800Hz	PNP	NO+NC	M12 connector	Fig.9
	OS50-K2500VN6Q				NPN			Fig.10
	OS50-K2500VR5	2500mm	Infrared	50Hz	Relay	NO+NC	2m cable	Fig.12
	OS50-K3500VP6	3500mm	Infrared laser	800Hz	PNP	NO+NC	2m cable	Fig.7
	OS50-K3500VN6				NPN			Fig.8
	OS50-K3500VP6Q	3500mm	Infrared laser	800Hz	PNP	NO+NC	M12 connector	Fig.9
	OS50-K3500VN6Q				NPN			Fig.10
	OS50-K3500VR5	3500mm	Infrared laser	50Hz	Relay	NO+NC	2m cable	Fig.12
	OS50-K7000VP6	7000mm	Infrared laser	800Hz	PNP	NO+NC	2m cable	Fig.7
	OS50-K7000VN6				NPN			Fig.8
	OS50-K7000VP6Q	7000mm	Infrared laser	800Hz	PNP	NO+NC	M12 connector	Fig.9
	OS50-K7000VN6Q				NPN			Fig.10
	OS50-K7000VR5	7000mm	Infrared laser	50Hz	Relay	NO+NC	2m cable	Fig.12

Technical Data:

Operating voltage	10 ... 30 V DC (NPN, PNP) 24 ... 240 V AC/DC (relay type)
Light source	Red laser (650 nm)/class 1
Response time	Max, 2 ms (NPN, PNP) Max, 30 ms (relay type)
No-load current	≤25mA
Load current	≤200mA(NPN, PNP) ≤3A（relay type）
Protection circuit	Electrical surge, reverse polarity protection, short circuit protection Electrical surge protection (relay type)
Distance adjustment	Adjustable, with single-turn knob
Output type	NPN, PNP, Relay
Switch mode	NO+NC
Output indicator	Yellow LED
Steady state indicator	Green LED
Ambient temperature	-25 °C...55 °C
Spot size	4.5cm(1.2m), 7cm(2.4m), 9cm(3.5m)@OS50-K3500
Voltage resistance	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
Housing material	PBT+ABS
Accessories	Mounting bracket (all types) EOS50-1, reflector RB50*50-1 (only for retro-reflective and polarized retro-reflective)

Wiring:

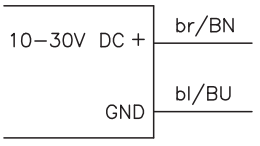


Fig.1

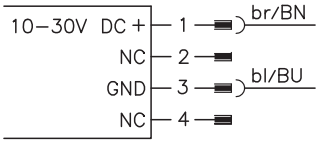


Fig.2

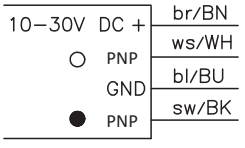


Fig.3

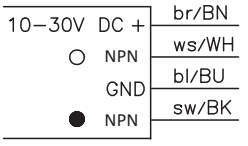


Fig.4

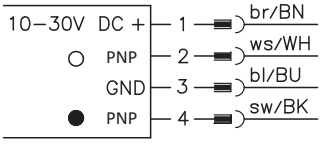


Fig.5

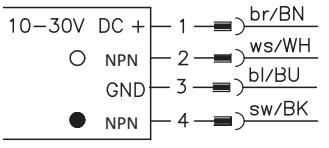


Fig.6

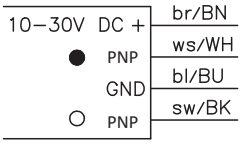


Fig.7

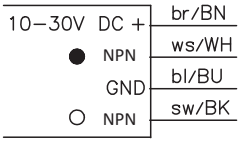


Fig.8

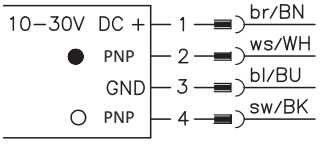


Fig.9

Photoelectric Sensors - Rectangular OS50

Wiring:

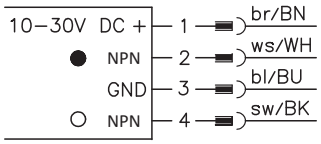


Fig.10

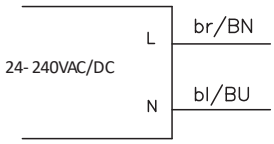


Fig.11

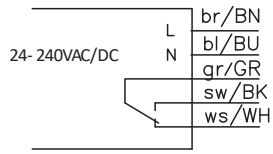
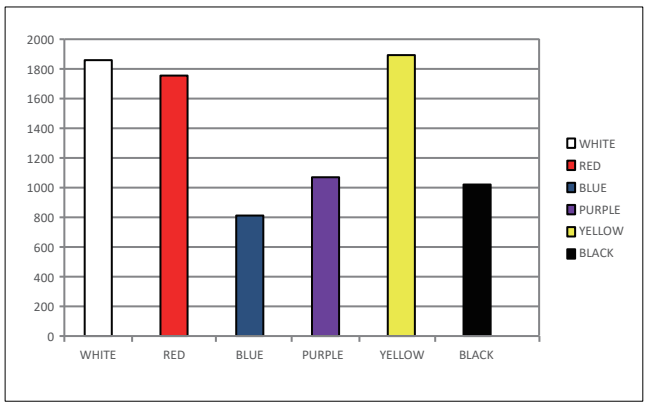


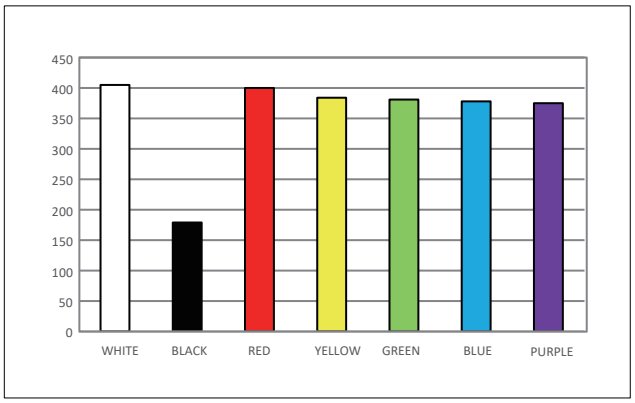
Fig.12

Attenuation figure:

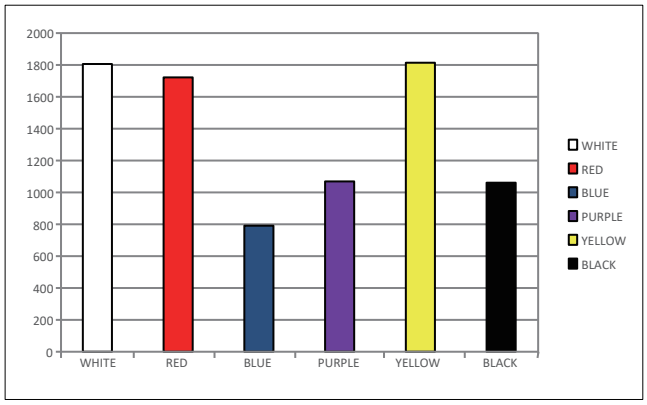
OS50-K1000VP6



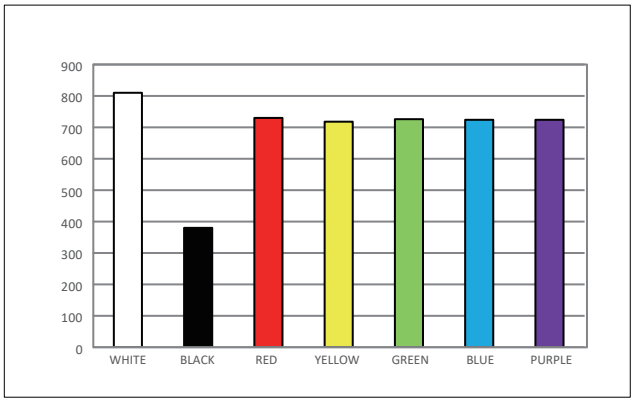
OS50-K3500VP6



OS50-K1000VR5

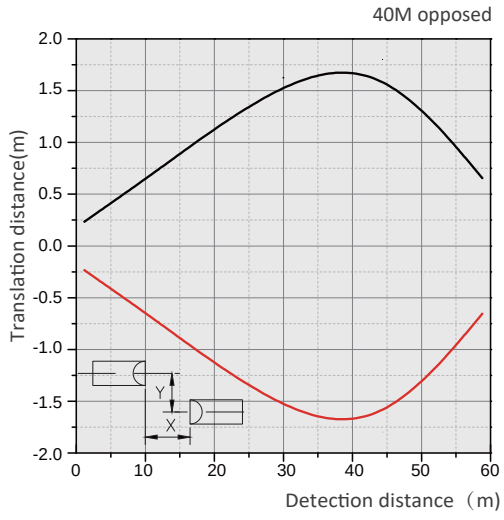


OS50-K7000VR5

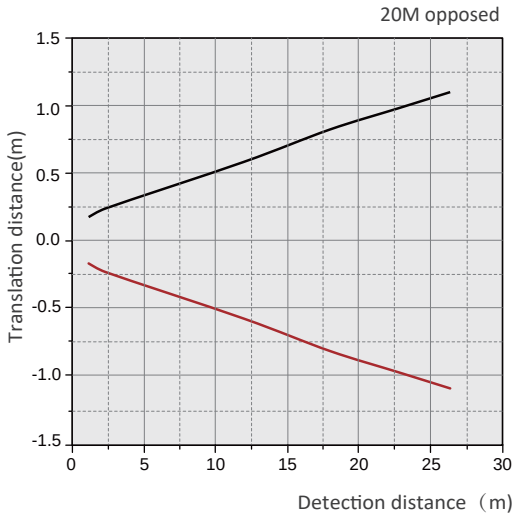


Translation characteristic curve

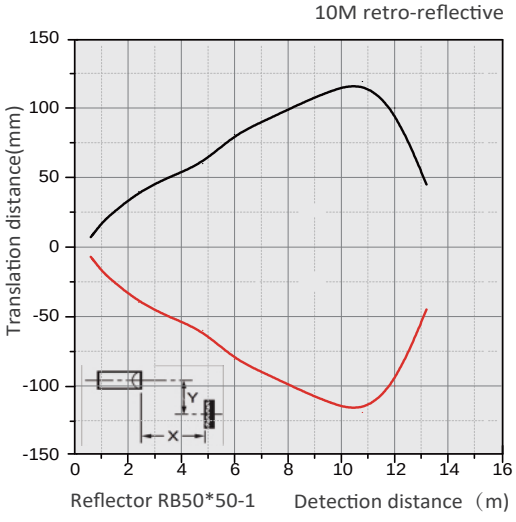
40M opposed



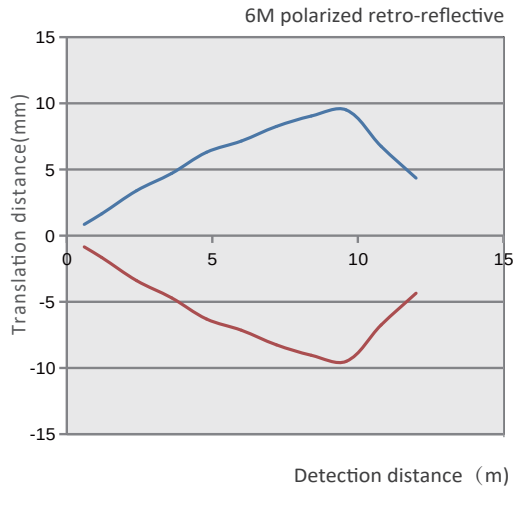
20M opposed



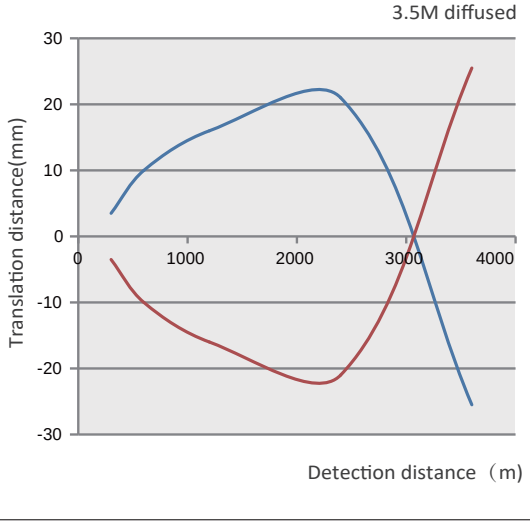
10M retro-reflective



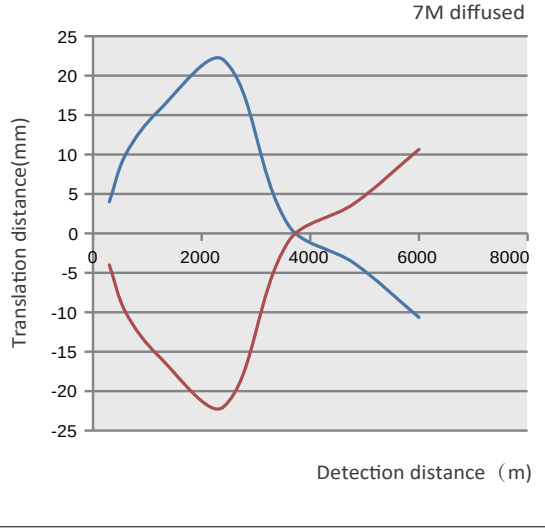
6M polarized retro-reflective



3.5M diffused



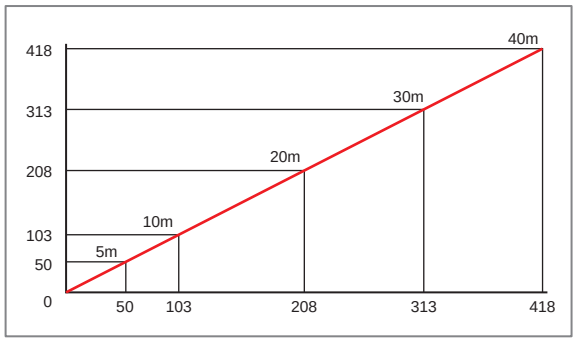
7M diffused



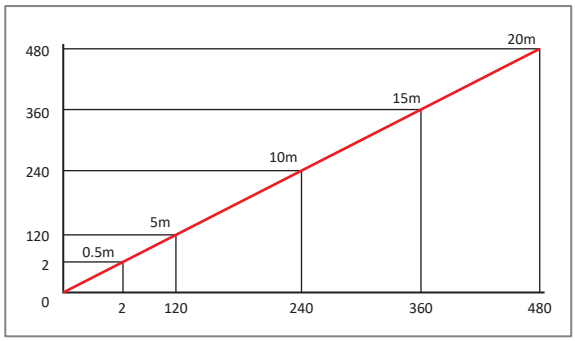
Photoelectric Sensors - Rectangular OS50

Beam Pattern:

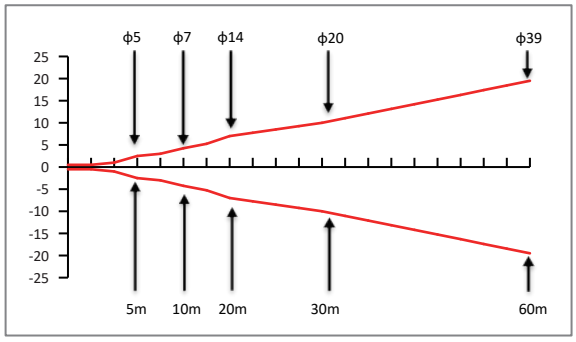
OS50-S6/S5 (cm)



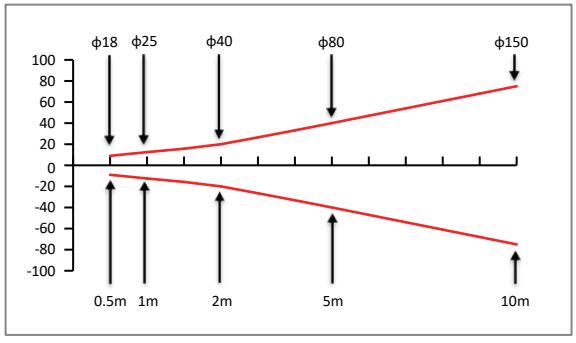
OS50-206/205 (mm)



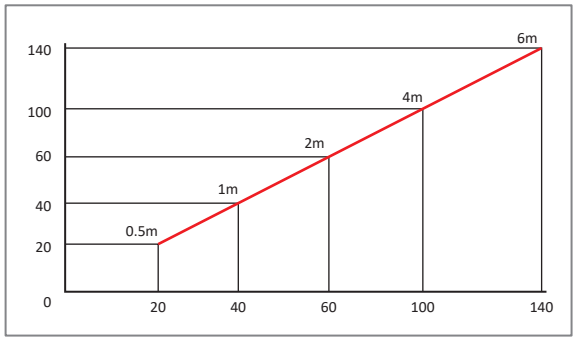
OS50-SL6/SL5 (mm)



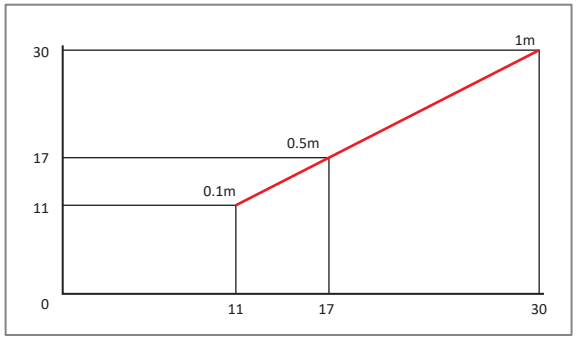
OS50-R (mm)



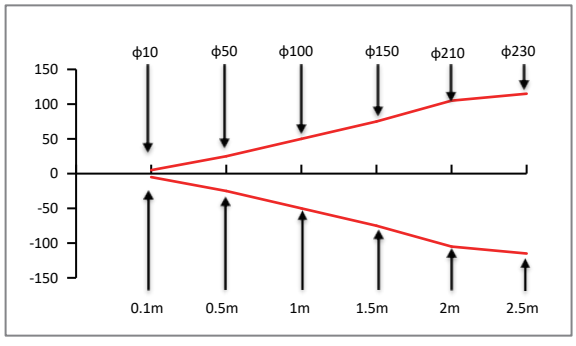
OS50-RP (mm)



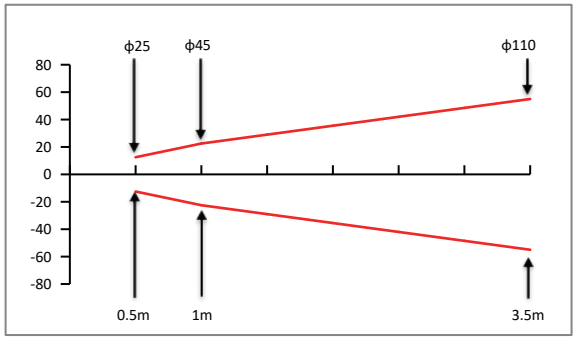
OS50-K1000 (mm)



OS50-K2500 (mm)

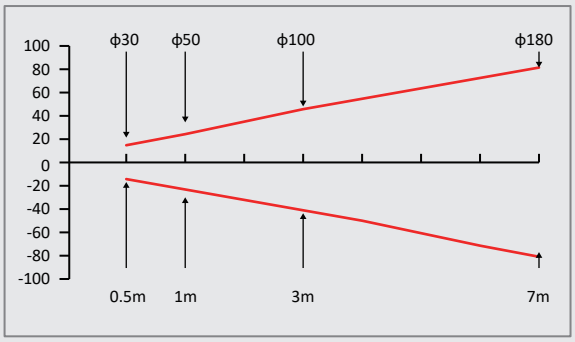


OS50-K3500 (mm)



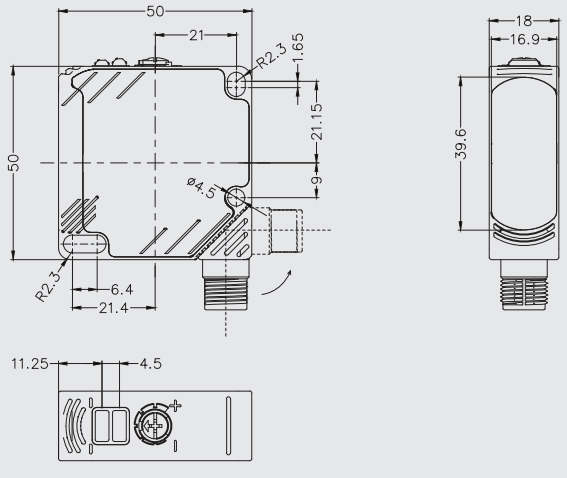
Beam Pattern :

OS50-K7000 (mm)

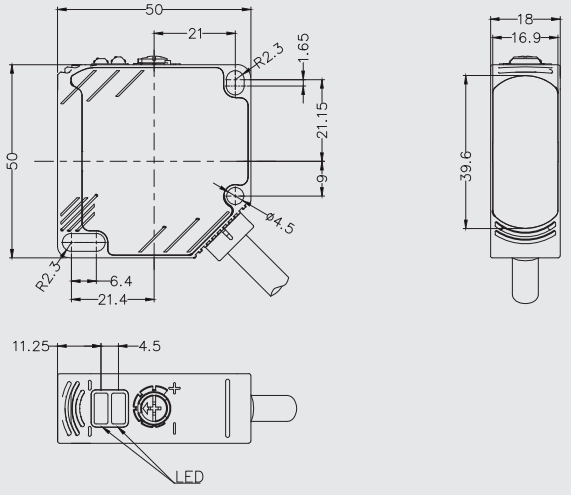


Dimensions:

M12 connector

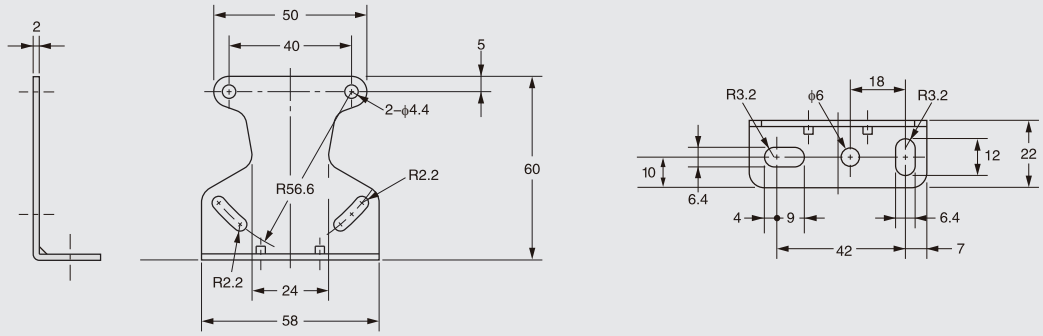


2m cable



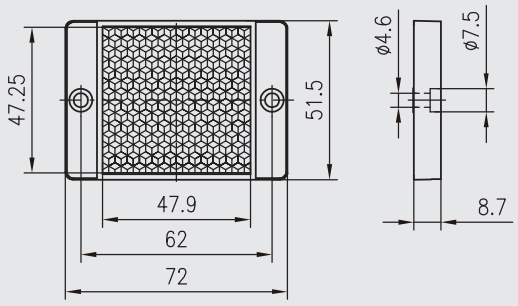
Mounting bracket (standard):

EOS50-1

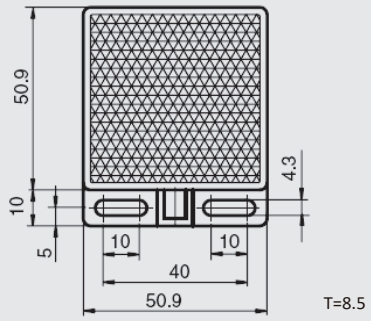


Reflector:

RB50x50-1(standard)



RB50x50 (optional)



Photoelectric sensor - rectangular OSM70

Description:

Metal housing, 150m laser opposed, 30m laser retro-reflective, 25m laser polarized retro-reflective, 3m laser BGS diffuse, coaxial technology, no blind zone, precise positioning, wide voltage supply, relay output. Suitable for automotive manufacturing, metallurgical industry, non-standard equipment, textile machinery and others.

Features:

- BGS function greatly improves the detection effect
- Long detection distance
- Adjust the sensitivity by knob
- IP67 protection class
- Push-pull / relay output

Type: (light source-laser)

Detection mode	Type	Distance	Light source	Frequency	Output	Switching mode	Connection	Wiring
Opposed	OSM70-SL6	150m	Laser	— —	— —	— —	2m cable	Fig.1
	OSM70-ELVB6		— —	800Hz	Push-Pull	Light on / dark on	2m cable	Fig.4
	OSM70-SL6Q	150m	Laser	— —	— —	— —	M12 4-pin connector	Fig.2
	OSM70-ELVB6Q		— —	800Hz	Push-Pull	Light on / dark on	M12 4-pin connector	Fig.4
	OSM70-SL5	150m	Laser	— —	— —	— —	2m cable	Fig.3
	OSM70-ELVR5		— —	50Hz	Relay	Light on / dark on	2m cable	Fig.5
Retro-reflective	OSM70-RLVB6	30m	Laser	800Hz	Push-Pull	Light on / dark on	2m cable	Fig.6
	OSM70-RLVB6Q	30m	Laser	800Hz	Push-Pull	Light on / dark on	M12 4-pin connector	Fig.4
	OSM70-RLVR5	30m	Laser	50Hz	Relay	Light on / dark on	2m cable	Fig.5
Polarized retro-reflective	OSM70-RPLVB6	25m	Laser	800Hz	Push-Pull	Light on / dark on	2m cable	Fig.6
	OSM70-RPLVB6Q	25m	Laser	800Hz	Push-Pull	Light on / dark on	M12 4-pin connector	Fig.4
	OSM70-RPLVR5	25m	Laser	50Hz	Relay	Light on / dark on	2m cable	Fig.5
BGS TOF	OSM70-AKL3000VB6	3m	Infrared laser + Laser indication	20-50Hz	Push-Pull	Light on / dark on	2m cable	Fig.6
	OSM70-AKL3000VB6Q	3m	Infrared laser + Laser indication	20-50Hz	Push-Pull	Light on / dark on	M12 4-pin connector	Fig.4
	OSM70-AKL3000VR5	3m	Infrared laser + Laser indication	20-50Hz	Relay	Light on / dark on	2m cable	Fig.5
	OSM70-AKL3000C2B6	3m	Infrared laser + Laser indication	20-50Hz	2xPush-Pull	Light on / dark on	2m cable	Fig.7
	OSM70-AKL3000C2B6Q	3m	Infrared laser + Laser indication	20-50Hz	2xPush-Pull	Light on / dark on	M12 4-pin connector	Fig.8
BGS TOF	OSM70-AKL4000VB6	4m	Infrared laser + Laser indication	20-50Hz	Push-Pull	Light on / dark on	2m cable	Fig.6
	OSM70-AKL4000VB6Q	4m	Infrared laser + Laser indication	20-50Hz	Push-Pull	Light on / dark on	M12 4-pin connector	Fig.4
	OSM70-AKL4000VR5	4m	Infrared laser + Laser indication	20-50Hz	Relay	Light on / dark on	2m cable	Fig.5
	OSM70-AKL4000C2B6	4m	Infrared laser + Laser indication	20-50Hz	2xPush-Pull	Light on / dark on	2m cable	Fig.7
	OSM70-AKL4000C2B6Q	4m	Infrared laser + Laser indication	20-50Hz	2xPush-Pull	Light on / dark on	M12 4-pin connector	Fig.8

Technical Data:

Operating voltage	10...30VDC (push-pull), 24...240VAC/DC (relay)
Ripple voltage	≤10%
Switch output	Push-Pull, Relay
Output characteristics	Light on + dark on
Repeatability	≤3%
light source	Opposed/retroreflective: red laser (655 nm)/class 2; TOF: infrared laser (940 nm) + indication laser (655 nm)/class 1
Spot diameter	5mm@7m, 15mm@20m(Opposed, Etro-reflective); 2*4cm@1m, 7*5cm@2m, 10*7cm@3m(Diffuse detection light source)
No-load current	≤30mA
Load current	≤450mA (push-pull), ≤3A (relay)
Protection circuit	Reverse polarity protection (push-pull), short circuit protection, surge protection (relay), overload protection
Output indicator	Red LED
Steady state indicator	Green LED
Housing material	Die cast zinc
Connection	M12 connector / 2 meter cable
Operating temperature	-25 °C…5 5°C; -30 °C…55 °C(OSM70-AKL4000)
Storage temperature	-40 °C…70 °C
Detection mode	BGS, Window mode, FGS（OSM70-AKL3000）
Voltage resistance	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
Dimensions	27×54×84mm

Wiring:

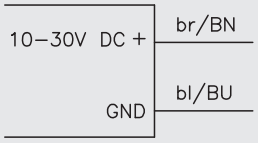


Fig.1

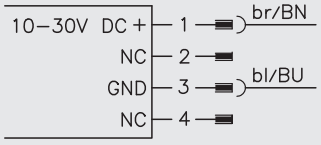


Fig.2

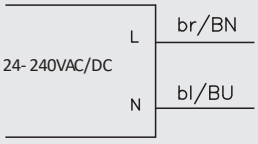


Fig.3

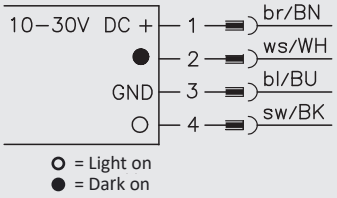


Fig.4

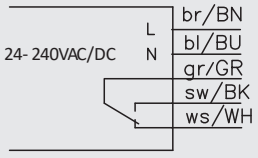


Fig.5

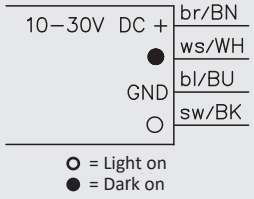


Fig.6

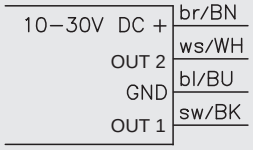


Fig.7

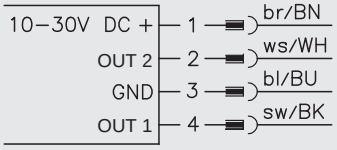
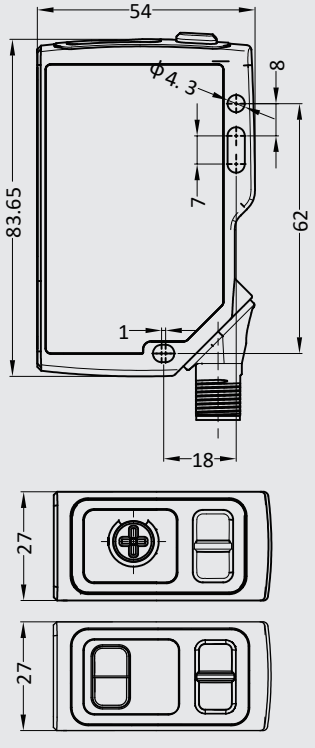


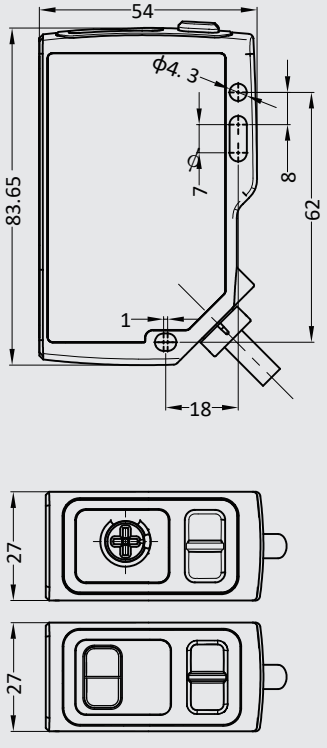
Fig.8

Dimensions:

M12 connector



2m cable



Photoelectric sensor - OSM40

Description:

Laser displacement sensor, 655nm laser source, metal housing, LED display and button settings, rich interface. Suitable for pharmaceutical, packaging, automotive, non-standard equipment and others.

Features:

- LED digital display + teaching function
- Strong resistance to ambient light, compact size
- Analog/switch dual output

Type:

Type	Distance	Beam	Output	Resolution	Connection	Wiring
OSM40-KL35CBLIU6	25...35mm	Red laser	NPN/PNP+analog mA / V	0.001mm	2m cable	Fig.1
OSM40-KL35CBLIU6Q12.1	25...35mm	Red laser	NPN/PNP+analog mA / V	0.001mm	M12 connector	Fig.1
OSM40-KL70CBLIU6	35...70mm	Red laser	NPN/PNP+analog mA / V	0.01mm	2m cable	Fig.1
OSM40-KL70CBLIU6Q12.1	35...70mm	Red laser	NPN/PNP+analog mA / V	0.01mm	M12 connector	Fig.1
OSM40-KL160CBLIU6	60...160mm	Red laser	NPN/PNP+analog mA / V	0.01mm	2m cable	Fig.1
OSM40-KL160CBLIU6Q12.1	60...160mm	Red laser	NPN/PNP+analog mA / V	0.01mm	M12 connector	Fig.1
OSM40-KL300CBLIU6	100...300mm	Red laser	NPN/PNP+analog mA / V	0.1mm	2m cable	Fig.1
OSM40-KL300CBLIU6Q12.1	100...300mm	Red laser	NPN/PNP+analog mA / V	0.1mm	M12 connector	Fig.1
OSM40-KL800CBLIU6	150...800mm	Red laser	NPN/PNP+analog mA / V	0.1mm	2m cable	Fig.1
OSM40-KL800CBLIU6Q12.1	150...800mm	Red laser	NPN/PNP+analog mA / V	0.1mm	M12 connector	Fig.1
OSM40-KL35CB6/485	25...35mm	Red laser	NPN/PNP+ 485	0.001mm	2m cable	Fig.2
OSM40-KL35CB6Q12.1/485	25...35mm	Red laser	NPN/PNP+ 485	0.001mm	M12 connector	Fig.2
OSM40-KL70CB6/485	35...70mm	Red laser	NPN/PNP+ 485	0.01mm	2m cable	Fig.2
OSM40-KL70CB6Q12.1/485	35...70mm	Red laser	NPN/PNP+ 485	0.01mm	M12 connector	Fig.2
OSM40-KL160CB6/485	60...160mm	Red laser	NPN/PNP+ 485	0.01mm	2m cable	Fig.2
OSM40-KL160CB6Q12.1/485	60...160mm	Red laser	NPN/PNP+ 485	0.01mm	M12 connector	Fig.2
OSM40-KL300CB6/485	100...300mm	Red laser	NPN/PNP+ 485	0.1mm	2m cable	Fig.2
OSM40-KL300CB6Q12.1/485	100...300mm	Red laser	NPN/PNP+ 485	0.1mm	M12 connector	Fig.2

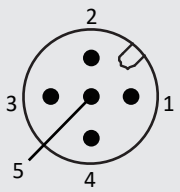
Type:

Type	Distance	Beam	Output	Resolution	Connection	Wiring
OSM40-KL800CB6/485	150...800mm	Red laser	NPN/PNP+485	0.1mm	2m cable	Fig.2
OSM40-KL800CB6Q12.1/485	150...800mm	Red laser	NPN/PNP+485	0.1mm	M12 connector	Fig.2
OSM40-KL2000C2B6Q12.1	150...2000mm	Red laser	2xNPN/PNP	0.1mm	2m cable	Fig.4
OSM40-KL2000C2B6	150...2000mm	Red laser	2xNPN/PNP	0.1mm	2m cable	Fig.4
OSM40-KL35CB6Q12.1/IO	25...35mm	Red laser	NPN/PNP+IO-Link	0.001mm	M12 connector	Fig.3
OSM40-KL70CB6Q12.1/IO	35...70mm	Red laser	NPN/PNP+IO-Link	0.01mm	M12 connector	Fig.3
OSM40-KL160CB6Q12.1/IO	60...160mm	Red laser	NPN/PNP+IO-Link	0.01mm	M12 connector	Fig.3
OSM40-KL300CB6Q12.1/IO	100...300mm	Red laser	NPN/PNP+IO-Link	0.1mm	M12 connector	Fig.3
OSM40-KL800CB6Q12.1/IO	150...800mm	Red laser	NPN/PNP+IO-Link	0.1mm	M12 connector	Fig.3

Technical Data:

Supply voltage	10-30VDC
Ripple voltage	≤10%
No-load current	≤150mA
Power	1.5W
Analog output	4...20mA, 0...5V or 0...10V
Switch output	NPN/PNP
Communication type	RS485， IO-Link
Light source	Red laser (655 nm)/class 2
Protection circuit	Reverse polarity protection, short circuit protection, Overload protection
Response time	1.5ms / 5ms / 10ms switchable
Repeatability	0.05mm@35...70mm; 0.1mm@60...160mm;0.5mm@150...400mm; 1mm@400...600mm; 3mm@600...800mm
Spot diameter	1mm@150mm; 2mm@600mm
Housing material	316L
Ambient temperature	-10 °C ... -45 °C
Voltage resistance	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/S^2 (50G) 3 times X,Y,Z respectively
Protection class	IP67
Dimensions	60.4*20*35.3mm

Interface output:



CO12.5-2/WS/P
2m connector

Fig.1

Serial number	Function	Core color of cable type	Core color of connector type
1	Power +	BN	BN
2	Analogue output	GY	WH
3	Power -	BU	BU
4	NPN/PNP	BK	BK
5	Enable input	PK	GY

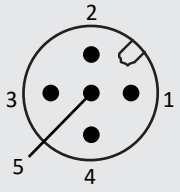


Fig.2

Serial number	Function	Core color of cable type	Core color of connector type
1	Power +	BN	BN
2	485B	GY	WH
3	Power -	BU	BU
4	NPN/PNP	BK	BK
5	485A	PK	GY

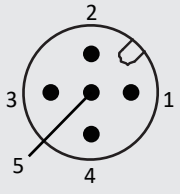


Fig.3

Serial number	Function	Core color of connector type
1	Power +	BN
2	IO-Link-DIO	WH
3	Power -	BU
4	IO-Link-C/Q	BK
5	NPN/PNP	GY

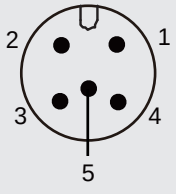
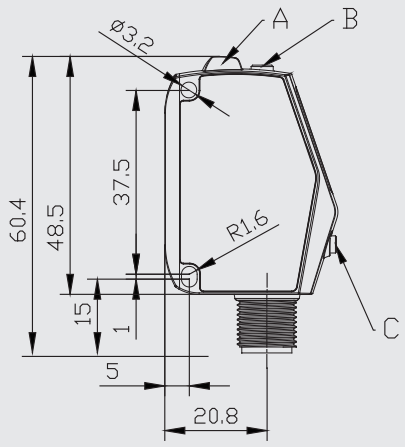
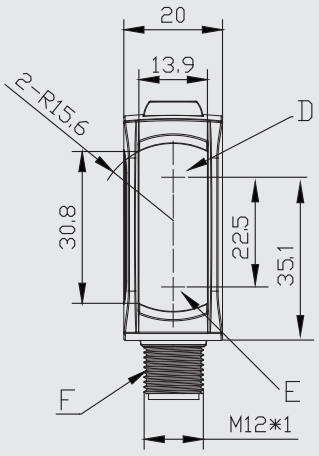


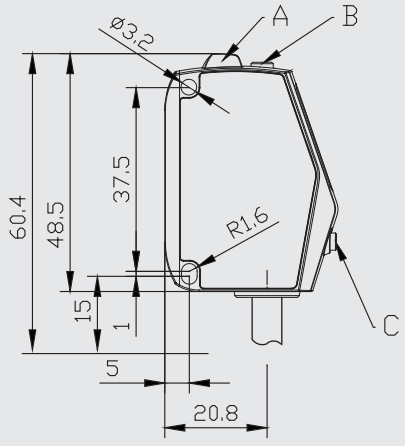
Fig.4

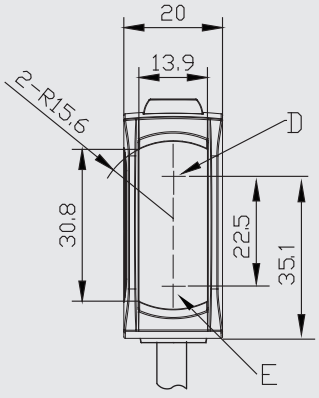
Serial number	Function	Core color of cable type
1	Power +	BN
2	NPN/PNP 2	GY
3	Power -	BU
4	NPN/PNP 1	BK
5	Enable input	PK

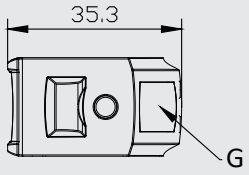
Dimensions:











A alarm indicator

B function setting button

C function adjustment button

D emitting

E receiving

F M12*1 connector

G LED display

Photoelectric sensor - OSM41

Description:

Laser displacement sensor, Metal housing, LED display and Key settings, 655nmLaser light source, 50mm-400mm Displacement-type ranging of the center point; 940nm Infrared laser 2.5m, 4m TOF type ranging. Applies to dispensing machine, pharmaceutical, packaging, automotive, AGV and other industries.

Features:

- Small size, small spot & high accuracy
- More detection mode for different application
- Four white digital tubes, clear and bright indicators
- TOF type ranging with visible laser indication light source

Type:

Ranging type	Type	Distance	Beam	Output	Resolution	Connection	Wiring
Laser displacement	OSM41-KL30CBLIU6	30mm±5mm	Red laser	NPN/PNP+analog mA / V	0.001mm	2m cable	Fig.1
	OSM41-KL50CBLIU6	50mm±15mm	Red laser	NPN/PNP+analog mA / V	0.01mm	2m cable	Fig.1
	OSM41-KL100CBLIU6	100mm±35mm	Red laser	NPN/PNP+analog mA / V	0.01mm	2m cable	Fig.1
	OSM41-KL200CBLIU6	200mm±80mm	Red laser	NPN/PNP+analog mA / V	0.1mm	2m cable	Fig.1
	OSM41-KL400CBLIU6	400mm±200mm	Red laser	NPN/PNP+analog mA / V	0.1mm	2m cable	Fig.1
	OSM41-KL1500CBLIU6	150...1500mm	Red laser	NPN/PNP+analog mA / V	0.1mm	2m cable	Fig.1
	OSM41-KL30CB6/485	30mm±5mm	Red laser	NPN/PNP+485	0.001mm	2m cable	Fig.2
	OSM41-KL50CB6/485	50mm±15mm	Red laser	NPN/PNP+485	0.01mm	2m cable	Fig.2
	OSM41-KL100CB6/485	100mm±35mm	Red laser	NPN/PNP+485	0.01mm	2m cable	Fig.2
	OSM41-KL200CB6/485	200mm±80mm	Red laser	NPN/PNP+485	0.1mm	2m cable	Fig.2
	OSM41-KL400CB6/485	400mm±200mm	Red laser	NPN/PNP+485	0.1mm	2m cable	Fig.2
	OSM41-KL1500CB/485	150...1500mm	Red laser	NPN/PNP+485	0.1mm	2m cable	Fig.2
	OSM41-KL30C2B6	30mm±5mm	Red laser	2 x Push-Pull	0.001mm	2m cable	Fig.3
	OSM41-KL50C2B6	50mm±15mm	Red laser	2 x Push-Pull	0.01mm	2m cable	Fig.3
	OSM41-KL100C2B6	100mm±35mm	Red laser	2 x Push-Pull	0.01mm	2m cable	Fig.3
	OSM41-KL200C2B6	200mm±80mm	Red laser	2 x Push-Pull	0.1mm	2m cable	Fig.3
	OSM41-KL400C2B6	400mm±200mm	Red laser	2 x Push-Pull	0.1mm	2m cable	Fig.3

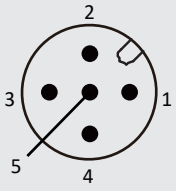
Type:

Ranging type	Type	Distance	Beam	Output	Resolution	Connection	Wiring
Laser TOF	OSM41-K2500CBLI6	50...2500mm	Infrared laser +Laser indication	NPN/PNP+analog mA	3mm	2m cable	Fig.1
	OSM41-K2500CBLU6	50...2500mm	Infrared laser +Laser indication	NPN/PNP+analog V	3mm	2m cable	Fig.1
	OSM41-K4000CBLI6	50...4000mm	Infrared laser +Laser indication	NPN/PNP+analog mA	3mm	2m cable	Fig.1
	OSM41-K4000CBLU6	50...4000mm	Infrared laser +Laser indication	NPN/PNP+analog V	3mm	2m cable	Fig.1
	OSM41-K2500CB6/485	50...2500mm	Infrared laser +Laser indication	NPN/PNP+485	3mm	2m cable	Fig.2
	OSM41-K4000CB6/485	50...4000mm	Infrared laser +Laser indication	NPN/PNP+485	3mm	2m cable	Fig.2
	OSM41-KL10CBLIU6	0.01 ... 10m	Infrared laser	NPN/PNP+analog mA/V	1mm	2m cable	Fig.1
	OSM41-KL10CB6/485	0.01 ... 10m	Infrared laser	NPN/PNP+485	1mm	2m cable	Fig.2
	OSM41-KL10C2B6	0.01 ... 10m	Infrared laser	2xNPN/PNP	1mm	2m cable	Fig.2

Technical Data:

Supply voltage	10-30VDC
Power	<1W
Light source	Laser displacement: red laser (655 nm)/class 2; TOF: infrared laser (940 nm) + indication laser（655nm)/class 1
Switch output	NPN/PNP, can be set
Analogue output	0-5V, 0-10V, 4-20mA / RS485
Spot diameter	ϕ100μm@30mm; ϕ100μm@50mm; ϕ200μm@100mm; ϕ500μm@200mm; ϕ1mm@400mm
Repeatability	ϕ2mm@600mm; 9*5.5cm@2.5m; 13*8.5cm@4m; 50mm@10M 10μm@30mm;30μm@50mm; 70μm@100mm; 200μm@200mm; 300μm(200mm~400mm);
Measurement accuracy	800μm(400mm~600mm); 10mm@4m; 10mm@10M Laser displacement: ±0.1%F.S.（160mm）±0.2%F.S.（160~400mm）±0.3%F.S.（400~600mm）
Response frequency	±0.5%F.S.(600~800mm) ; Laser TOF:30mm, 50mm@10M Laser displacement: 1.5ms/5ms/15ms; Laser TOF: 30HZ; 25HZ@10M
Ambient temperature	-20 °C ... +60 °C
Operating temperature	-10 °C ... +50 °C
Voltage resistance	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/S^2(50G) 3 times X,Y,Z respectively
Housing material	Die-cast zinc
Dimensions	45.7x26.5x20mm

Interface output:



CO12.5-2/WS/P
2m connector
Fig.1

Serial number	Function	Core color of cable type
1	Power +	BN
2	Analogue output	GY
3	Power -	BU
4	NPN/PNP	BK
5	Enable input	PK

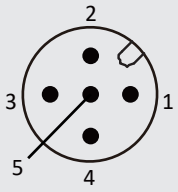


Fig.2

Serial number	Function	Core color of cable type
1	Power +	BN
2	485B	GY
3	Power -	BU
4	NPN/PNP	BK
5	485A	PK

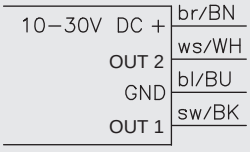
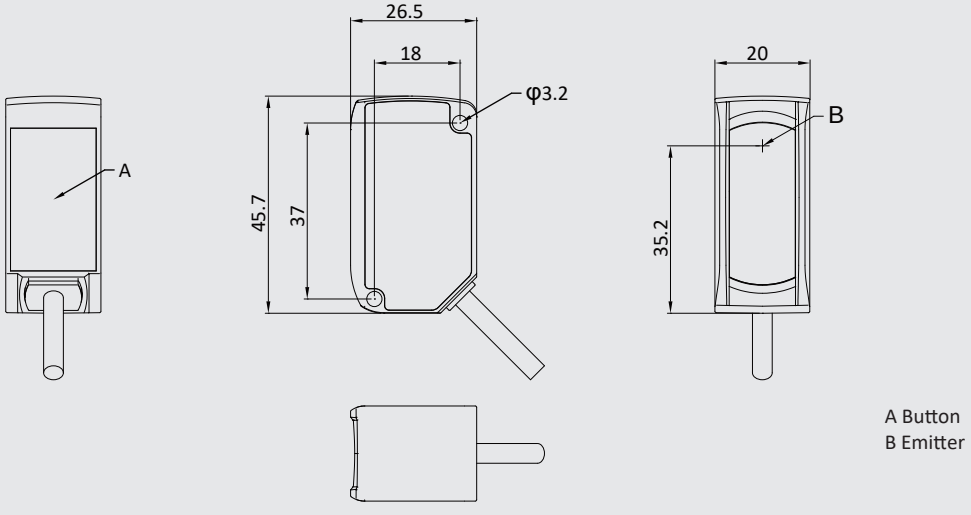


Fig.3

Serial number	Function	Core color of cable type
1	Power +	BN
2	Power -	BU
3	Switch 1	BK
4	Switch 2	PK

Dimensions:



A Button
B Emitter

Photoelectric sensor - OSM42

Description:

Laser distance measurement sensor, 655nm Laser light source, metal housing; Applies to logistics, packaging, automotive, non-standard equipment and others.

Features:

- High precision, accurate positioning
- Strong resistance to ambient light, compact size
- 2 switch output
- TOF type ranging with visible laser indication light source

Type:

Ranging type	Type	Distance	Beam	Output	Resolution	Connection	Wiring
Laser displacement	OSM42-KL1200C2B6	150...1200mm	Red laser	2 x Push-Pull	1mm	2m cable	Fig.1
	OSM42-KL1500C2B6	150...1500mm	Red laser	2 x Push-Pull	1mm	2m cable	Fig.1
	OSM42-KL2000C2B6	150...2000mm	Red laser	2 x Push-Pull	1mm	2m cable	Fig.1
Laser TOF	OSM42-K2500C2B6	50...2500mm	Infrared laser + Laser indication	2 x Push-Pull	5mm	2m cable	Fig.1
	OSM42-K4000C2B6	50...4000mm	Infrared laser + Laser indication	2 x Push-Pull	5mm	2m cable	Fig.1

Photoelectric sensor - OSM42

Technical Data:

Supply voltage	10-30VDC
Ripple voltage	≤10%
No-load current	≤150mA
Power	<0.8W
Switch output	2 x Push-Pull
Light source	Laser displacement: red laser (655nm)/class 2; TOF: infrared laser (940 nm) + indication laser (655nm)/class 1
Protection circuit	Reverse polarity protection, short circuit protection, Overload protection
Response time	Laser displacement: 100Hz; TOF: 30HZ
Repeatability	2mm(150mm-600mm); 5mm(600mm-800mm); 10mm(800mm-1200mm)
Spot diameter	2mm@600mm; 3.5mm@1200mm; 8mm@2000mm
Housing material	Die-cast zinc
Ambient temperature	-20 °C ... +60 °C
Operating temperature	-10 °C ... +50 °C
Voltage resistance	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
Dimensions	46x20x29mm

Interface output:

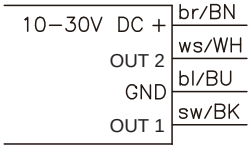


Fig.1

	Function	Wire color
1	Power +	BN
2	Power -	BU
3	Switch 1	BK
4	Switch 2	WH

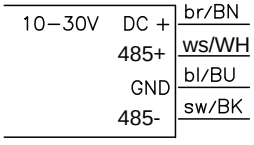
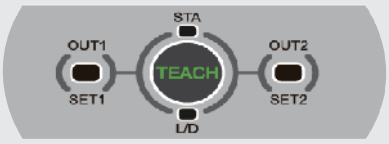


Fig.2

	Function	Wire color
1	Power +	BN
2	Power -	BU
3	485-	BK
4	485+	WH

Indicator:



STA: status

L/D: light on/dark on

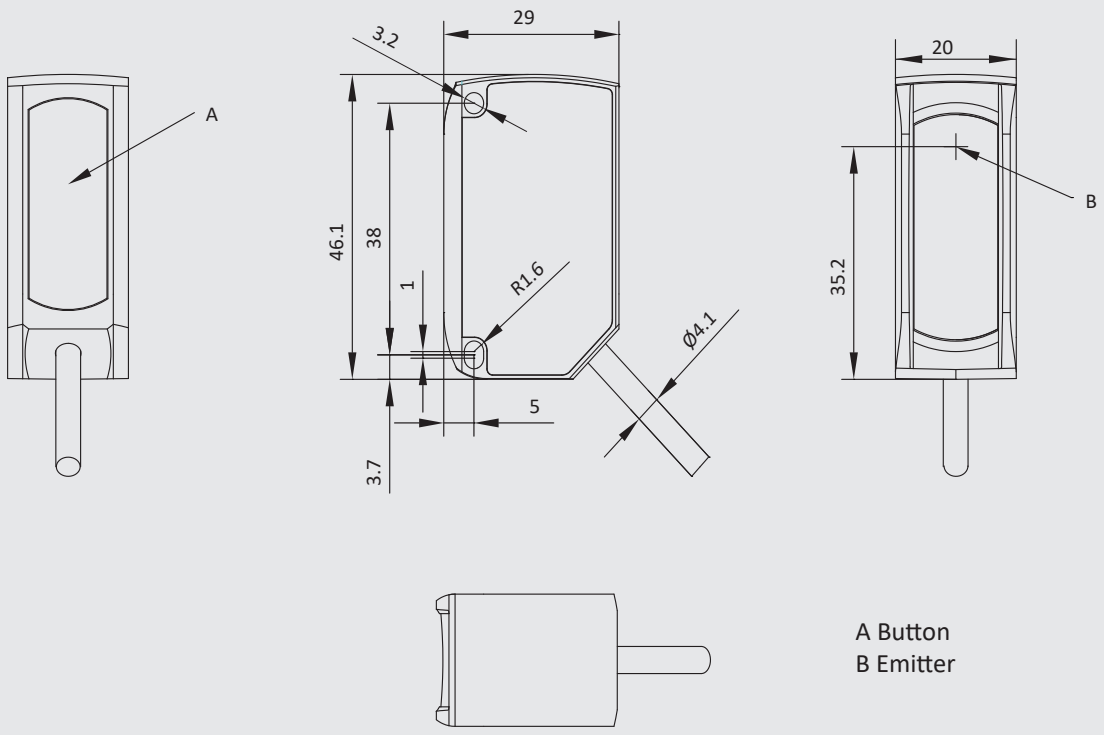
OUT1: switch 1 digital output

OUT2: switch 2 digital output

Keys instruction:

TEACH: setting

Dimensions:



A Button
B Emitter

Photoelectric sensor - Color sensor OSM47

Description:

The combination of white LED and customized receiving optical elements ensures stable performance. OLED display function and key settings. Supports three detection modes, with a maximum of 15 colors detected simultaneously. Suitable for industries such as automotive parts, 3C, packaging, lithium batteries, photovoltaics, semiconductors, etc.

Features:

- OLED digital display + teaching function
- IO-Link
- Adjustable white spot size

Type:

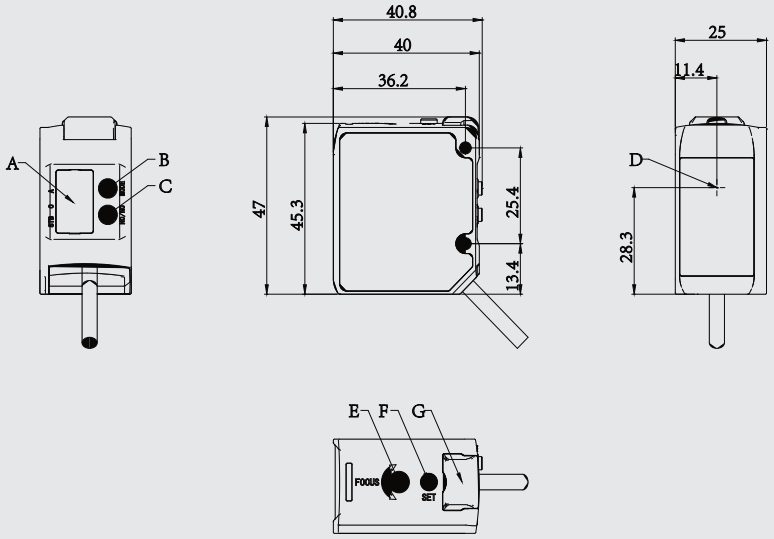
Type	Detecting Distance	Light source	Output	Connection
OSM47-CK500C2B6	30 ...500mm	White LED	NPN/PNP	2m cable
OSM47-CK500C2B6Q12.1	30 ...500mm	White LED	NPN/PNP	M12 connector
OSM47-CK500C2B6/IO	30 ...500mm	White LED	NPN/PNP + IO/Link	2m cable
OSM47-CK500C2B6Q12.1/IO	30 ...500mm	White LED	NPN/PNP + IO/Link	M12 connector

Technical Data :

Detecting distance	30 ... 500 mm
Light source	White LED
Ripple voltage	<1.56 W
Frequency difference	Frequencies can be set, up to 2
Output type	2 × NPN/PNP
Communication mode	IO-Link
External input	1 way can be used for external triggering
Spot size	Ø3.5mm@100m; Ø9mm@250m; Ø18mm@500m
Load current	24VDC 65mA
Supply voltage	10...30 VDC ± 10%
Switch mode	N.O. / N.C.
Ambient light resistance	Incandescent lamp: less than 10000 lux; Sunlight: below 20000 lux
Protection circuit	Reverse polarity protection, short circuit protection, overload protection
Response time	200us / 1ms / 10ms / 500ms
Housing material	Zinc die-casting
Connector	2m, 5-pin, PVC; Q12 connector 5-pin
Ambient temperature	-40 °C ... +70 °C
Storage temperature	-20 °C ... +50 °C
Voltage withstanding	1000V / AC / 50 / 60Hz 60s
Insulation impedence	≥50MΩ (500VDC)
Shock resistance	Complex amplitude 1.5 mm 10... 50 Hz (2hr X, Y, Z respectively)
Impact resistance	500m/S2 (50G) 3 times X, Y, Z respectively
Protection class	IP67
Housing dimension	40.8*47*25 mm

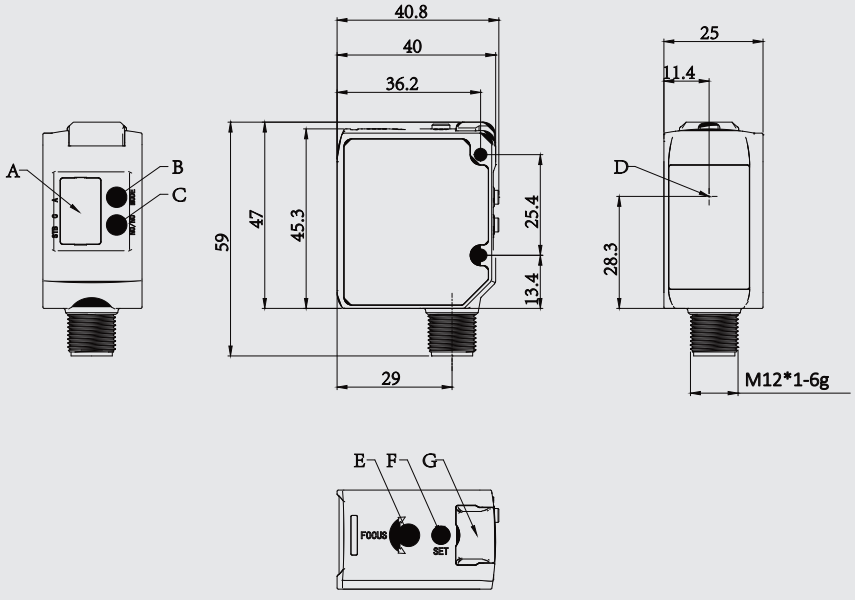
Dimensions:

2m cable



A: OLED display
B: function setting button
C: function adjustment button
D: emitting
E: adjuste knob
F: teaching button
G: Indicator LED

M12 connector



A: OLED display
B: function setting button
C: function adjustment button
D: emitting
E: adjuste knob
F: teaching button
G: Indicator LED

Photoelectric Sensors - Rectangular OSM61

Description:

Micron-class laser distance sensor, 655nm laser light source, metal case, OLED display functions and key settings.Data analysis can be carried out through its own host computer software, with rich interfaces.It is suitable for auto parts, 3C, lithium battery, photovoltaic, semiconductor and other industries.

Features:

- OLED digital display + teach-in function
- The compact all-in-one body design eliminates the need to connect an external controller
- The output interface is abundant, and the host computer is connected through 485

Type:

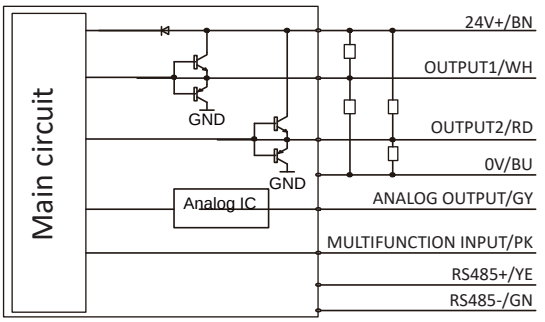
Type	Distance	Light source	Output	Resolution	Connection	Wiring
OSM61-KL30C2BLIU6/485	30 ± 4mm	Red laser	Push-pull+ analog V/mA+RS485	0.1um	2m cable	Fig. 1
OSM61-KL50C2BLIU6/485	50 ± 10mm	Red laser	Push-pull+ analog V/mA+RS485	1um	2m cable	Fig. 1
OSM61-KL85C2BLIU6/485	85 ± 20mm	Red laser	Push-pull+ analog V/mA+RS485	1um	2m cable	Fig. 1
OSM61-KL120C2BLIU6/485	120 ± 60mm	Red laser	Push-pull+ analog V/mA+RS485	1um	2m cable	Fig. 1
OSM61-KL250C2BLIU6/485	250 ± 150mm	Red laser	Push-pull+ analog V/mA+RS485	1um	2m cable	Fig. 1

Technical Data:

Operating voltage	10...30VDC±10% Including pulse fluctuations 0.5V(P-P)
Light source	Red laser (655 nm)/class 2
Power	Power＜2W, current＜200mA
Analog output	LIU: 4...20mA, 0...10V
Switching output	2×Push-Pull/NPN/PNP
Communication mode	RS485
External input	Used for zero setting and reset
linearity	30/50/85/120mm: ±0.1%F.S. , 250mm: ±0.3%F.S
repeatability	0.5um@26...34mm; 1.5um@40...60mm; 2.5um@65...105mm; 8um@60...180mm; 20um@100...400mm
Spot diameter	ϕ0.8mm@30mm; ϕ1mm@50mm; ϕ1.2mm@85mm; ϕ1.2mm@120mm; ϕ1.3mm@250mm
Protection circuit	Reverse polarity protection, short circuit protection, overload protection
Response time	200us / 500us / 1ms / 2ms
Material	Shell: aluminum alloy; Window: Glass
Connection	2m, 8-pin, PVC
Ambient temperature	-20°C...+60°C
Operating temperature	-10°C...+50°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
Dimension	61.1 x 21.8 x 58.5 mm

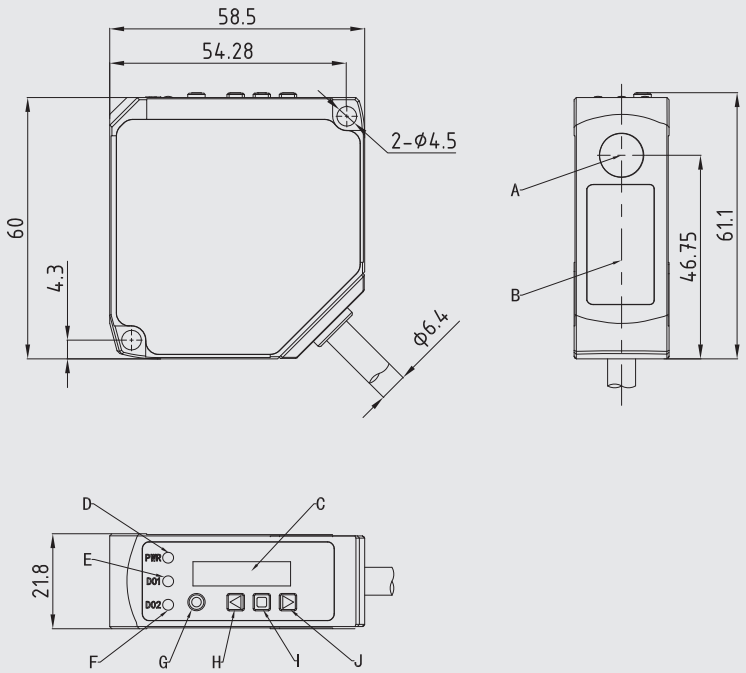
Interface output:

Fig.1



No.	Colour	Feature
1	BN	24V +
2	BU	0V
3	WH	Switching quantity 1
4	RD	Switching quantity 2
5	YE	RS485+
6	GN	RS485-
7	GY	Analog V/mA
8	PK	External input

Dimensions:



A. Emitter
B. Receiver
C. Display
D. Power indicator/alarm indicator
E. Switching quantity 1 Output indicator
F. Switch quantity 2 Output indicator
G. Backspace key
H. Page up key
I . Confirm key
J. Scroll down key

Deviation correction sensor - Inductor

Description:

The OSMT60 series needs to be used with the OSC1 controller with a push-button teaching function.A variety of working modes are available, and there are multiple output types at the same time.Applicable to pharmaceuticals, packages installation, lithium battery, photovoltaic, non-standard equipment, etc.

Features:

- High precision, split inductor
- Use it with a controller to adapt to more scenarios and output more modes

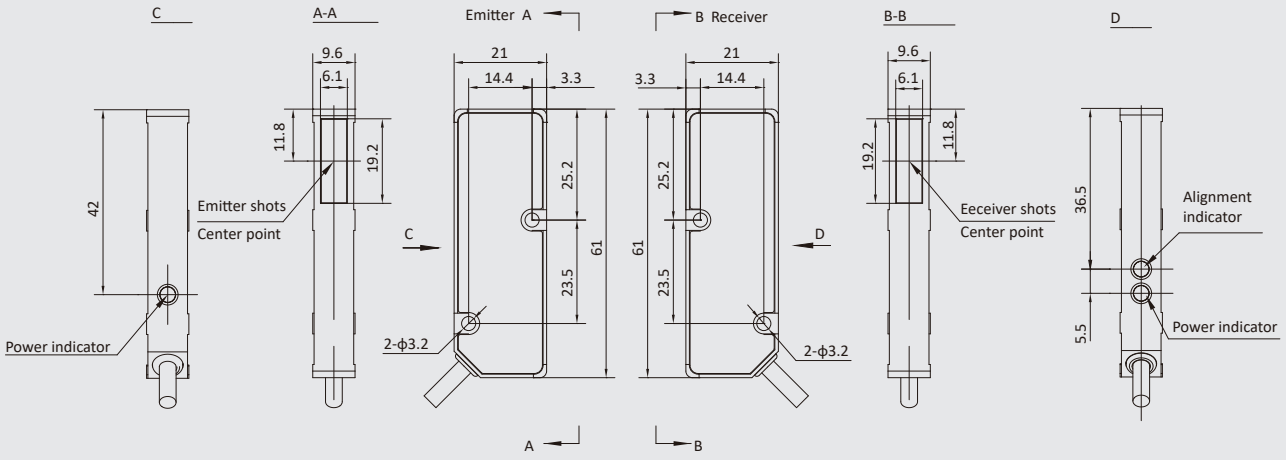
Type:

Detection mode	Type	Distance	Light source	Repeatability	Connection
Opposed	OSMT60-S3006-0.3-Q8 (Emitter)	300mm	Laser	±5μm	M8 connector, 4-pin
	OSMT60-E3006-0.3-Q8 (Receiver)	300mm	— —	±5μm	M8 connector, 4-pin
	OSMT60-T300 (Emitter+Receiver)	300mm	Laser	±5μm	M8 connector, 4-pin

Technical Data:

Light source	Red laser (655 nm)/class 1
Operating voltage	DC 12 ... 24 V
Ripple voltage	≤ 10%
Supply current	Emitter: ＜ 20 mA, Receiver: ＜80 mA (DC 12 V)
Connection	0.3m cable + M8 connector, 4-pin
linearity	Installation distance 100mm: +0.4%FS (40 um)
Temperature characteristic	±0.02% F.S./ °C
Response time	500 us
Spot size	3x14 mm
Measuring range	Measuring width10 mm
Indicator	Transmitter Power Indicator: Green; receiver indicator: the upper offset red light flashes, the lower offset green light flashes, and the transmitted light is not received at the same time
Protective circuit	Reverse polarity protection, short circuit protection, overload protection
Ambient temperature	-10 ... +50 °C/35~85%RH (No condensation · freezing)
Storage temperature	-20 ... +60 °C/35~85%RH (No condensation · freezing)
Shock resistance	Complex amplitude 1.5 mm 10 ... 50 Hz (2hr X, Y,Z respectively)
Impact resistance	500m/S2 (50G) 3 times X, Y, Z respectively
Protection class	IP50
Housing material	Housing: aluminum alloy, transmitting and receiving lens: glass

Dimensions: (Opposed)



Deviation correction sensor - Controller

Description:

The OSC1 series controller is used in conjunction with the guiding sensor head with a presskey teach-in function.Multiple operating modes are selectable and multiple output types are available.Suitable for pharmaceutical, packaging, lithium battery, photovoltaic, non-standard equipment, etc.

Features:

- The high-precision sensor controller is installed separately
- It supports multiple detection modes and multi-scenario applications
- Equipped with an organic EL display, available in Chinese and English

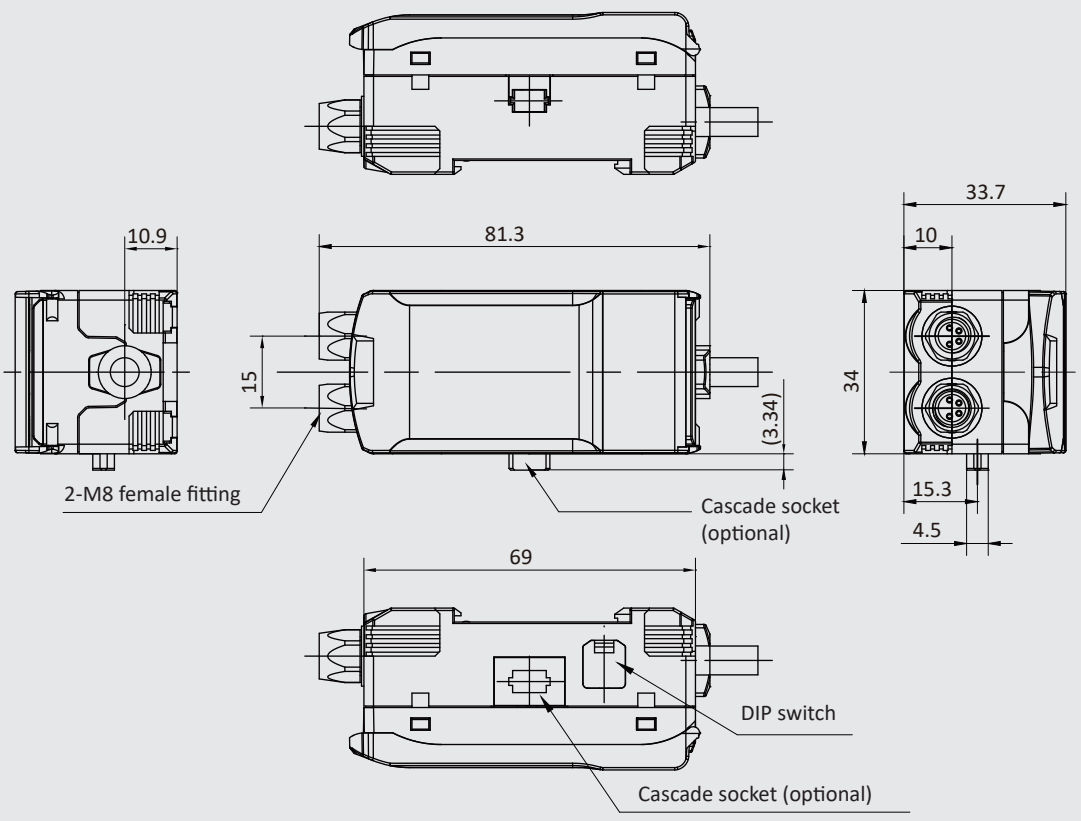
Type:

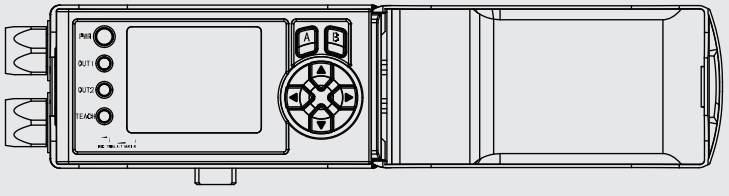
Type	Output	Sensor connection	Sensor communication	Number of induction head connections	Connection
OSC1-UC2B6-Q8/485	NPN/PNP+485	M8 connector, 4-pin	RS-485	MAX.2	2m cable
OSC1-TC2B6-Q8/485	NPN/PNP+485	M8 connector, 4-pin	RS-485	MAX.2	2m cable
OSC1-TC2BLIU6-Q8	NPN/PNP+Analog mA/V	M8 connector, 4-pin	RS-485	MAX.2	2m cable

Technical Data:

Operating voltage	DC12~24V
Ripple voltage	≤10%
Supply current	＜120mA(DC12V)
Sensor connection	Max.2, M8 connector, 4-pin
Sensor communication	RS485
Output type	2 PNP/NPN optional, Max.100mA/DC24V, RS485
	2 output analog current/voltage can be switched, current :4~20mA, voltage :0~10V
Protective circuit	Reverse polarity protection, short circuit protection, overload protection
Sensitivity	Button settings
Display features	Dot-matrix display Chinese/English optional
Indicator	Power indicator: green, output indicator: orange
Ambient temperature	-20...+50°C/35~85%RH (No condensation · freezing)
Storage temperature	-20...+60°C/35~85%RH (No condensation · freezing)
Shock resistance	Complex amplitude 1.5 mm 10 ... 50Hz (2hr X, Y,Z respectively)
Impact resistance	500m/S² (50G) 3 times X, Y, Z respectively
Protection class	IP50
Housing material	PC

Dimensions:





Panel view

Deviation correction sensor - Communication Unit

Description:

The M1-EC6 communication unit module can be connected to the OSC1 series controller EtherCAT network.It can be operated directly on the host computer, and the parameters can be adjusted remotely, which can avoid the inconvenience of manual adjustment.

Features:

- EtherCAT communication is supported
- It can be directly cascaded and rail-mounted

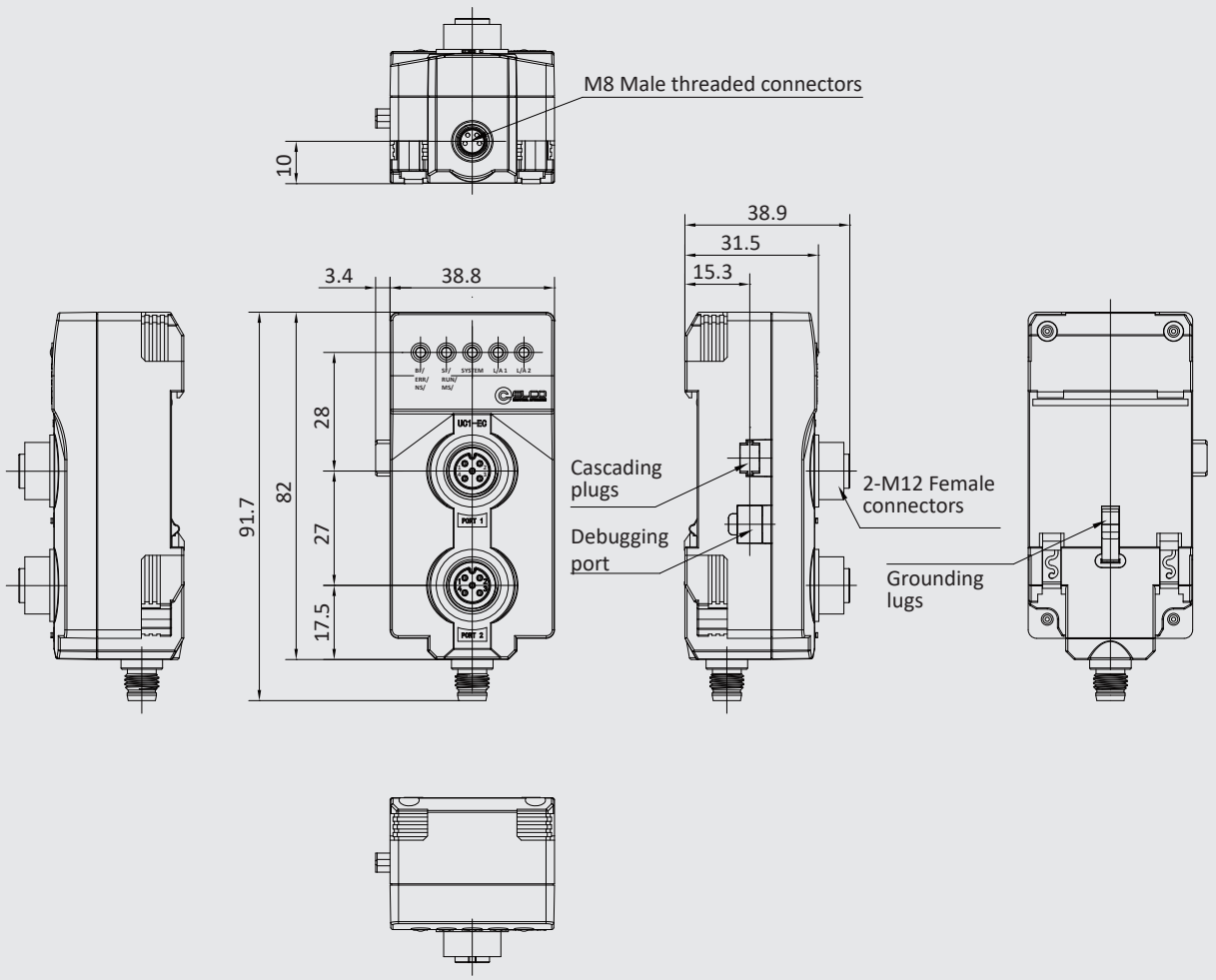
Type:

Type	Communication mode	Transmission speed	Connection port
M1-EC6	EtherCAT	100M Baud	2×M12*LAN+1 cascade port

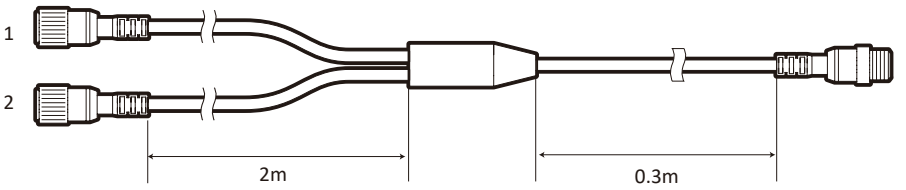
Technical Data:

Operating voltage	DC12~24V
Ripple voltage	≤10%
Supply current	<100mA (DC12V)
Connecting sensor	It can be connected to the OSC1 series controller
Number of connections	Up to 8 controllers can be connected
Connection	Connector, 5-pin
Circuit settling time	<1.5s
Transmission speed	EtherCAT: 100M Baud, EtherNet/IP: 10/100 Mbps
Communication unit	EtherCAT, EtherNet/IP, PROFINET
Indicator	EtherCAT - Power indicator: Green(PWR), Alarm light: red(ERR), Running indicator: Green(RUN), Action indicator: Green(SYSTEM), PORT1 indicator: Green(L/A1), PORT2 indicator: Green(L/A2) EtherNet/IP - Power indicator: Green(PWR), Network status indicator: red/green(NS), Device status indicator: red/green(MS), Action indicator: Green(SYSTEM), PORT1 indicator: Green(L/A1), PORT2 indicator: Green(L/A2)
Protective circuit	Reverse polarity protection, short circuit protection, overload protection
Ambient temperature	-25...+55°C/35~85%RH (No condensation · freezing)
Storage temperature	-40...+70°C/35~85%RH (No condensation · freezing)
Shock resistance	Complex amplitude 1.5 mm 10 ... 50Hz (2hr X, Y,Z respectively)
Impact resistance	500m/S2 (50G) 3 times X, Y, Z respectively
Protection class	IP50
Housing	PC

Dimensions:


M8 Male threaded connectors
10
38.9
31.5
15.3
3.4
38.8
28
82
27
17.5
91.7
Cascading plugs
Debugging port
2-M12 Female connectors
Grounding lugs

ECS-C8.4-0.3-2CO8.4-2/2/P44



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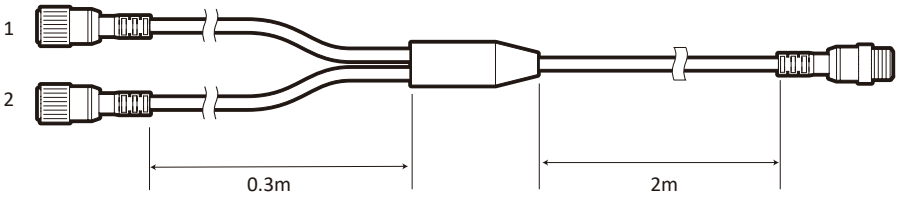
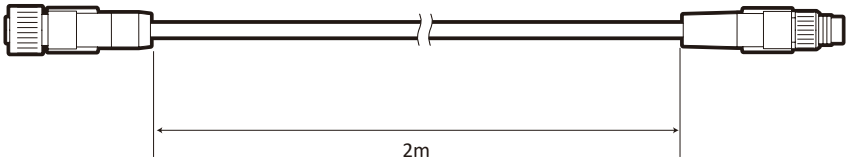
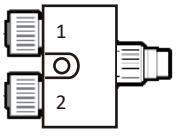


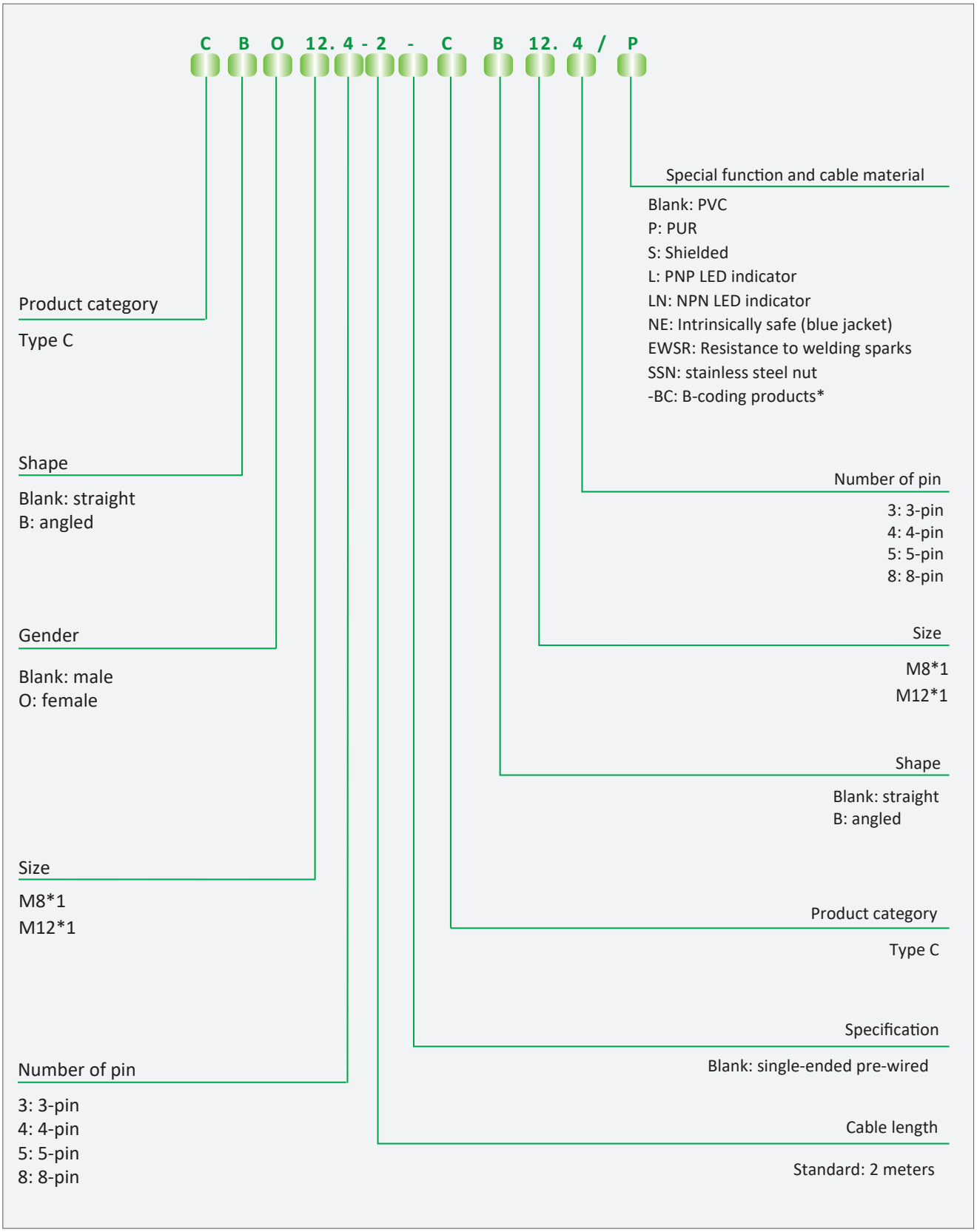
CO8.4-2-C8.4

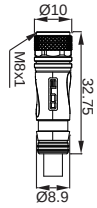
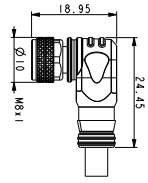
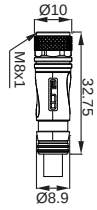
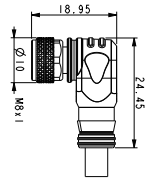
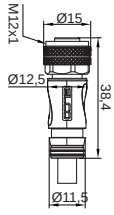
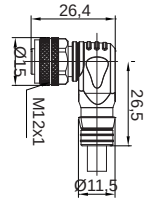
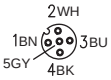
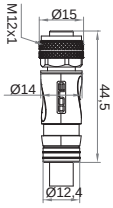
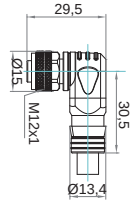
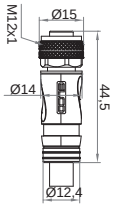
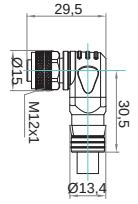


ECS-ECO8.4/P44



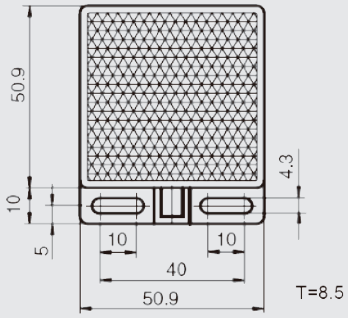
Accessories - connector



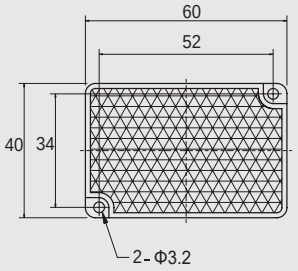
Size and pin assignment	Adapter connector	
	Straight	Angled
M8  1 br/BN 3 bl/BU 4 sw/BK	 	
M8  1 br/BN 2 ws/WH 3 bl/BU 4 sw/BK	 	
M12  1 br/BN 2 ws/WH 3 bl/BU 4 sw/BK	 	
M12  1 br/BN 2 ws/WH 3 bl/BU 4 sw/BK 5 Blindloch/ dummy hole	 	
M12  1 ws/WH 2 br/BN 3 gn/GN 4 ge/YE 5 gr/GY 6 rs/PK 7 bl/BU 8 rt/RD	 	

Reflector:

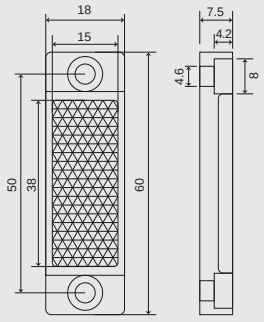
RB50*50



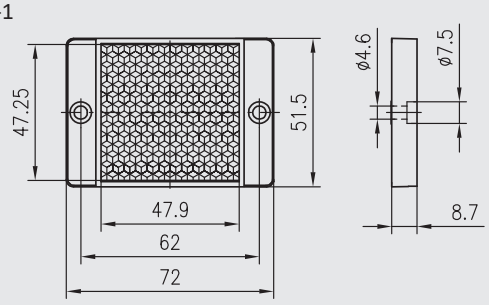
RB40*60



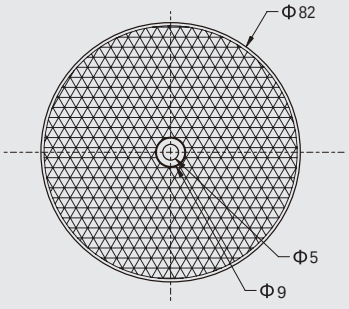
RB20*40



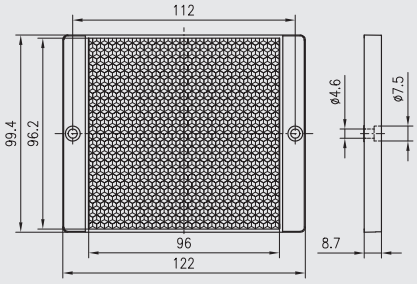
RB50*50-1



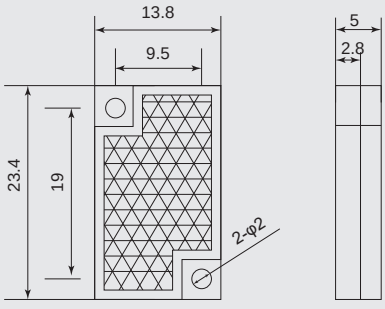
RB80



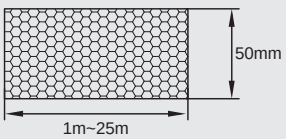
RB100*100



RB15*25

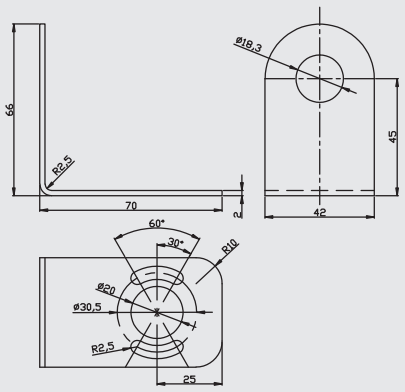


Reflective tape
RT50-1

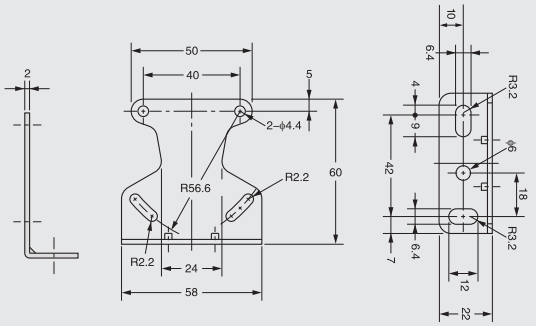


Mounting bracket:

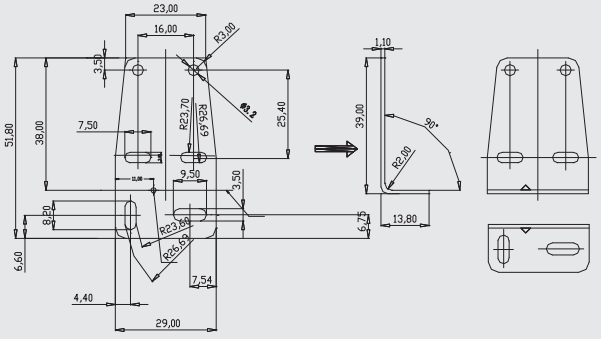
Barrel 18 series mounting bracket
EOM18-1



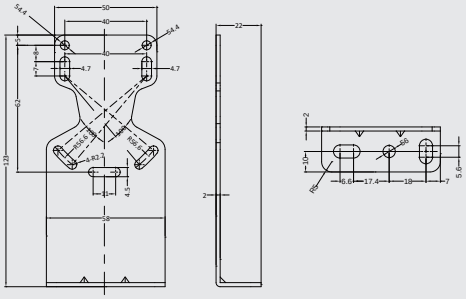
OS50 Series Mounting Bracket
EOS50-1



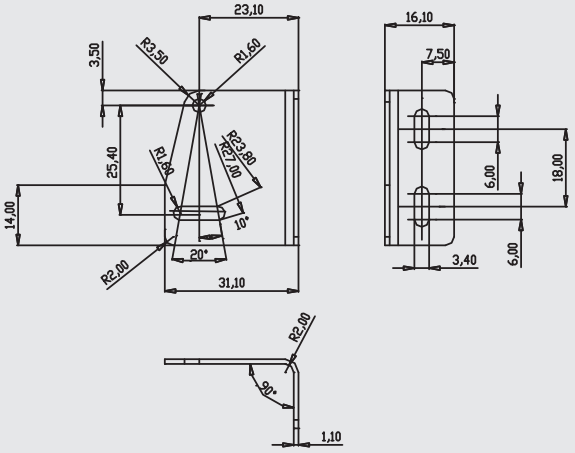
OS10/10S series mounting bracket
EOS12DF-1



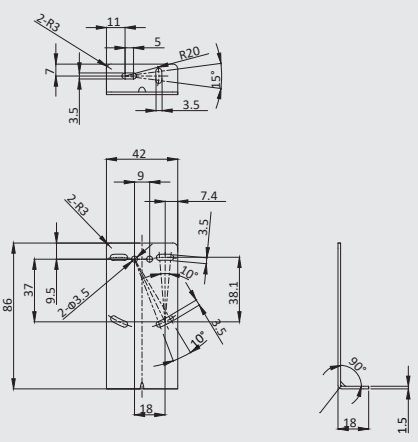
OSM70 series mounting bracket
EOSM70-1



OS12 series mounting bracket
EOS12DF-2

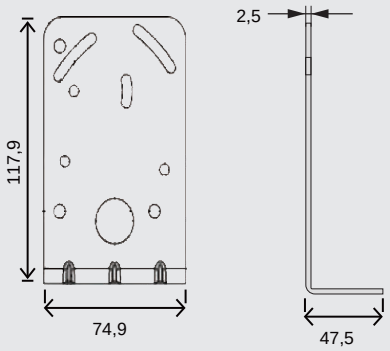


OSM40/41 series mounting bracket
EOSM4041-1



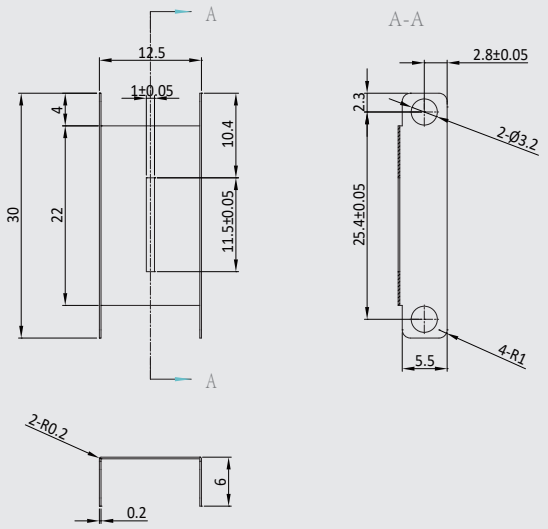
Mounting bracket:

OSM72 series mounting bracket
EOSM72-1

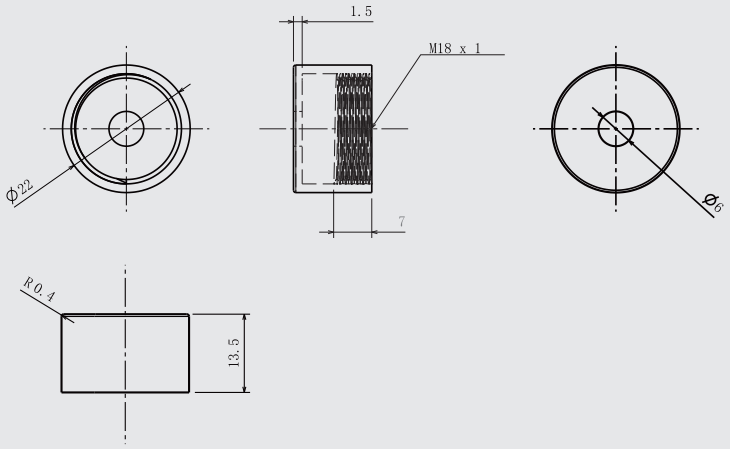


Slit:

OS10 series slit
SOS10-1



OM18\OP18\OG18 slit
SOM18-1



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