

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 $\Phi 3$, 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

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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

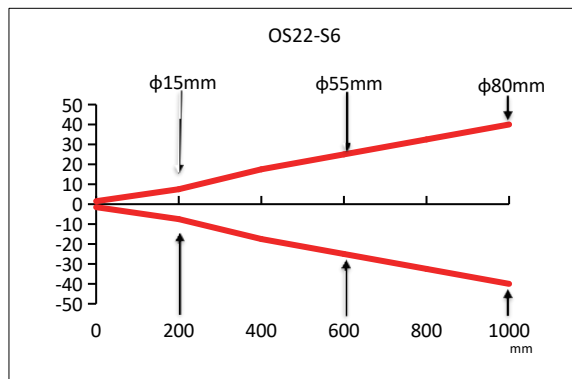
Technical Data:

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 impedance	≥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
Environment light immune	Sunlight interference ≤10000Lux; filament lamp ≤5000Lux, light in dark environment ≥300Lux

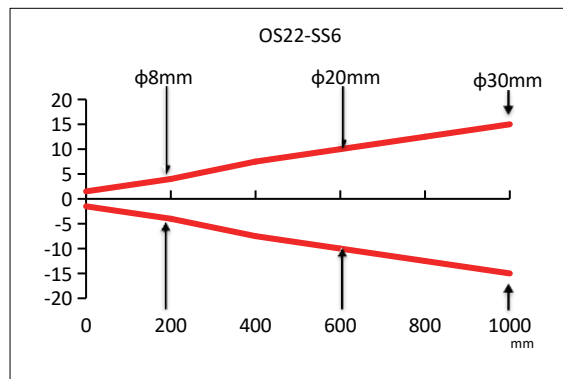
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Beam Pattern :

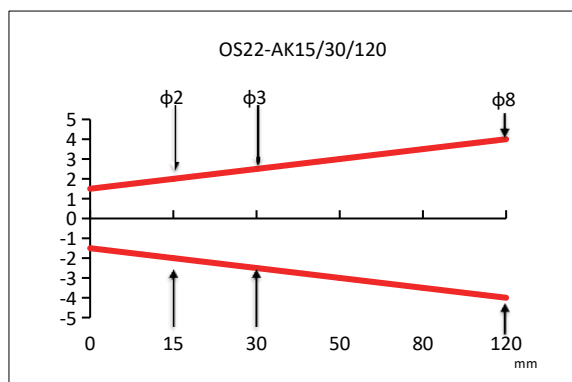
OS22-S6 (mm)



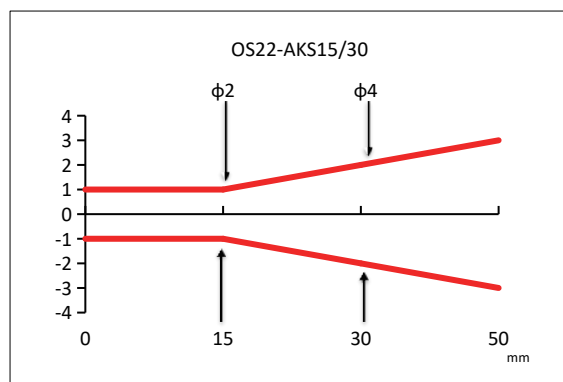
OS22-SS6 (mm)



OS22-AK15/30/120 (mm)



OS22-AKS15/30 (mm)



Wiring:

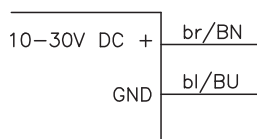


Fig.1

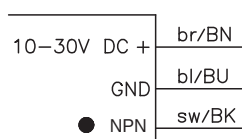


Fig.3

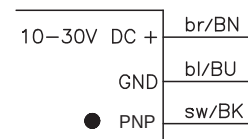


Fig.5

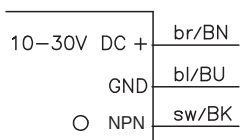


Fig.2

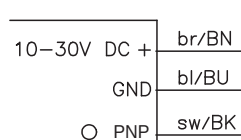
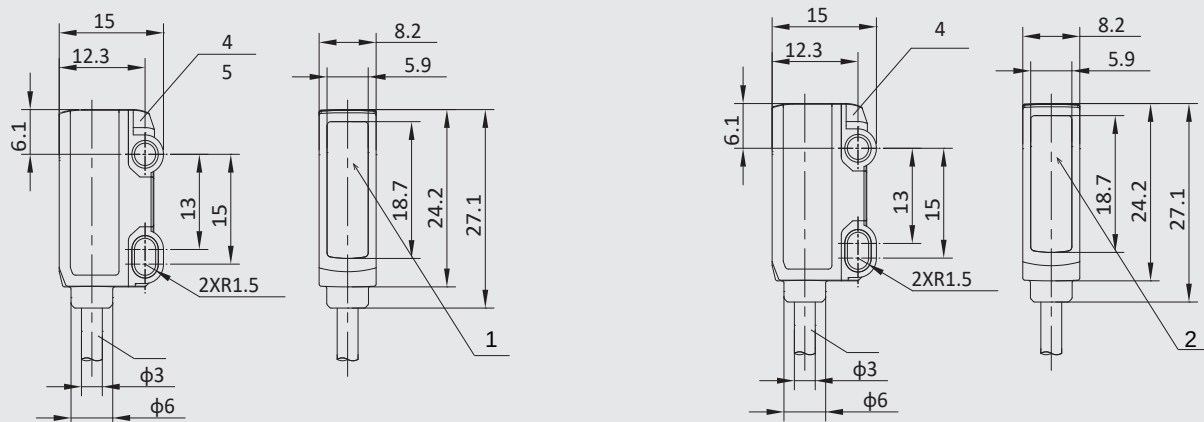


Fig.4

Dimensions:

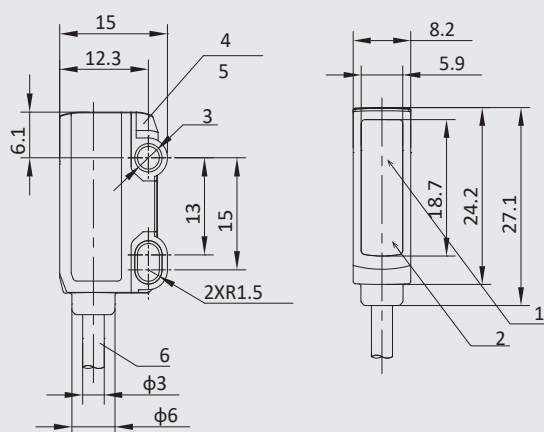
Opposed:



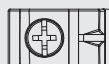
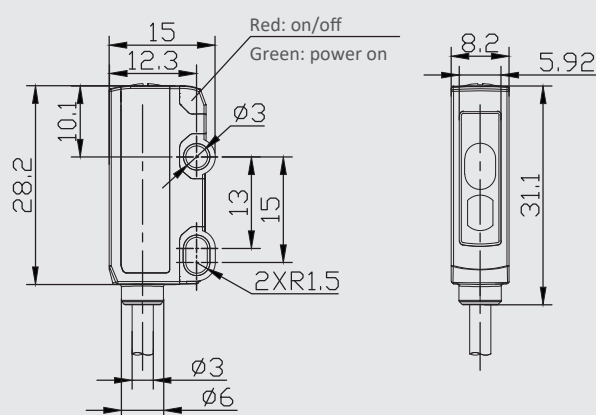
1	Emitter optic axis
2	Receiver optic axis
3	Mounting hole $\phi 3\text{mm}$
4	Green LED: power on
5	Red LED: on/off
6	Connection: cable

BGS:

Fixed



Adjustable



1	Emitter optic axis
2	Receiver optic axis
3	Mounting hole $\phi 3\text{mm}$
4	Green LED: power on
5	Red LED: on/off
6	Connection: cable