
Operation manual



Precautions

- Please make sure that the power supply voltage is within the rated value before powering on
- The time from powering-on to normal detection of the sensor is 100ms, please ensure that the sensor is used after 100ms of powering-on
- When using different power sources for the sensor and load, be sure to turn on the power of the sensor first
- When the sensor is not used, it is recommended to cut off the power of the load first and then turn off the power of the sensor
- Do not subject the sensor to severe external forces (such as hammer hits, etc.) during installation, so as not to damage the sensor performance
- Avoid using thinner, alcohol or other organic solvents when cleaning

Safety Warning

- Do not use in an environment with flammable, explosive or corrosive gases
- Do not use in oil or chemical environments
- Do not use in a high humidity environment
- Do not use in direct sunlight
- Do not use in other environmental conditions that exceed the rated value
- Do not disassemble, repair or modify this product without authorization

Scrap Treatment

- When the product is scrapped, please dispose of it as industrial waste

Distance Adjustment

1. Turn the sensitivity adjuster fully.

BGS function: Counterclockwise

FGS function: Clockwise



BGS



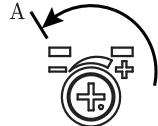
FGS

2. BGS function: In the object present condition, turn the sensitivity adjuster and confirm the point A where the sensor enters the sensing state.

FGS function: In sensing back-ground condition, turn the sensitivity adjuster and confirm the point A where the sensor enters the non-sensing state.



BGS

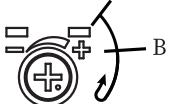


FGS

3. BGS function: After removing the sensing object, turn the sensitivity adjuster and confirm the point B where the sensor enters the non-sensing state.

FGS function: In the object present condition, turn the sensitivity adjuster and confirm the point B where the sensor enters the sensing state.

(If the sensor does not enter the “Light” state operation even when the sensitivity adjuster is turned fully clockwise, the position is point B.)

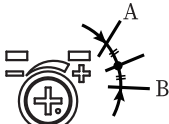


BGS

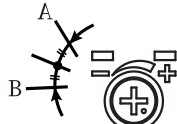


FGS

4. The optimum position to stably detect objects is the center point between A and B.



BGS



FGS

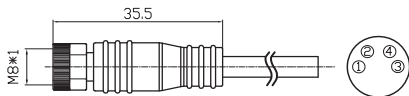
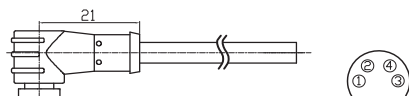
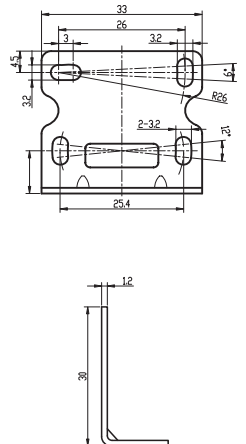
■ Technical specifications

Detection type		Background suppression							
		NPN NO	NPN NC	PNP NO	PNP NC	NPN	PNP	NPN	PNP
Format	Cable	PSE-YC5DNOR	PSE-YC5DNCR	PSE-YC5DPOR	PSE-YC5DPCR	PSE-YC25DNBR	PSE-YC25DPBR	PSE-YC35DNBR	PSE-YC35DPBR
	Connector	PSE-YC5DNOR-E3	PSE-YC5DNCR-E3	PSE-YC5DPOR-E3	PSE-YC5DPCR-E3	PSE-YC25DNBR-E3	PSE-YC25DPBR-E3	PSE-YC35DNBR-E3	PSE-YC35DPBR-E3
Sensing distance		0.2...5cm				0.5...25cm		0.5...35cm	
Return difference		<2%				<10%			
Distance adjustment		5-turn knob adjustment							
Light source		Red light(630nm)							
Light spot size		φ2mm@5cm				φ6mm@25cm			
Supply voltage		10...30VDC							
Consumption current		≤20mA							
Load current		≤100mA							
Voltage drop		≤2V							
Circuit protection		Short circuit、Reverse polarity、Overload、Zener protection							
BGS/FGS Switch		The white wire connected to the positive electrode or floating is BGS,and the white wire connected to the negative electrode is FGS				/			
NO/NC Switch		/				The white wire connected to the positive electrode or floating is NO,and the white wire connected to the negative electrode is NC			
Response time		≤0.5ms				≤1ms			
Indicator		Green:Power indicator;Yellow:Output,overload or short circuit							
Anti-ambient light		Sunlight interference≤10,000 lux;Anti-incandescent light interference≤3,000 lux							
Ambient temperature		-25℃...55℃							
Storage temperature		-25℃...70℃							
Protection degree		IP67							
Certification		CE							
Material		PC+ABS							
Lens		PMMA							
Weight		Cable:about 50g;Connector:about 10g							
Accessories		Screw×2、Mounting bracket ZJP-8、Operation manual							

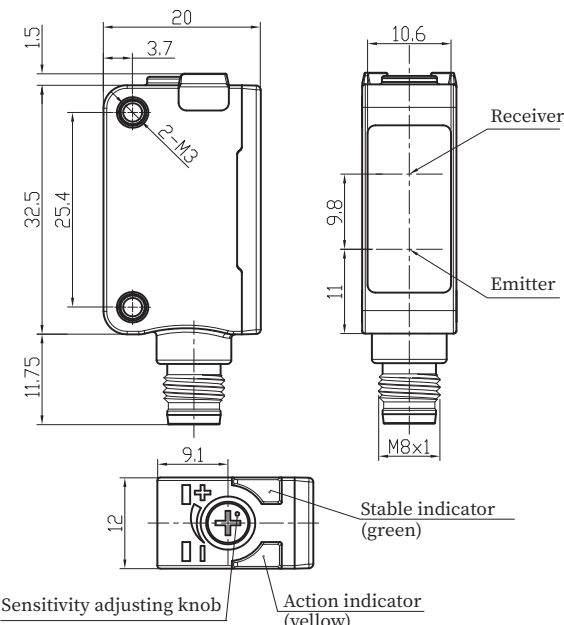
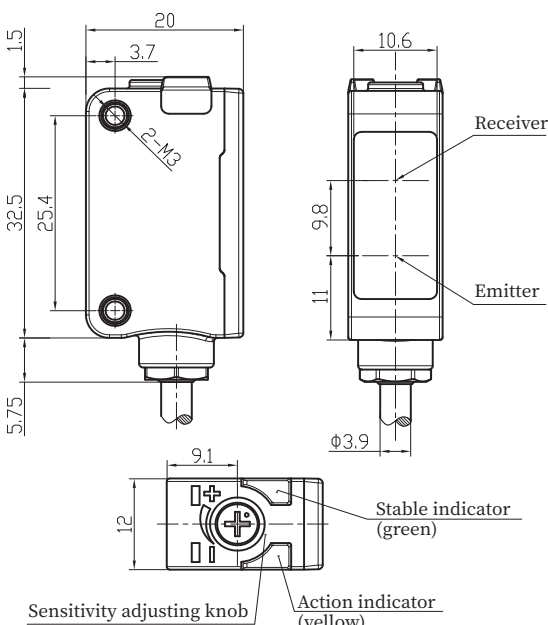
Note: The standard detection target is a white card of 20cm*20cm(90% reflectivity)

■ Accessory Dimensions(Sold Separately)

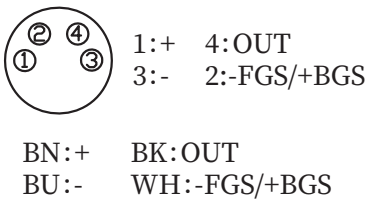
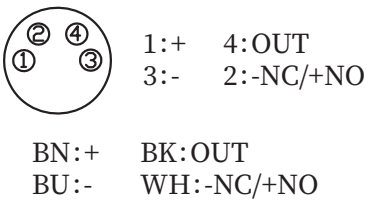
The following accessories need to be ordered additionally except for the ZJP-8 type mounting bracket.

M8 Connector:QE8-N4F2	M8 Connector:QE8-N4G2	Mounting Bracket:ZJP-8(accessory)
		

■ Dimensions

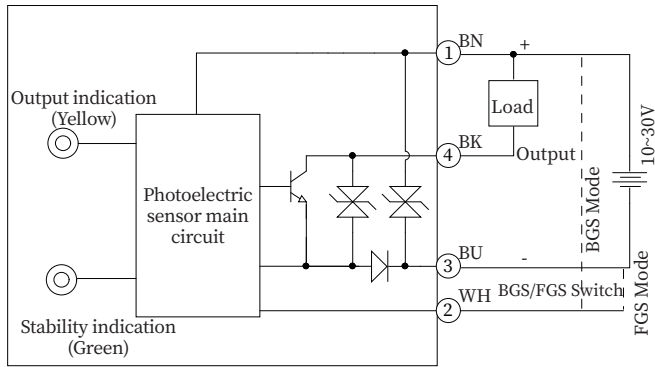
Background Suppression-Connector	Background Suppression-Cable
	

■ Terminal Wiring Diagram

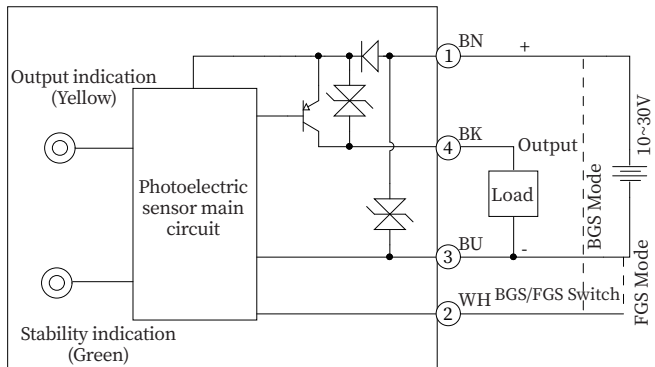
PSE-YC5	PSE-YC25, YC35
	

■ Wiring diagram

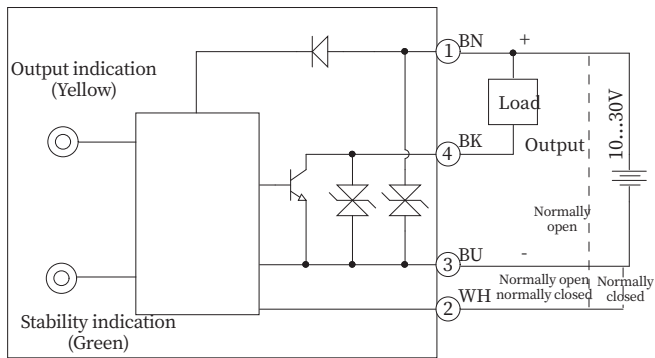
PSE-YC5(NPN Output)



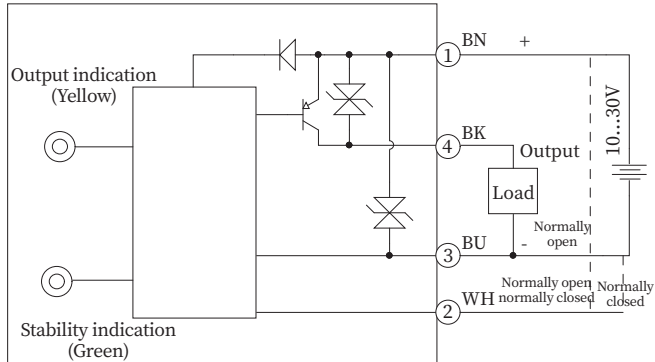
PSE-YC5(PNP Output)



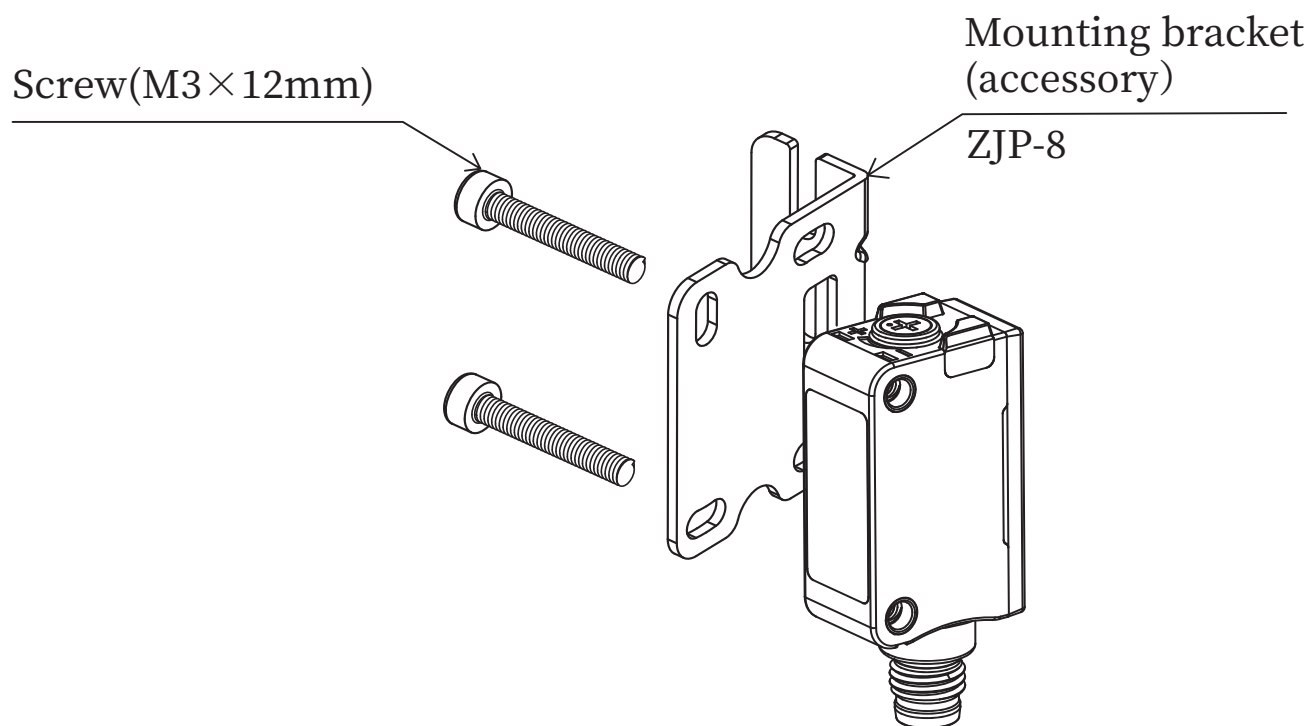
PSE-YC25, YC35(NPN Output)



PSE-YC25, YC35(PNP Output)



■ Mounting



Note: When installing this product, please keep the tightening torque below 0.5N·m