

OUTLINE AND PRECAUTIONS

- This sensor is a Sequential Array Scanning light curtain sensor.
- This product has no function to prevent disasters, accidents, death or injuries and doesn't comply with any standard or regulation for industrial safety. This product can't be used as a safety sensor to protect human body.
- This sensor is designed to detect a passing object within the detection area.
- When using this sensor for safety purposes except those mentioned above, ensure safe operation of the system as a whole including detection and control function.
- Takex PSG series is a safety sensor for power press machine certified upon Japanese standard.

SPECIFICATIONS

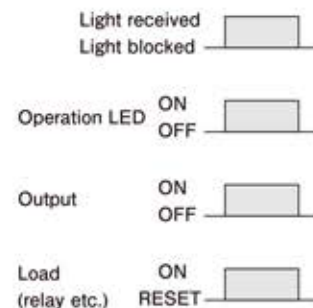
NPN model	SSC-T801	SSC-T802	SSC-T803	SSC-T805	SSC-T850	SSC-T810	SSC-T815	SSC-T830	SSC-T835	
PNP model	SSC-T801PN	SSC-T802PN	SSC-T803PN	SSC-T805PN	SSC-T850PN	SSC-T810PN	SSC-T815PN	SSC-T830PN	SSC-T835PN	
Detection method	Through beam									
Detecting distance	100~500mm	0.4~1.2m	0.5~2m	100~500mm	150~800mm			0.5~2.5m		
Detection object (Min)	φ6mm	φ8mm	φ15mm	φ12.5mm	φ17mm	φ11mm	φ20mm	φ13mm	φ22mm	
No. of optical axis	10		5		10		6	10	6	
Detecting width	50mm		50mm		150mm	100mm				
Optical axis interval	5.55mm		12.5mm		16.6mm	11mm	20mm	11mm	20mm	
Power supply	12V~24V DC ±10%, Ripple 10% (Max)									
Current consumption	Trns.	50mA (Max)		50mA (Max)		80mA (Max)		80mA (Max)	80mA (Max)	
	Rcvr.	100mA (Max) ※		65mA (Max) ※		110mA (Max) ※		70mA (Max)※	110mA (Max)※	
Output mode	NPN	NPN open collector output Rating : sink current 100mA (30VDC) Max.								
	PNP	PNP open collector output Rating : source current 100mA (30VDC) Max.								
Operating mode	Light ON : activated when light beams of all axes are received (deactivated when light beam of any axis is blocked) ※1									
Response time	Light blocking : 5ms Max. Light reception 8ms Max.		Light blocking : 3ms Max. Light reception 4ms Max.		Light blocking : 5ms Max. Light reception 8ms Max.					
Light source	Infrared LED, Wavelength 870nm									
LED Indicator	Trns : Power (Green) Rcvr : Power (Green), Light-On (Orange)									
Case protection	Housing : Aluminum, End cap : PBT with glass, Front cover : Acrylic									
Connection	Flying lead, Outer dia 4mm									
	Cable	Trns : 0.3mm ² × 2 Wire (Gray) 3m Rcvr : 0.3mm ² × 3 Wire (Black) 3m								
Weight (Max)	Trns, Rcvr. 130 g each		Trns, Rcvr. 130 g each		Trns, Rcvr. 190 g each		Trns, Rcvr. 150 g (Max) each			
Recommended Power unit	P S Series									

※12VDC. In case of 24VDC : Approximately 60% of it. ※1 Dark ON type is available : activated when light beams of all axes are blocked.

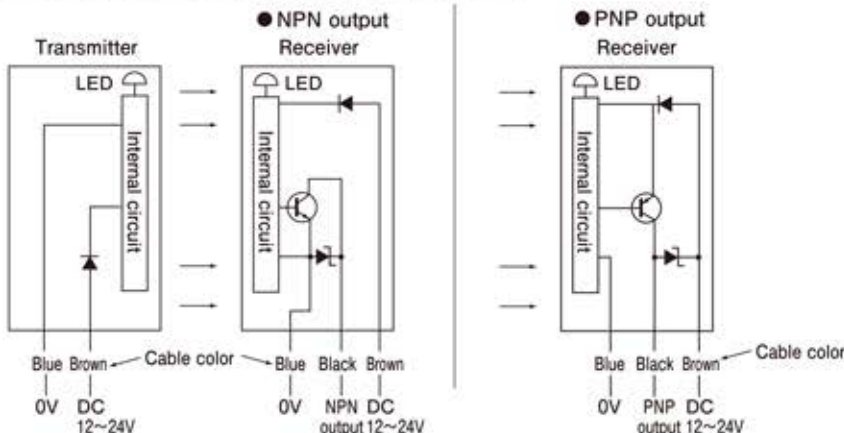
AMBIENT CONDITIONS

Ambient Light : 5,000 lx (Max)
 Operating temp. : -10~+55°C (non-freezing)
 Humidity : 35~85%RH (non-condensing)
 Protection rating : IP67
 Vibration : 10~55Hz, 1.5mm Double amplitude 3 Directions, 2Hr.
 Shock : 500m/s², 3 times each in 3 directions
 Dielectric withstanding : 500VAC for 1 minute
 Insulation resistance : 500VDC, 20MΩ or higher

OPERATION TIMING CHART



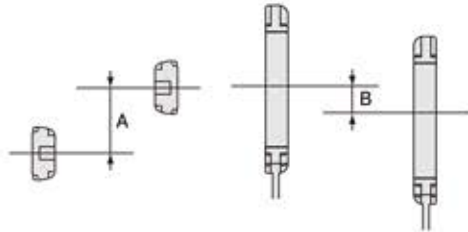
INPUT/OUTPUT CIRCUIT AND WIRING



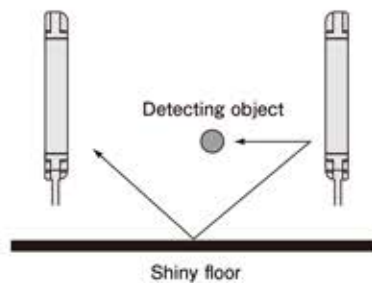
- Check wiring connections before turning on the power. Improper wiring may cause burnout or damage.
- Short-circuit protection is provided for the open collector output. The output transistor turns off when load short-circuit or overload occurs. Turn off the power and check the load then restore the power.
- Be sure to route the sensor wires separate from any high voltage or power transmission line to avoid malfunction or damage.

INSTALLATION AND ALIGNMENT

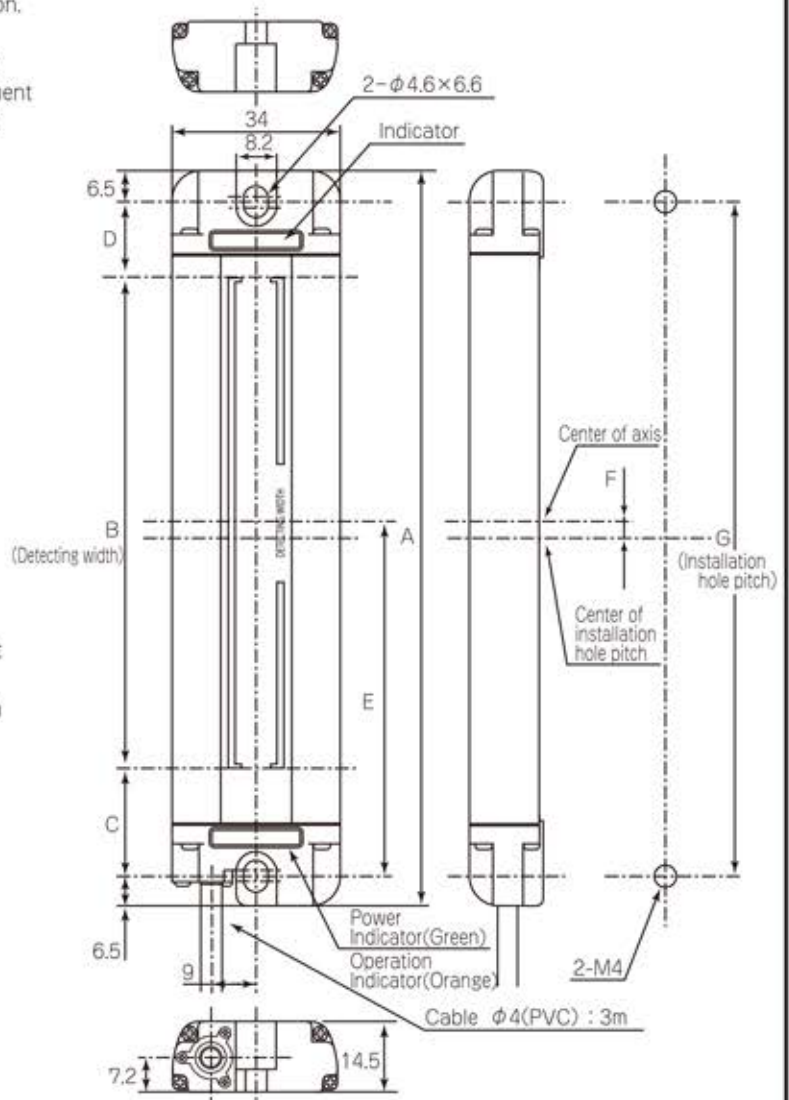
Set the transmitter and receiver face to face at a place of installation. Swing the transmitter right and left and find the horizontal range where the operation LED turns on. Fix the transmitter at the center of the range. Fix the receiver in the same way. Repeat the adjustment vertically for the transmitter and the receiver. Fix the sensor by M4 screws with a tightening torque of 0.6N·m or less.



- The horizontal or vertical gap (A or B in the figure) should be $\pm 30\text{mm}$ or $\pm 10\text{mm}$ respectively.
- The output may repeat on and off when the sensor is installed at a range beyond specification or the alignment is poor.
- If there is a reflecting structure such as a wall, floor or machine close to the detecting range of the sensor, light beam may go around the detection object by reflection and the beams may not be blocked. Install the sensor at least 100(150)mm away from reflecting structures when the detection range is less(more) than 1m and carefully check the operation.
- Check and avoid interference when install two or more sensors closely.



DIMENSIONS (unit : mm)



NOTES

- Clean the lens by a soft and dry cloth periodically. A stain or dirt stuck on the lens deteriorates the performance. Do not use organic solvent including alcohol and thinner.
- Avoid to turn on and off the power consecutively.
- Be sure to route the sensor wires separate from any power transmission or high voltage line. Use a same conduit or duct with high-voltage or power lines will cause malfunction or damage by induction.
- Limit the current of the power supply to 3A in accordance with the size of the sensor cable.
- Use UL class 2 power supply when using this product as UL approved equipment.
- When using a DC power unit with an insulated transformer or a switching regulator, be sure to ground the frame ground (FG) terminal.
- High frequency fluorescent lamps or inverters may emit light or noise of similar modulated frequency that photo sensors generate. Do not install the sensor in the vicinity of high-frequency equipment.
- When extending the wire, use 0.3mm^2 cable or more in size and check a voltage drop.

Models	Mark	A	B	C	D	E	F	G
SSC-T801								
SSC-T802								
SSC-T804		100	50	22.5	14.5	47.5	4	87
SSC-T805								
SSC-T850		200	150			97	3.5	187
SSC-T810								
SSC-T815		150	100	22	15	72	3.5	137
SSC-T830								
SSC-T835								

- The guarantee period of this product is one year after the delivery.
- If any defect is found during the guarantee period, Takenaka will repair or replace the defective product.
- This product is an industrial sensor which issues an output upon detecting an object. It does not have any function to prevent accidents, death or injuries.
- Takenaka will not held responsible for any damage or loss incurred due to accidents, faulty installation, abuse, misuse, improper maintenance or acts of God including lightning surge.