

**Amplifier-separated Sensor Head
SH-8 Series**

MJEC-SH8 No.0055-58V

Thank you very much for purchasing Panasonic products. Please read this Instruction Manual carefully and thoroughly for the correct and optimum use of this product. Kindly keep this manual in a convenient place for quick reference.



- Never use this product as a sensing device for personnel protection.
- In case of using sensing devices for personnel protection, use products which meet laws and standards, such as OSHA, ANSI or IEC etc., for personnel protection applicable in each region or country.

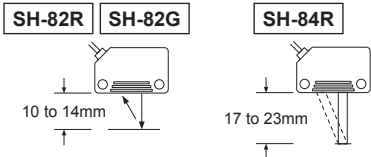
1 SPECIFICATIONS

Type	Mark sensor		
	Pinpoint		Line-focus
Item	Red LED	Green LED	Red LED
Model No.	SH-82R	SH-82G	SH-84R
Applicable amplifiers	SU-7 series		
Sensing range	10 to 14mm (Convergent point: 12mm) (Spot diameter: ϕ 0.7mm) (Note)	10 to 14mm (Convergent point: 12mm) (Spot diameter: ϕ 1mm) (Note)	17 to 23mm (Convergent point: 20mm) (Spot size: 1 x 4mm) (Note)
Operation indicator	Red LED (lights up when the sensing output of the amplifier is ON)		
Ambient temperature	-10 to +55°C (No dew condensation or icing allowed), Storage: -20 to +70°C		
Ambient humidity	35 to 85% RH, Storage: 35 to 85% RH		
Emitting element	Red LED (modulated)	Green LED (modulated)	Red LED (modulated)
Material	Enclosure: Polycarbonate, Lens: Acrylic		
Cable	0.089mm ² 1-core, two parallel shielded cable, 2m long		
Weight	20g approx.		

Note: The sensing range is specified for white non-glossy paper (150 x 150mm) as the object.

2 MOUNTING

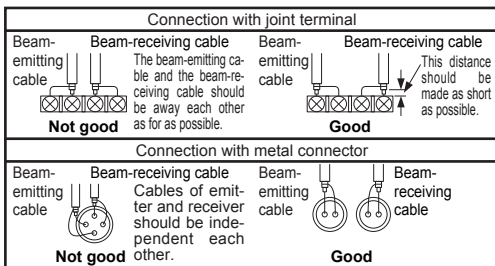
- On mounting the sensor head, the distance between the sensing face and the object surface should be within the rated sensing range.



- The tightening torque should be 0.29N·m or less when mounting the sensor head with the screws.

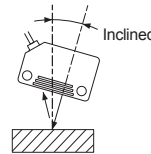
3 CABLE EXTENSION

- The cable can be extended up to 5m with two 1-core shielded cables of at least equivalent quality. A 2-core cable cannot be used instead. If a joint terminal or connector is used for extension, refer to the figures below.
(The shielded extension cable must be of ϕ 1.45mm) outer diameter.



4 CAUTIONS

- This product has been developed / produced for industrial use only.
- The thin cable (0.089mm²) is used for this product. Thus, take care that if the cable is pulled with excessive force, it may cause cable break.
- Take care that wrong wiring will damage the sensor.
- Make sure the sensor not to be affected by inductive noise, especially under intense noise environment. Do not lay the sensor cable along power line. Keep a distance between them as far as possible.
- Avoid dust, dirt, and steam. Take care that the sensor does not come in direct contact with water.
- Take care that the sensor is not directly exposed to fluorescent lamp from a rapid-starter lamp, a high frequency lighting device or sunlight etc., as it may affect the sensing performance.
- This product works as the diffuse reflective mode. If objects are specular such as aluminum or copper foils, or glossy, the detectability may be unstable. Examine the detectability with the actual objects as the sensor looks at the object, at an angle, not perpendicular.

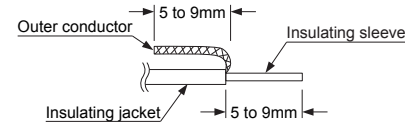


5 CONNECTION

Connect the sensor head cables to **SU-7** series correctly. If not so, the sensor does not work.

- 1 Remove the cover.
- 2 Use **SU-CT1**, cable stripper attached to **SU-7** series, and strip outer conductor of cables from 5 to 9mm.

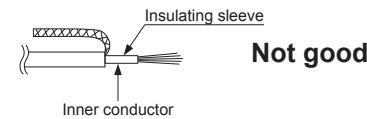
<Required modification>



Caution

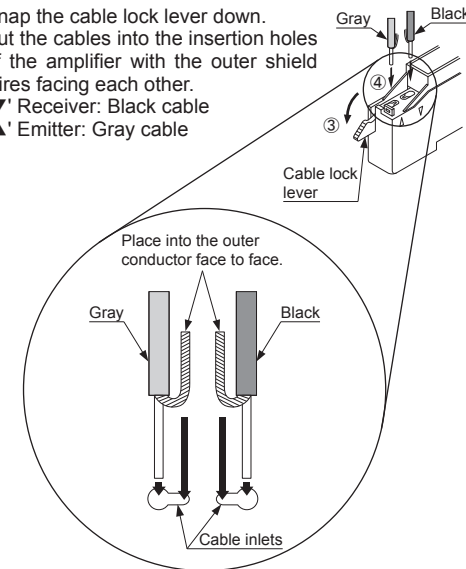
- As the insulating sleeve is taken off at the delivery, rectify the edge of cables as the above figure.

<Factory-delivered>



- Do not strip the insulating sleeve off the inner conductor.

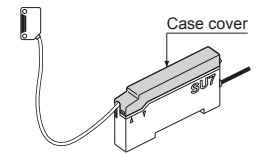
- 3 Snap the cable lock lever down.
- 4 Put the cables into the insertion holes of the amplifier with the outer shield wires facing each other.
 - '▼' Receiver: Black cable
 - '▲' Emitter: Gray cable



Notes: 1) Place into the outer conductors face to face.

- 5 Pull the cable lock lever back to lock the cables.

- 6 Put the cover on the amplifier.



Notes: 2) After locking, if the lock is released and the cable is removed, it can be locked again, as it is, only once. If the locking is repeated three times or more, repeat the process from Step 2). If the cables are locked and released repeatedly, note that the cable ends may break, resulting in a bad connection.
3) If there is a shred of the cable left inside the cable inlet, remove it before connecting the sensor head cables. Turn the amplifier upside down, and tap it around the holes. If the shred still remains, peel the bottom seal off the amplifier, and drop it out. (The seal is reusable.)

