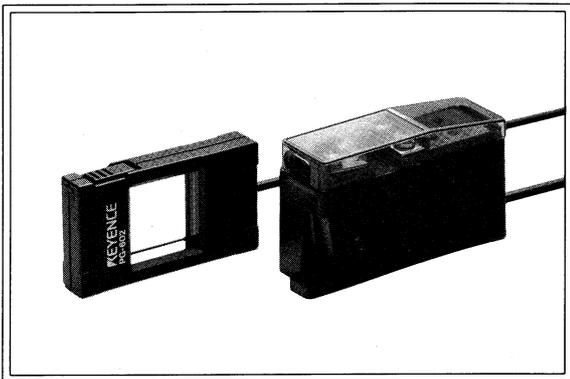


KEYENCE

OPTICAL PASSAGE CONFIRMATION SENSORS

PG series

INSTRUCTION MANUAL



Specifications

Sensor head

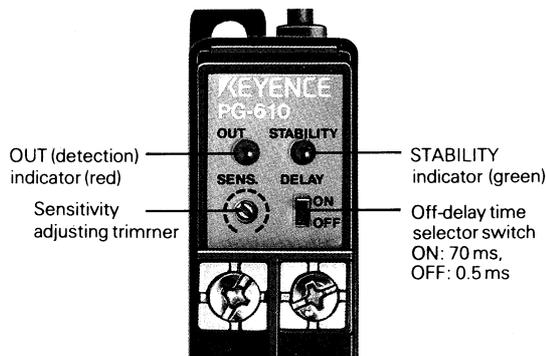
Model	PG-602
Detecting range	21 × 21 mm (0.83 × 0.83 in)
Detectable object	Opaque and transparent materials [0.5 mm (0.02 in) dia. min. for opaque materials only]
Light source	Infrared LEDs
Ambient illuminance	Fluorescent lamp: 10,000 lx max. Sunlight: 1,500 lx max.
Ambient operating temperature	-10 to +60°C (14 to +140°F), No freezing
Relative humidity	35 to 85%, No condensation
Housing material	Polycarbonate
Weight	Approx. 40g (1.42oz) (including cables)

Controller

Model	PG-610
Supply voltage	12 to 24VDC ±10% Ripple (P-P): 10% max.
Current consumption	40mA max.
Sensitivity adjustment	1-turn trimmer
Control output*	NPN open collector 100mA max. (40V max.) Residual voltage: 1V max.
Self-diagnostic output	NPN open collector 100mA max. (40V max.) Residual voltage: 1V max.
Response time	0.2ms
Off-delay time	0.5/70ms selectable
Ambient operating temperature	-10 to +50°C (14 to +122°F), No freezing
Relative humidity	35 to 85%, No condensation
Weight	Approx. 100g (3.52oz)

*One-shot output (ON when target passes through sensor)

Controller panel

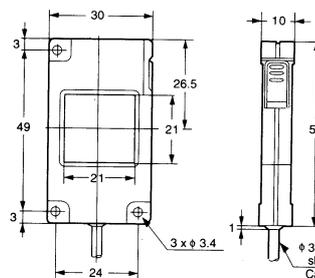


Adjustment

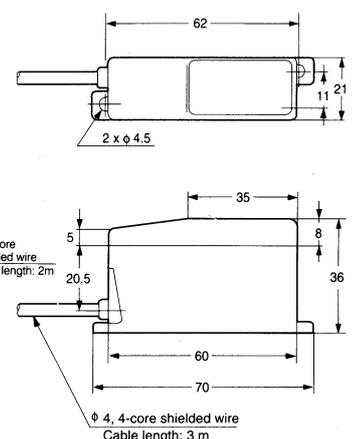
1. Turn the sensitivity adjustment trimmer to its maximum position.
2. Allow the objects to pass through the sensor head at the normal speed.
3. With the objects being passed in the above manner, turn the trimmer to the point just before the STABILITY indicator goes off.
4. Set the Off-delay time selector switch to ON or OFF depending on the external device to which the controller output is to be connected.

Dimensions Unit: mm

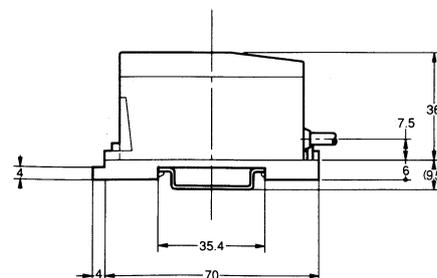
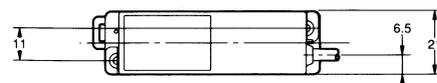
Sensor head



Controller



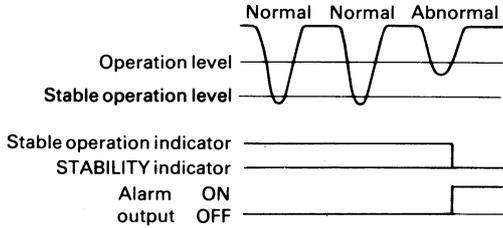
When the DIN-rail mounting bracket
[included in the PG-610] is attached.



Alarm output

The STABILITY indicator (green LED) on the controller panel lights when a change in the receiver output level exceeds twice the operation level (i.e., stable operation level). When the lens becomes soiled or when any of the sensor cables is broken, the indicator goes off, causing the alarm output to turn on. This output is held as is until reset.

*The alarm output is reset by clearing the trouble that caused the STABILITY indicator to go off. When it has been reset, the indicator lights again.

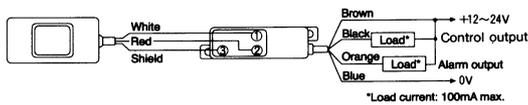


Hints on correct use

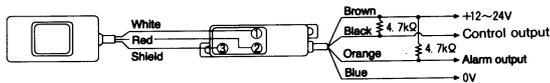
1. When mounting a pipe or a chute within the detecting range of the sensor head, be sure to install the pipe or chute so that it is free from vibration.
2. Always keep the sensor unit clean so that no matter that can refract the light beam (such as water or oil) adheres to the sensor unit.
3. When using a commercially available switching regulator, be sure to ground its frame ground terminals.
4. Route the wiring of the sensor separately from those of power cables and high-tension cables as the sensor may be caused to malfunction by noise.

Connection diagrams

To drive current load
DARK-ON

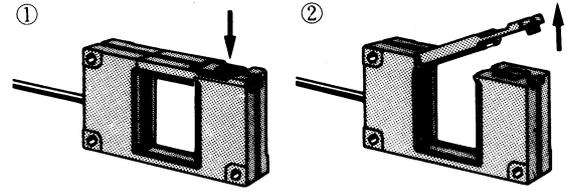


To drive voltage input device
LIGHT-ON



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5. One of the two reflectors is hinged and can be opened. To do this, press the claw of the reflector with the finger and then pull it up.



Warranty

Up to (1) year after date of shipment, all repairs free of charge except in the following cases.

1. When malfunction is caused by careless handling and/or incorrect use or operation.
2. When malfunction is caused by improper repair or modification.
3. When malfunction or damage is attributable to an Act of God.

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Specifications are subject to change without notice.

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