

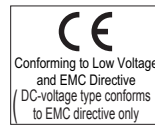
# EQ-500 SERIES

**Related Information**

- General terms and conditions..... F-7
- Sensor selection guide..... P.271~
- Glossary of terms / General precautions.....P.1455~ / P.1458~
- China's CCC mark..... P.1505



[panasonic.net/id/pidsx/global](http://panasonic.net/id/pidsx/global)



## Long range sensing capability to 2.5 m **8.202 ft** Stable sensing unaffected by color or material

### Long sensing range

An adjustable range to 2.5 m **8.202 ft** allows plenty of space for installation.  
1 m **3.281 ft** sensing range type also available. Adjust the volume easily to suit your needs when using at close range.

### Impervious to variations color or angle

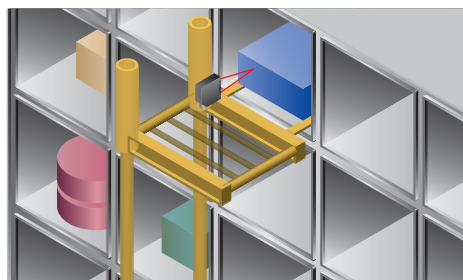
The optical system has been optimized. Since the sensor is hardly influenced at all by angles or the gloss of objects compared to the previous model, it is possible to detect both white objects and black objects at almost a constant distance.

[ The difference in sensing range between white non-glossy paper and gray non-glossy paper (lightness: 5) is approx 5% when set at a distance of 2 m **6.562 ft**. ]

### Hardly affected by background objects

Because the sensor doesn't detect objects outside the preset sensing field by using the 2-segment photodiode adjustable range system, it will not malfunction even if someone walks behind the sensing object or machines or conveyors are in the background.

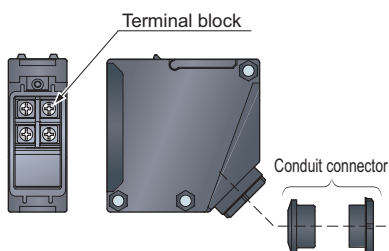
Note: Please note that malfunction may occur when there are specular objects or objects with a mirror-like surface in the background.  
[ Refer to p.368 "Mounting" of "PRECAUTIONS FOR PROPER USE" section. ]



## MOUNTING

### Convenient terminal block type

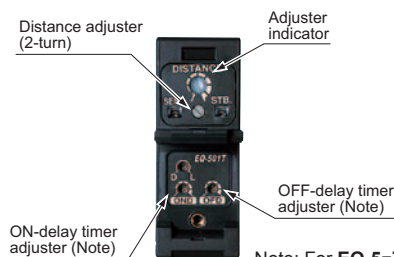
Cabling enabled by way of a terminal block that eliminates waste.



## OPERABILITY

### An easy to set adjuster with indicator

Equipped with a 2-turn adjuster with indicator, making it easy to set for short or long distances.

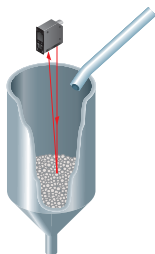


Note: For EQ-500T only.

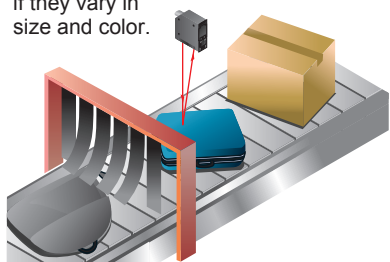
- FIBER SENSORS
- LASER SENSORS
- PHOTOELECTRIC SENSORS
- MICRO PHOTOELECTRIC SENSORS
- AREA SENSORS
- LIGHT CURTAINS / SAFETY COMPONENTS
- PRESSURE / FLOW SENSORS
- INDUCTIVE PROXIMITY SENSORS
- PARTICULAR USE SENSORS
- SENSOR OPTIONS
- SIMPLE WIRE-SAVING UNITS
- WIRE-SAVING SYSTEMS
- MEASUREMENT SENSORS
- STATIC ELECTRICITY PREVENTION DEVICES
- LASER MARKERS
- PLC
- HUMAN MACHINE INTERFACES
- ENERGY CONSUMPTION VISUALIZATION COMPONENTS
- FA COMPONENTS
- MACHINE VISION SYSTEMS
- UV CURING SYSTEMS
- Selection Guide
- Amplifier Built-in
- Power Supply Built-in
- Amplifier-separated
- CX-400
- CY-100
- EX-10
- EX-20
- EX-30
- EX-40
- CX-440
- EQ-30
- EQ-500**
- MQ-W
- RX-LS200
- RX
- RT-610

**APPLICATIONS****Level check within the hopper**

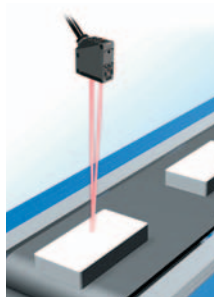
The distance to the object can be set to enable residual amount sensing in the hopper regardless of color.

**Confirmation of the passage of packages on a conveyor belt**

Can accurately detect packages even if they vary in size and color.

**VARIETIES****Equipped with both NPN and PNP outputs** EQ-51□

We've added a DC-voltage type with NPN and PNP transistor outputs all in one sensor. Its BGS / FGS function controls any background effects for more stable sensing.

**Multi-voltage** EQ-50□

Because it can function with 24 to 240 V AC and 12 to 240 V DC, almost any power supply anywhere in the world will do.

**Convenient timer function models**

Types with an ON-delay / OFF-delay timer available. OFF-delay, e.g. useful when the response of the connected device is slow, ON-delay, e.g. useful to detect objects that take a long time to move.

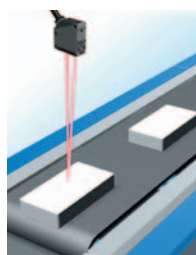
- Operation: ON-delay, OFF-delay
- Timer period: 0.1 to 5 sec.  
(individual setting possible)

**FUNCTIONS****BGS / FGS functions make even the most challenging settings possible!**

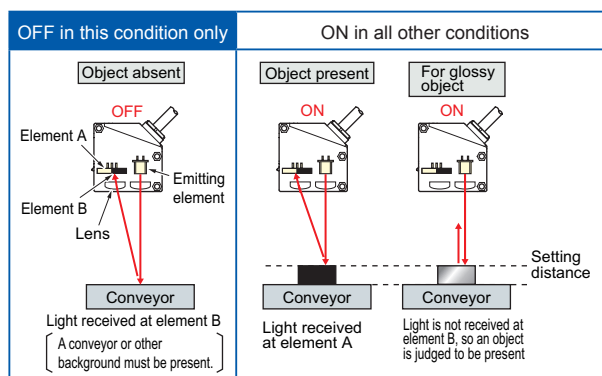
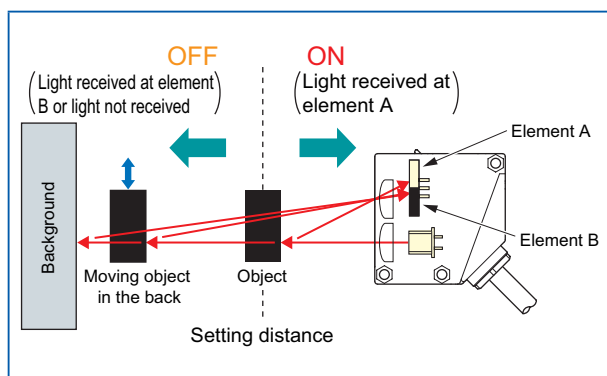
EQ-51□

**The BGS function is best suited for background not present**

When object and background are separated **BGS (Background suppression) function**  
The sensor judges that an object is present when light is received at position A of the light-receiving element (2-segment element).  
This is useful if the object and background are far apart.  
Not affected if the background color changes or someone passes behind the conveyor.

**The FGS function is best suited for background present**

When object and background are close together  
**FGS (Foreground suppression) function**  
The sensor judges that no object is present when light is received at position B of the light receiving element (2-segment element) (The conveyor is detected). This function is useful if the object and the background are close together or if the object is glossy or uneven.  
However, sensing is impossible if there is no background (conveyor, etc.).



Note: Refer to "BGS / FGS function (p.369)" of "PRECAUTIONS FOR PROPER USE" for operation of BGS / FGS function.

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Power Supply Built-in

Amplifier-separated

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CY-100

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