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

Adjustable Range Reflective Photoelectric Sensor **Amplifier Built-in** **Multi-voltage**

EQ-500 SERIES

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

panasonic.net/id/pidsx/global

CE Conforming to Low Voltage and EMC Directive (DC-voltage type conforms to EMC directive only)

cULus Recognition

Certified (Multi-voltage type only)

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.

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.

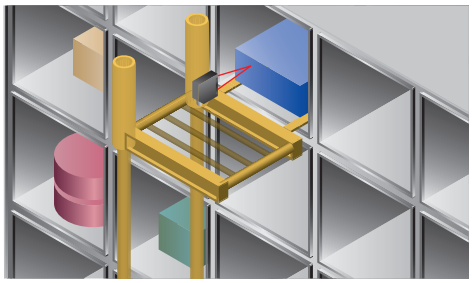
Note: Please note that malfunction may occur when there are specular objects or objects with a mirror-like surface in the background.

Refer to p.368 "**Mounting**" of "**PRECAUTIONS FOR PROPER USE**" section.

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.

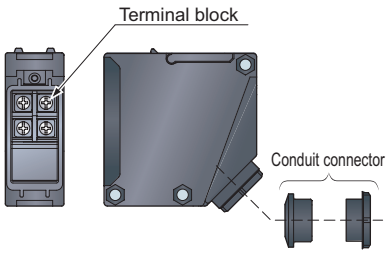
The difference in sensing range between white non-glossy paper and gray non-glossy paper (lightness: 5) is approx 5% when set at a distance of 2 m 6.562 ft.



MOUNTING

Convenient terminal block type

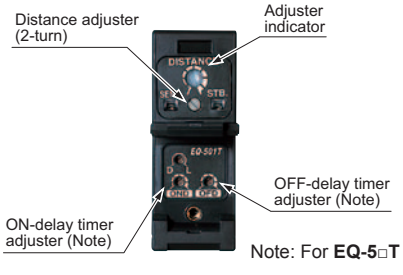
Cabling enabled by way of a terminal block that eliminates waste.



OPERABILITY

An easy to set adjuster with indicator

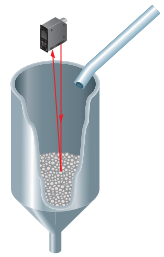
Equipped with a 2-turn adjuster with indicator, making it easy to set for short or long distances.



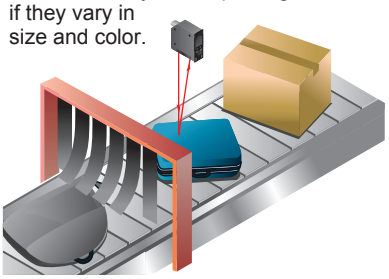
Note: For **EQ-5□T** only.

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.



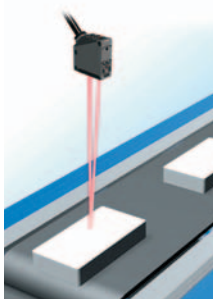
Confirmation of the passage of packages on a conveyor belt
Can accurately detect packages even if they vary in size and color.



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)

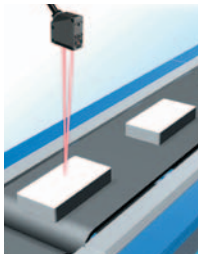
FUNCTIONS

BGS / FGS functions make even the most challenging settings possible! EQ-51□

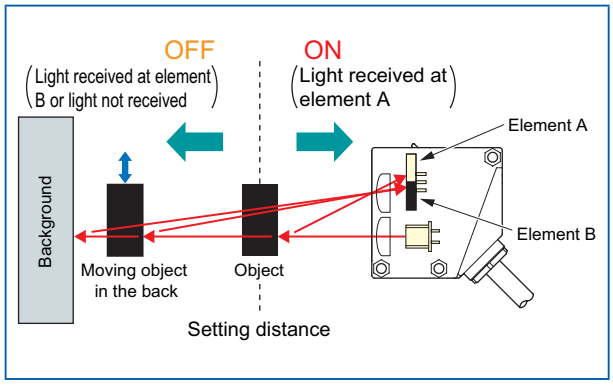
The BGS function is best suited for background not present

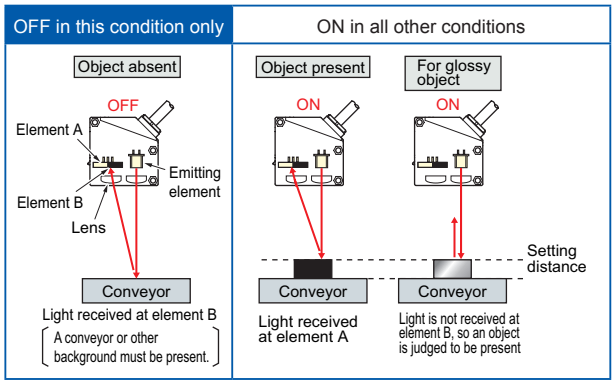
When object and background are separated
BGS (Background suppression) function
The sensor judges that an object is present when light is received at position A of the light-receiving element (2-segment element).
This is useful if the object and background are far apart.
Not affected if the background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

The FGS function is best suited for background present



When object and background are close together
When the object is glossy or uneven
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.