

# Autonics

PHOTO MICRO SENSOR BUILT AMPLIFIER

## BS5-□2M SERIES

M A N U A L

Thank you very much for selecting Autonics products.  
For your safety, please read the following before using.

### Caution for your safety

\* Please keep these instructions and review them before using this unit.

\* Please observe the cautions that follow:

**Warning** Serious injury may result if instructions are not followed.

**Caution** Product may be damaged, or injury may result if instructions are not followed.

\* The following is an explanation of the symbols used in the operation manual.

**Warning** Injury or danger may occur under special conditions.

### Warning

**In case of using this unit with machineries(Nuclear power control, medical equipment, vehicle, train, airplane, combustion apparatus, entertainment or safety device etc), it requires installing fail-safe device, or contact us for information on type required.**  
It may result in serious damage, fire or human injury.

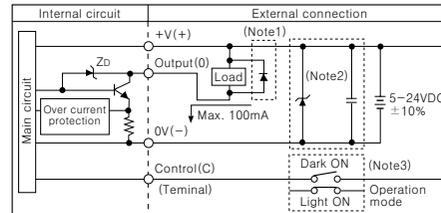
### Caution

#### Cable Connection

There is no reverse polarity protection circuit, therefore it can be damaged by wrong connection. Please check each terminal layout, range of power voltage and connection after cutting off power line.

#### Connection

Connector Type : BS5-K2M/ BS5-T2M/ BS5-L2M

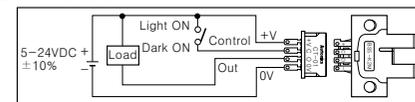


\* (Note1) There is ZD(Zener Diode) absorbing the surge in output circuit, but to prevent the unit, in case of connect large inductive load, connect diode absorbing the surge at both terminals of Load.

\* (Note2) If there are surge in power line, connect ZD(30 to 35V) or Condenser(0.1 to 1,  $\mu$ F/400 to 600V) to remove the surge.

\* (Note3) Selectable operation mode if control terminal connects with +V(+) terminal, it is Light ON. If control(C) terminal does not connect with any terminal, it is Dark ON.

### Connection



### Caution for using

#### 1. External light source.

• There is no protection of external light source in this unit, please intercept external light source from the receiver.

#### 2. Connection

• Do not wire with power line or high voltage line, use separated conduit to avoid malfunction or damage by inductive current.

#### 3. Noise generator

• If there are machines generating noise at surrounding photo micro sensor(Switching regulator, inverter motor etc.) be sure to earth F.G terminals of machines.

#### 4. Soldering(When solder on terminals directly)

• When soldering, control max. 260°C temperature of the solder and do not heat at terminals for more than 3 sec.

#### 5. Installation of the sensor

• Use M3 screws and tighten as max. 0.49N·m(5.0kgf·cm) torque, When screw, washer( $\phi$ 6) are used.  
• Be sure not to touch any object to detecting part of sensor, if the detecting part damaged, it may cause malfunction or efficiency dropped.

#### 6. Maintenance of the sensor

• If the sensor is installed at place there are a lot of dust and humidity, clear the receiver and the emitter with dry cloth. Pollution of the receiver and the emitter can occur malfunction of the sensor.

#### 7. The others

• Avoid installing the sensor as follow:  
Corrosive gas, oil or dust, vapor, strong flux & alkali, acid, and strong direct ray of the sun.

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