

Autonics

Area Sensor BW SERIES

INSTRUCTION MANUAL



Thank you for choosing our Autonics product. Please read the following safety considerations before use.

Safety Considerations

Please observe all safety considerations for safe and proper product operation to avoid hazards.

- Warning symbols and descriptions: Warning, Caution.

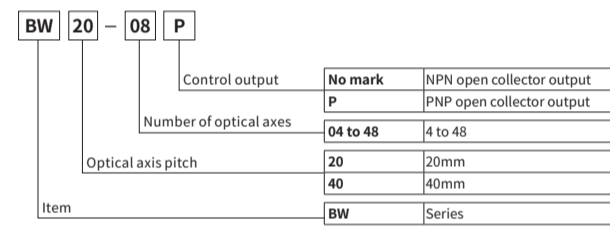
Warning

- 1. Fail-safe device must be installed when using the unit with machinery that may cause serious injury or substantial economic loss.
2. Do not use the unit in the place where flammable/explosive/corrosive gas, high humidity, direct sunlight, radiant heat, vibration, impact, or salinity may be present.
3. Do not connect, repair, or inspect the unit while connected to a power source.
4. Check 'Connections' before wiring.
5. Do not disassemble or modify the unit.
6. This product is not safety sensor and does not observe any domestic nor international safety standard.

Caution

- 1. Use the unit within the rated specifications.
2. Use dry cloth to clean the unit, and do not use water or organic solvent.
3. Do not use a load over the range of rated relay specification.

Ordering Information



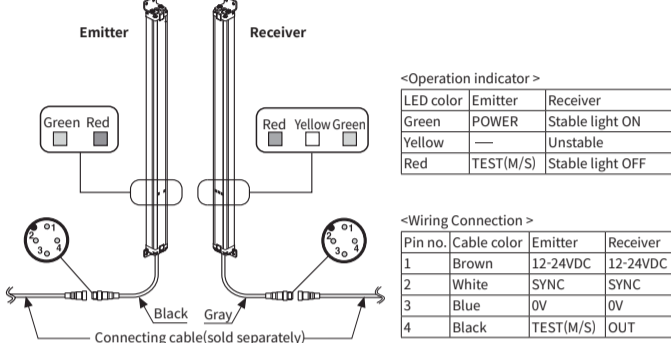
Function

- Emitter OFF (external diagnosis)
Connections for TEST input
Control output pulse by TEST input
Self-Diagnosis
Diagnosis items
Interference Protection
Time chart for MASTER/SLAVE transmission pulse
MASTER/SLAVE connections

Specifications

Table with 2 columns: Model (BW20-[P], BW40-[P]), Sensing method, Sensing distance, Min. sensing target, Optical axis pitch, Number of optical axes, Sensing height, Response time, Power supply, Current consumption, Operation mode, Control output, Protection circuit, Light source, Insulation resistance, Synchronization type, Self-diagnosis, Interference protection, Noise immunity, Dielectric strength, Vibration, Shock, Environment, Protection structure, Material, Cable, Accessory, Approval, Weight.

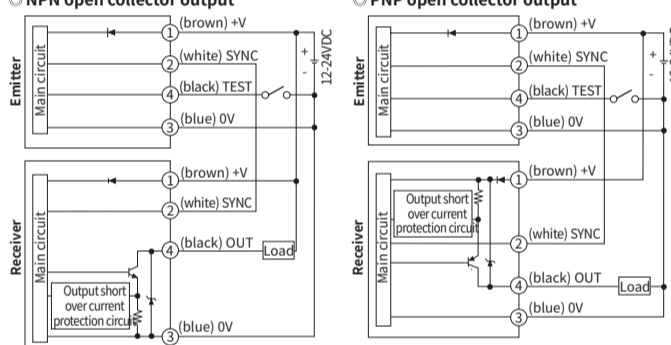
Structure



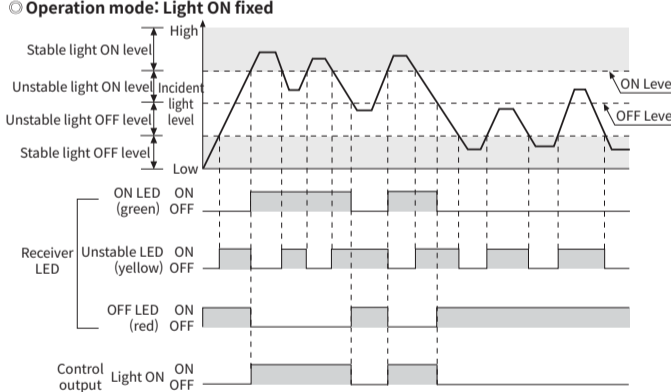
Connecting Cable (sold separately)

Table with 4 columns: Type (Emitter/Receiver), Model (CID4-3T to CID4-15R), L (Cable length), Cable color.

Input-Output Circuit and Connections



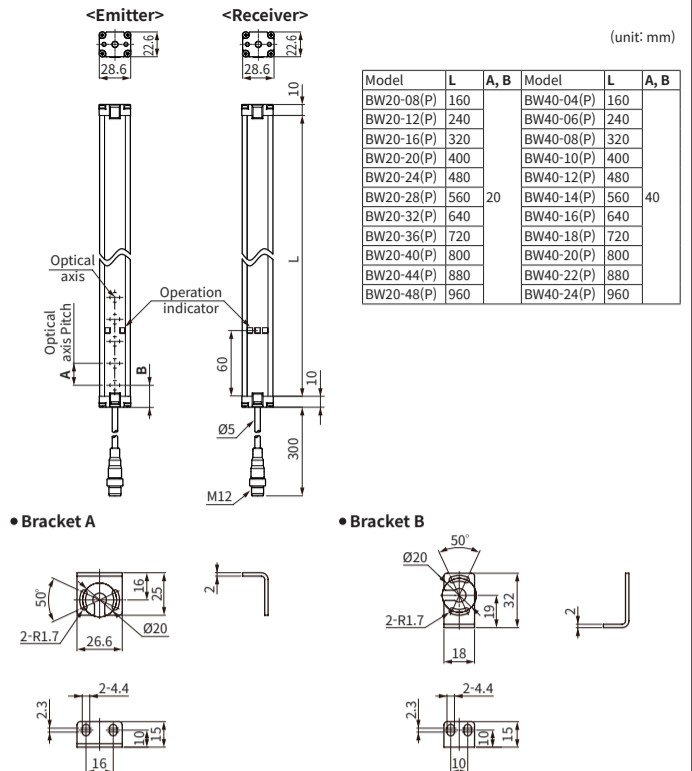
Operation Timing Diagram



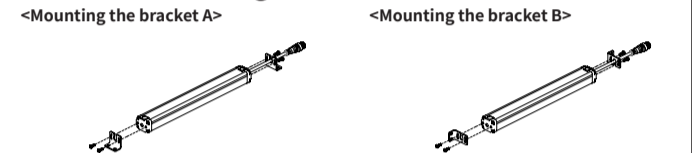
Installation

- For Direction Of Installation
For Reflection From The Surface Of Wall And Flat
For Prevention Of Interference
Transmission direction should be opposite between 2 sets
Baffle should be installed between 2 sets
It should be installed out of the interference distance

Dimensions



Bracket Mounting



Optical Axis Pitch/Number of Optical Axis/Sensing Height

Table with 4 columns: Model, Number of optical axes, Sensing height, Optical axis pitch. Includes a sub-table for different models.

Operation Indicator

Table with 4 columns: Item, Emitter Indicator (Green/Red), Receiver Indicator (Green/Yellow/Red), Control output Light ON.

Troubleshooting

Table with 3 columns: Malfunction, Cause, Troubleshooting.

Cautions during Use

- 1. Follow instructions in 'Cautions during Use'.
2. 12-24VDC power supply should be insulated and limited voltage/current or Class 2, SELV power supply device.
3. Use the product, 1 sec after supplying power.
4. When using switching mode power supply to supply the power, ground F.G. terminal and connect a condenser between 0V and F.G. terminal to remove noise.
5. When connecting a DC relay or other inductive load, remove surge by using diodes or varistors.
6. Wire as short as possible and keep away from high voltage lines or power lines, to prevent surge and inductive noise.
7. This unit may be used in the following environments.