

Photoelectric Sensors for PCB Detection



BJP Series CATALOG

For your safety, read and follow the considerations written in the instruction manual, other manuals and Autonics website.

The specifications, dimensions, etc. are subject to change without notice for product improvement. Some models may be discontinued without notice.

Features

- 30mm×3mm of rectangular light beam (at 30mm distance) provides accurate detection of PCBs regardless of holes, incomplete fabrication, protrusions, or intrusions on the boards.
- Background suppression (BGS) sensing method allows stable detection regardless of the color, texture or surface of the background object.
- Sensing distance : 10 to 100 mm (adjustable distance: 20 to 100 mm)
- Switch for selecting Light ON/Dark ON mode
- Reverse power protection circuit, output short overcurrent protection circuit
- IP65 protection rating (IEC standard)

Ordering Information

This is only for reference, the actual product does not support all combinations. For selecting the specified model, follow the Autonics website.

BJP 100 - B D T - ①

① Control output

No mark: NPN open collector output

P: PNP open collector output

Product Components

- Product
- Bracket A
- M3 bolt × 2, M3 nut × 2
- Instruction manual
- Adjustment screwdriver

Specifications

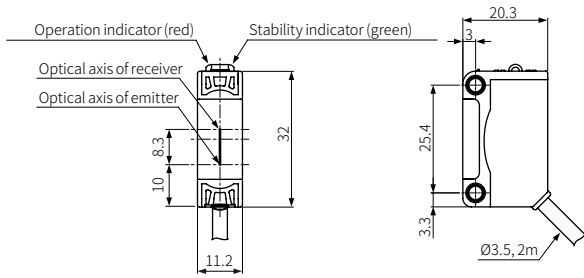
Model	BJP100-BDT-□
Sensing type	BGS reflective
Sensing distance	10 to 100 mm ⁰¹⁾ (at sensing distance: 100 mm)
Sensing target	Opaque materials
Sensing distance setting	20 to 100 mm ⁰¹⁾
Hysteresis	≤ 10 % of setting distance ⁰¹⁾
Response time	≤ 1.5 ms
Light source	Red
Peak emission wavelength	660 nm
Beam spot size	W 3 × L 30 mm (at sensing distance: 30 mm)
Operation mode	Light ON mode - Dark ON mode selectable (Adjuster)
Indicator	Operation indicator (red), stability indicator (green)
Approval	CE ENEC
Unit weight (packaged)	≈ 50 g (≈ 105 g)

01) Non-glossy white paper 100 × 100 mm

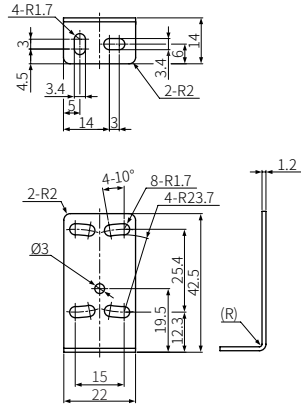
Power supply	12-24 VDC≐ ±10 % (ripple P-P: ≤ 10 %)
Current consumption	≤ 30 mA
Control output	NPN open collector output / PNP open collector output model
Load voltage	≤ 26.4 VDC≐
Load current	≤ 100 mA
Residual voltage	NPN: ≤ 1 VDC≐, PNP: ≤ 2 VDC≐
Protection circuit	Reverse power protection circuit, output short overcurrent protection circuit
Insulation resistance	≥ 20 MΩ (500 VDC≐ megger)
Noise immunity	±240 VDC≐ the square wave noise (pulse width: 1 μs) by the noise simulator
Dielectric strength	1,000 VAC~ 50/60 Hz for 1 min
Vibration	1.5 mm double amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 2 hours
Shock	500 m/s ² (≈ 50 G) in each X, Y, Z direction for 3 times
Ambient illuminance (receiver)	Sunlight: ≤ 10,000 lx, incandescent lamp: ≤ 3,000 lx
Ambient temperature	-25 to 55 °C, storage: -40 to 70°C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)
Protection rating	IP65 (IEC standard)
Connection	Cable type
Cable spec.	∅ 3.5 mm, 3-wire, 2 m
Wire spec.	AWG24 (0.08 mm, 40-core), insulator outer diameter: ∅ 1 mm
Material	Case: PC+ABS, CAP: PC, sensing part: PMMA

Dimensions

- Unit: mm, For the detailed drawings, follow the Autonics website.



Bracket A



Sold Separately

- Bracket B: BJP SERIES BRACKET B

Sold Separately: Bracket B (BJP SERIES BRACKET B)

- Unit: mm, For the detailed drawings, follow the Autonics website.

