

Color Mark Photoelectric Sensors



BC 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

- Outstanding color matching accuracy
 - R.G.B light emitting diodes and 12-bit resolution
 - 2 detection modes (color only / color + intensity)
 - 3-step sensitivity adjustment for each mode (fine, normal, rough)
- External light interference reduction minimizes errors and allows stable detection
- Check reference color with teaching indicator
- Operation indicator (red), stability indicator (green), timer indicator (orange)
- Configure operation functions with external input from wiring
- W 1.24 × L 6.7 mm spot size for detection of tiny targets and color marks
- IP67 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.

BC 15 - L D T - C - ①

① Control output

No mark: NPN open collector output

P: PNP open collector output

Product Components

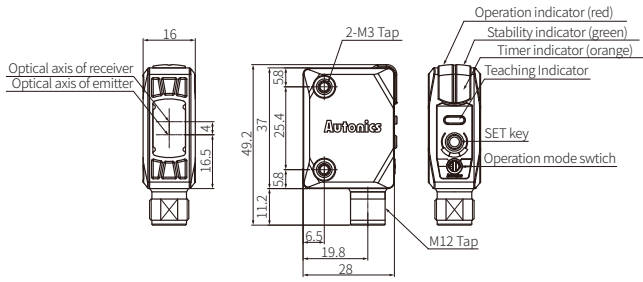
- Product
- Bracket
- M3 bolt × 2
- Instruction manual
- Adjustment screwdriver

Specifications

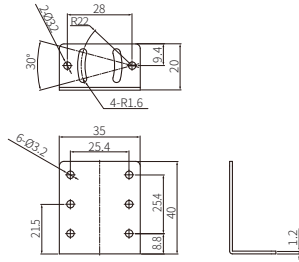
| | |
|---------------------------------------|---|
| Model | BC15-LDT-C-□ |
| Sensing type | Convergent reflective |
| Sensing distance | 15 mm ± 2 mm |
| Sensing target | Opaque materials, translucent materials |
| Hysteresis | ≤ 20 % of sensing distance (may vary by sensing mode or sensitivity) |
| Response time | ≤ 500 μs |
| Light source | Full Color (Red, Green, Blue) |
| Min. spot size | W 1.24 × L 6.7 mm |
| Sensing mode | C mode (color only) - C+I mode (color + intensity) selectable (SET key or SET cable) |
| Sensitivity adjustment | YES (SET key or SET cable) |
| Operation mode | Color match (Normally Open) - Color mismatch (Normally Closed) mode selectable (Adjuster) |
| Teaching | YES |
| Timer | OFF-delay mode: 40 ms |
| Indicator | Operation indicator (red), stability indicator (green), teaching indicator (full color), timer indicator (orange) |
| Approval | CE ENEC |
| Unit weight (packaged) | ≈ 14 g (≈ 80 g) |
| 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 | ≤ 30 VDC≒ |
| Load current | ≤ 100 mA |
| Residual voltage | NPN: ≤ 1 VDC≒, PNP: ≤ 2.5 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) | Incandescent lamp: ≤ 3,000 lx |
| Ambient temperature | -10 to 55 °C, storage: -25 to 75 °C (no freezing or condensation) |
| Ambient humidity | 35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation) |
| Protection rating | IP67 (IEC standard) |
| Connection | Connector type |
| Connector | M12 4-pin plug type |
| Material | Case: PC, sensing part: Acrylic, bracket: SUS304, bolt: Carbon Steel |

Dimensions

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



Bracket



Sold Separately

- Connector cable, connector connection cable