Autonics

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 - ❶

❶ Control output
No mark: NPN open collector output
P: PNP open collector output

Product Components

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

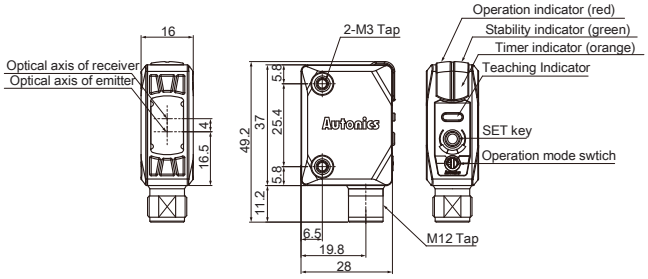
Specifications

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 (SETkey 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	□ □
Unit weight (packaged)	14 g (≈ 80 g)

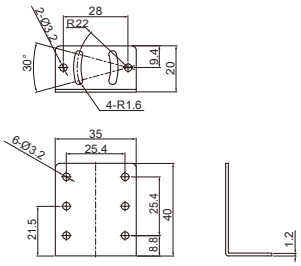
Power supply	VDC□ ±10 % (ripple P-P: ≤ 10 %) 12-24
Current consumption	≤ 30 mA
Control output	NPN open collector output / PNP open collector output model
Load voltage	≤ 30 VDC□
Load current	≤100 mA
Residual voltage	NPN: ≤ 1 VDC□, PNP: ≤ 2.5 VDC□
Protection circuit	Reverse power protection circuit, output short overcurrent protection circuit
Insulation resistance	MΩ (500 VDC□ megger) 20 ≤
Noise immunity	VDC□ the square wave noise (pulse width: 1 μs) by the noise simulator ±240
Dielectric strength	VAC□ 50/60 Hz for 1 min 1,000
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/s² (≈ 50 G) in each X, Y, Z direction for 3 times
Ambient illuminance (receiver)	Incandescent lamp: ≤ 3,000 lx
Ambient temperature	-10 to 55 ℃, storage: -25 to 75 ℃ (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