

Cylindrical Photoelectric Sensors



BR 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

- Superior noise resistance with digital signal processing
- High-speed response time under 1ms
- Built-in reverse power protection circuit and output short overcurrent protection circuit
- Suitable for sensing in narrow space (narrow beam type)
- External sensitivity adjustment
- Light ON/Dark ON mode selectable by control wire
- IP66 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.

BR ① **200** - **DD TN** - ② - ③

① Material

No mark: Metal
P: Plastic

③ Control output

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

② Connection

No mark: Cable type
C: Connector type

Product Components

- Product
- M18 fixing nut × 2
- Washer (metal material model)
- Instruction manual
- Adjustment screwdriver

Specifications

Model	BR□200-DDTN-□-□
Sensing type	Narrow beam reflective
Sensing distance	200 mm ⁰¹⁾
Sensing target	Opaque materials, translucent materials
Hysteresis	≤ 20 % of sensing distance
Response time	≤ 1 ms
Light source	Infrared
Peak emission wavelength	850 nm
Sensitivity adjustment	YES (Adjuster)
Operation mode	Light ON mode - Dark ON mode selectable (Control wire)
Indicator	Operation indicator (red)
Approval	CE ENEC

01) Non-glossy white paper 100 × 100 mm

Unit weight (packaged)	Metal material model	Plastic material model
Cable type	≈ 120 g (≈ 160 g)	≈ 100 g (≈ 140 g)
Connector type	≈ 50 g (≈ 90 g)	≈ 30 g (≈ 70 g)

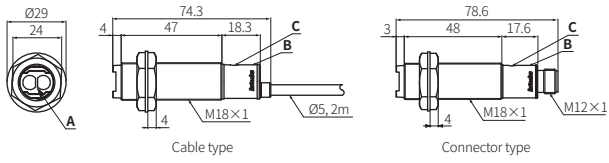
Power supply	12-24 VDC± ±10 % (ripple P-P: ≤ 10 %)
Current consumption	≤ 45 mA
Control output	NPN open collector output / PNP open collector output model
Load voltage	≤ 30 VDC±
Load current	≤ 200 mA
Residual voltage	NPN: ≤ 1 VDC±, PNP: ≤ 2.5 VDC±
Protection circuit	Reverse power protection circuit, output 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)	Sunlight: ≤ 11,000 lx, incandescent lamp: ≤ 3,000 lx
Ambient temperature	-10 to 60 °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	IP66 (IEC standard)
Connection	Cable type / Connector type model
Cable spec.	Ø 5 mm, 4-wire, 2 m
Wire spec.	AWG22 (0.08 mm, 60-core), insulator outer diameter: Ø 1.25 mm
Connector	M12 4-pin plug type
Material	Case: Brass, Ni-plate (metal material model) or PA Black (plastic material model), sensing part: PC lens

Dimensions

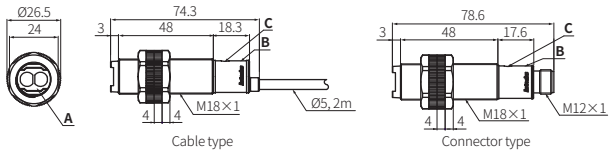
- Unit: mm, For the detailed drawings, follow the Autonics website.

A	Lens	C	Sensitivity adjuster
B	Operation indicator (red)		

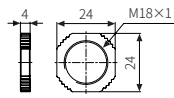
■ Metal material model



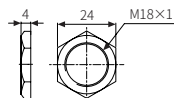
■ Plastic material model



■ M18 fixing nut



■ Washer



Sold Separately

- Connector cable, connector connection cable