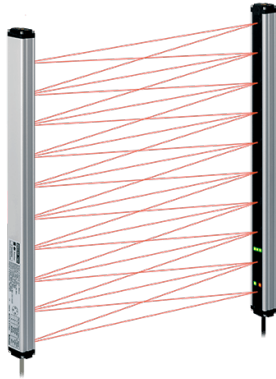


Cross-Beam Area Sensors



BWC 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

- 3-point cross-beam type detection minimizes non-detection area
- Long sensing distance up to 7 m
- 14 configurations (number of optics: 4 to 20 / optical pitch: 40, 80 mm / detection area: 120 to 1,040 mm)
- Easy installation with installation mode function
- Mutual interference prevention function, self-diagnosis function
- Self-diagnosis output: sensing screen pollution and blocking of optical axis can be checked from external device (patent)
- Bright LED indicators on emitter and receiver
- Korean Railway Standard compliant (BWC80-14HD models)
- IP67 protection structure (IEC standard) (patent)

Ordering Information

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

BWC ① - ② ③

① Optical axis pitch

Number: Optical axis pitch (unit: mm)

② Number of optical axes

Number: 4 to 20

③ Operation mode

H: Light ON

HD: Dark ON

Product Components

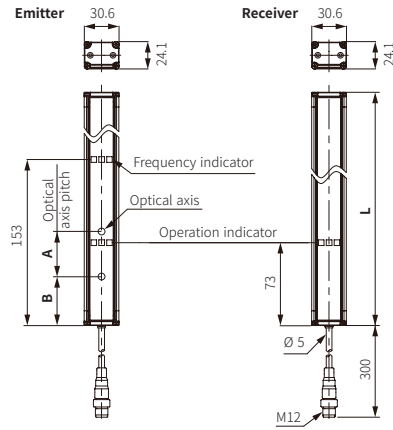
- Product × 1
- Instruction manual × 1
- Bracket A × 4
- Bracket B × 4
- Fixing bolt × 8

Specifications

Model	BWC40-□□H	BWC40-□□HD	BWC80-14H	BWC80-14HD
Sensing method	Through-beam			
Beam pattern	3-point cross beam netting type			
Light source	Infrared LED (850 nm modulated light)			
Sensing distance	1.0 to 7.0 m			
Sensing target	Opaque material			
Min. sensing target	≥ Ø 50 mm		≥ Ø 90 mm	
Number of optical axes	4 / 10 / 12 / 16 / 18 / 20		14	
Sensing height	120 to 760 mm			
Optical axis pitch	40 mm		80 mm	
Response time	≤ 50 ms			
Operation mode	Light ON	Dark ON	Light ON	Dark ON
Functions	Self-diagnosis output (front screen pollution, covering optical axis), self-diagnosis			
Installation mode	YES			
Interference protection	Interference protection by frequency changing setting			
Synchronization type	Timing method by synchronous line			
Indicator	Emitter: Operation indicator (green, red), frequency indicator (green) Receiver: Operation indicator (red, yellow, green)			
Approval	CE ENEC	CE ENEC	CE ENEC	CE ENEC
Korean Railway Standards	-			KRS SG 0068
Weight (packaged)	≈ 1.7 kg (≈ 2.1 kg) (based on BWC80-14H)			
Power supply	12 - 24 VDC≐ (ripple P-P: ≤ 10 %)			
Current consumption	≤ 100 mA			
Control output	NPN open collector output			
Load voltage	≤ 30 VDC≐			
Load current	≤ 100 mA (self-diagnosis output: ≤ 50 mA)			
Residual voltage	≤ 1 VDC≐			
Protection circuit	Reverse power protection circuit, output short overcurrent protection circuit			
Insulation resistance	≥ 20 M.Ω (500 VDC≐ megger)			
Noise immunity	± 240 V the square wave noise (pulse width: 1μs) by the noise simulator			
Dielectric strength	1,000 VAC~ 50 / 60 Hz for 1minute			
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	Ambient light: ≤ 100,000 lx			
Ambient temperature	-10 to 55 °C, storage: -20 to 60 °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)			
Wire spec.	Ø 5 mm, 4-wire, 300 mm			
Connector spec.	M12 plug connector			
Material	Case: AL, sensing part and indicator: acryl			

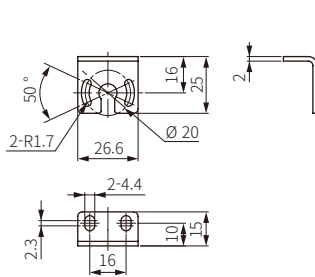
Dimensions

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

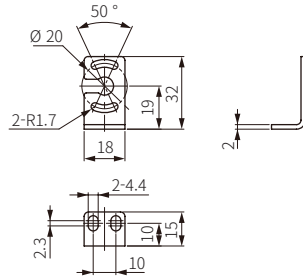


Model	Number of optical axis	Sensing height	L	A	B
BWC40-04H/HD	4	120 mm	186	40	43
BWC40-10H/HD	10	360 mm	426		
BWC40-12H/HD	12	440 mm	506		
BWC40-16H/HD	16	600 mm	666		
BWC40-18H/HD	18	680 mm	746		
BWC40-20H/HD	20	760 mm	826		
BWC80-14H/HD	14	1,040 mm	1146	80	83

Bracket A



Bracket B

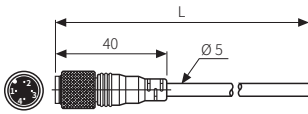


Sold Separately

- Connection cable: CID4-□T(R) (1 set - emitter and receiver)

Sold Separately: Connection Cable

- Connecting cable is as one set; each of emitter's and receiver's.



Type	Model	L	Cable color
Emitter	CID4-□T	3 / 5 / 7 / 10 / 15 m	Black
Receiver	CID4-□R	3 / 5 / 7 / 10 / 15 m	Gray