#### Autonics

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

BF5	0	-	2	1	-	0	
Light source						Display part	
R: Red LED				D: Dual display			
G: Green LED				S: Single display			
B: Blue	I FD						

#### Ontrol output

N: NPN open collector output P: PNP open collector output

**Ordering Information** 

-. FINF Open collector output

#### Product Components

Product Connector cable

- Instruction manual
- Side connector

#### Specifications

Model	BF5R-D1-	BF5G-D1-	BF5B-D1-				
Light source	Red LED	Green LED	Blue LED				
Peak emission wavelength	660 nm, modulated	530 nm, modulated	470 nm, modulated				
Response time	Standard (500 $\mu s)$ , Long distance (4 ms), Ultra long distance (10 ms), Ultra fast (50 $\mu s)$ , Fast (150 $\mu s)$ mode						
Sensitivity setting	Manual, Teaching (Auto-tuning, 1-point, 2-point, positioning)						
Operation mode	Light ON, Dark ON						
Measured value display	7-segment LCD, 4-digit (decimal, percentage)						
Operation mode of the timer	OFF, OFF Delay, ON Delay, One-shot						
Max. cascading units	≤ 31 units						
Mutual interference prevention	≤ 8 units						
Indicator	Operation indicator (red), display screen (PV display part: red LED, SV display part: green LED)						
Approval	C€ERE	CEER	CER				
Unit weight (packaged)	≈ 20 g (≈ 138 g)	≈ 20 g (≈ 138 g)	≈ 20 g (≈ 138 g)				
Model	BF5R-S1-		1				
Light source	Red I FD						
0							
Peak emission wavelength	660 nm, modulated						
Response time	Standard (500 µs), Long distance (4 ms), Fast (150 µs) mode						
Sensitivity setting	Manual, Teaching (Auto-tuning)						
Operation mode	Light ON, Dark ON						
Measured value display	7-segment LCD, 4-digit (decimal, percentage)						
Operation mode of the timer	OFF Delay (time range: OFF, 10 ms, 40 ms)						
Mutual interference prevention	≤ 8 units						
Indicator	Operation indicator (red), o	display screen (PV / SV displ	ay part: red LED)				
Approval	CEIAL						
Unit weight (packaged)	$\approx 20 \text{ g} (\approx 138 \text{ g})$						
Power supply	12-24 VDC== ±10% (ripple	P-P:≤10%)					
Current consumption	≤ 50 mA						
Control output	NPN open collector output / PNP open collector output model						
Load voltage	≤ 24 VDC==						
Load current	≤ 100 mA						
Residual voltage	NPN: ≤ 1 VDC=, PNP: ≤ 3 VDC=						
Protection circuit	Reverse power protection circuit, output short over current protection circuit, surge protection circuit						
Insulation resistance	$\geq$ 20 M $\Omega$ (500 VDC= megger)						
Dielectric strength	1,000 VAC~ 50 / 60 Hz for 1 min						
Vibration	1 mm double amplitude at frequency 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 2 hours						
Shock	500 m/s <sup>2</sup> (≈ 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 50 °C, storage: -20 to 70 °C (no freezing or condensation)						
Ambient humidity		0 85%RH (no freezing or cor					
Protection rating	IP40 (IEC standard)						
Connection	Connector cable						
Cable spec.	Ø4 mm, 3-wire, 2 m						
Wire spec.	AWG22 (0.08 mm, 60-core), insulator outer diameter: Ø 1.25 mm						
Tightening torque for fiber optic unit	≥ 2kgf						
Material	Case: PBT, cover: PC						
material	Case. I Di, Cover. I C						

# Autonics

Single / Dual Display

Fiber Optic Amplifiers

## **BF5 Series** CATALOG

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

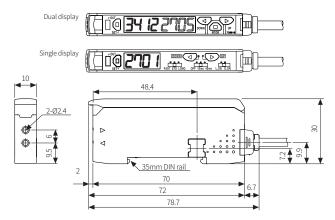
The specifications, dimensions, etc. are subject to change without notice for product improvement. Some models may be discontinued without notice.

#### Features

- Dual-display for light incident level and setting value (BF5 -D)
- Enables to detect the minute object with 1/10,000 high resolution
- $\bullet$  Enables to detect with high-speed moving object (response time 50  $\mu s)$   $\bullet$  5 response times
- : ultra fast mode (50 µs), fast mode (150 µs), standard mode (500 µs), long distance mode (4 ms), ultra long distance mode (10 ms)
- Anti-saturation setting function prevents malfunction by saturated light
- Easy sensitivity setting
- Long lasting amplifier regardless of element's life degradation or temperature change
- Multiple sensitivity setting modes available
- : auto-tuning, 1-point (maximum sensitivity), 2-point, positioning teaching
- Up to 8 units enable to connect with mutual interference prevention function using side connectors
- Auto channel setting function for multiple installations
- Adopts red, green, blue light sources
- Slim design with depth 10 mm (W 10  $\times$  H 30  $\times$  L 70 mm)

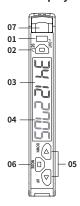
#### Dimensions

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



#### **Unit Descriptions**

#### Dual display model

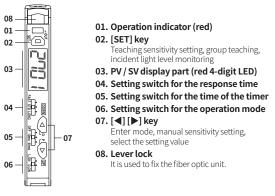


## 01. Operation indicator (red) 02. [SET] key Teaching sensitivity setting, group teaching, data back setting, incident light level monitoring, initialization 03. PV display part (red 4-digit LED) RUN mode: it shows PV (present value). Setting mode: it shows the parameter. 04. SV display part (green 4-digit LED) RUN mode: it shows SV (setting value). Setting mode: it shows the setting value, parameter value. 05. [◄] [►] key Manual sensitivity setting, select the setting value

66. [MODE] key Enter mode, return to RUN mode, move parameter, save the setting value

07. Lever lock It is used to fix the fiber optic unit.

#### Single display model



#### **Sold Separately**

• Fiber optic units

Communication converter: BFC Series