

Single / Dual Display Fiber Optic Amplifiers

BF5 Series



Features

- Dual-display for light incident level and setting value (BF5 -D)
- Enables to detect the minute object with 1 / 10,000 high resolution
- Enables to detect with high-speed moving object (response time 50 μ s)
- 5 response times:
ultra fast mode (50 μ s), fast mode (150 μ s), standard mode (500 μ s), 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)

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 μ s), Long distance (4 ms), Ultra long distance (10 ms), Ultra fast (50 μ s), Fast (150 μ 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	\leq 31 units		
Mutual interference prevention	\leq 8 units		
Indicator	Operation indicator (red), display screen (PV display part: red LED, SV display part: green LED)		
Approval	CE ENEC	CE ENEC	CE ENEC
Unit weight (packaged)	\approx 20 g (\approx 138 g)	\approx 20 g (\approx 138 g)	\approx 20 g (\approx 138 g)

Model	BF5R-S1-□
Light source	Red LED
Peak emission wavelength	660 nm, modulated
Response time	Standard (500 μ s), Long distance (4 ms), Fast (150 μ s) 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	\leq 8 units
Indicator	Operation indicator (red), display screen (PV / SV display part: red LED)
Approval	CE ENEC
Unit weight (packaged)	\approx 20 g (\approx 138 g)



View product detail

Power supply	12-24 VDC \pm 10% (ripple P-P: \leq 10%)
Current consumption	\leq 50 mA
Control output	NPN open collector output / PNP open collector output model
Load voltage	\leq 24 VDC \pm
Load current	\leq 100 mA
Residual voltage	NPN: \leq 1 VDC \pm , PNP: \leq 3 VDC \pm
Protection circuit	Reverse power protection circuit, output short over current protection circuit, surge protection circuit
Insulation resistance	\geq 20 M Ω (500 VDC \pm megger)
Dielectric strength	1,000 VAC \sim 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 ² (\approx 50 G) in each X, Y, Z direction for 3 times
Ambient illuminance (receiver)	Sunlight: \leq 11,000 lx, incandescent lamp: \leq 3,000 lx
Ambient temperature	-10 to 50 °C, storage: -20 to 70 °C (no freezing or condensation)
Ambient humidity	35 to 85%RH, storage: 35 to 85%RH (no freezing or condensation)
Protection rating	IP40 (IEC standard)
Connection	Connector cable
Cable spec.	\varnothing 4 mm, 3-wire, 2 m
Wire spec.	AWG22 (0.08 mm, 60-core), insulator outer diameter: \varnothing 1.25 mm
Tightening torque for fiber optic unit	\geq 2kgf
Material	Case: PBT, cover: PC