

Button Adjustment

Fiber Optic

Amplifiers

BF4 Series



Features

- High response time: max. 0.5 ms
- Auto sensitivity setting (button setting) / remote sensitivity setting type
- External synchronization input, mutual interference protection, self-diagnosis
- Reverse power protection and output short overcurrent protection circuit
- Timer function: OFF delay timer approx. 40 ms fixed.
(standard type, remote sensitivity setting type only)
- Automatically selectable Light ON / Dark ON
- Precise detection of small target and easy to install in the complicated place

Specifications

Model	BF4R□□-□	BF4G□□-□
Light source	Red LED	Green LED
Peak emission wavelength	660 nm, modulated	525 nm, modulated
Response time	Built-in 2 differential frequencies (frequency 1: ≤ 0.5 ms, frequency 2: ≤ 0.7 ms)	
Sensitivity setting	Button / Remote sensitivity setting	
Operation mode	Light ON / Dark ON selectable	
Self-diagnosis output	YES	
Load voltage	≤ 30 VDC≡	
Load current	≤ 50 mA	
Residual voltage	NPN: ≤ 1 VDC≡ (load current: 50 mA), ≤ 0.4 VDC≡ (load current: 16 mA) PNP: ≤ 2.5 VDC≡	
Indicator	Operation indicator (red), stability indicator (green)	
Approval	CE ENEC	CE ENEC
Unit weight (packaged)	≈ 65 g (≈ 120 g)	≈ 65 g (≈ 120 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	≤ 100 mA	
Residual voltage	NPN: ≤ 1 VDC≡ (load current: 100 mA), ≤ 0.4 VDC≡ (load current: 16 mA) 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 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 (≈ 50 G) in each X, Y, Z directions 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	35 to 85%RH, storage: 35 to 85%RH (no freezing or condensation)	
Cable spec.	Standard type: Ø 4 mm, 4-wire, 2 m External synchronization input, remote sensitivity setting type: Ø 4 mm, 6-wire, 2 m	
Wire spec.	Standard type: AWG22 (0.08 mm, 60-core), insulator outer diameter: Ø 1.25 mm External synchronization input, remote sensitivity setting type: AWG24 (0.08 mm, 40-core), insulator outer diameter: Ø 1 mm	
Material	Case: heat-resistance ABS, cover: PC	



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