

FS-V31

Fiber Amplifier, Cable Type, Main Unit, NPN

*Please note that accessories depicted in the image are for illustrative purposes only and may not be included with the product.

Specifications

Model		FS-V31
Type		1-output with cable
Output		NPN
Main unit/Expansion unit		Main unit
Control output		1 output
Monitor output (1 to 5 V)		N/A
External input		
Connector		—
Light source LED		Red, 4-element LED (Wavelength: 640 nm)
Response time		33 µs (HIGH SPEED) /250 µs (FINE) /500 µs (TURBO) /1 ms (SUPER TURBO) /4 ms (ULTRA TURBO) /16 ms (MEGA TURBO)
Output selection		LIGHT-ON/DARK-ON (switch-selectable)
Display indicator		Operation indicator: Red LED/Dual digital monitor: Dual 7-segment display, Preset Value (4-digit green LED indicator) and Current Value (4-digit red LED indicator) illuminated together. Current Value range: 0 to 64,512; Excess gain: 0P to 999P, Hold function: Possible to display both peak and bottom hold values, Selectable from 5 variations Bar LED monitor: Excess gain displayed (85% to 115% in 7 steps), Scaling display
Size		30.3 mm (H) x 9.8 mm (W) x 71.8 mm (D) 1.19" (H) x 0.39" (W) x 2.83" (D)
Detection mode		Light intensity (area detection possible, automatic sensitivity-tracking function provided)
Timer function		OFF-delay timer/ON-delay timer/One-shot timer/ON-delay timer + OFF-delay timer/ON-delay timer + One-shot timer, selectable Timer duration selectable: 0.1 ms to 9,999 ms, Maximum error against the setting value: ±10% max.
Control output		NPN open-collector 24 V, 100 mA max.*1 (main unit only)/20 mA max. (when the expansion unit(s) is connected), Residual voltage: 1 V max.
External inputy		Input time: 2 ms (ON)/20 ms (OFF) min.*2
Unit expansion		Up to 16 expansion units can be connected (a total of 17 units). Note that the 2-output type should be counted as two units.
Number of interference prevention units	Normal operation	HIGHSPEED：0 FINE：4 TURBO/SUPER/ULTRA/MEGA：8台
Rating	Power voltage	12 to 24 VDC ±10 %, Ripple (P-P) 10 % or less
	Power consumption	Normal: 710 mW max. (Using 24 V, 29 mA max., using 12 V, 40 mA max.)/Power saving: 540 mW max. (Using 24 V, 22 mA max., using 12 V, 28 mA max.)*3
Environmental resistance	Ambient light	Incandescent lamp: 20,000 lux max., Sunlight: 30,000 lux max.
	Ambient temperature	-10 to +55 °C 14 to 131 °F (No freezing)*4
	Relative humidity	35 to 85 % RH (No condensation)

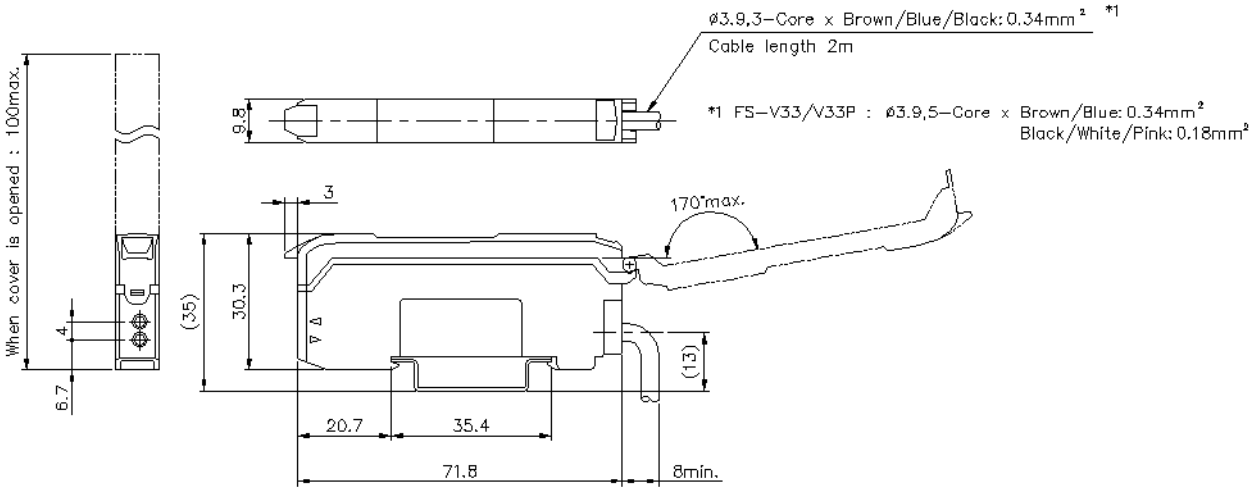
	Vibration resistance	10 to 55 Hz, Double amplitude 1.5 mm 0.06", 2 hours in each of the X, Y, and Z directions
	Shock resistance	500 m/s², 3 times in each of the X, Y, and Z directions
Case material		Polycarbonate
Accessories		N/A
Weight		Approx. 80 g

*1 Total current of two outputs should be less than 100 mA.
*2 Only available on certain models.
*3 When using the HIGH SPEED mode, the power consumption increases by 160 mW (7 mA).
*4 If more than one unit is used together, the ambient temperature varies with the conditions below. Mount the units on the DIN rail with mounting brackets and check that the output current is 20 mA or less.
1 to 2 Units: -10 to +55 °C 14 to 131 °F, 3 to 10 Units: -10 to +50 °C 14 to 122 °F, 11 to 16 Units: -10 to +45 °C 14 to 113 °F

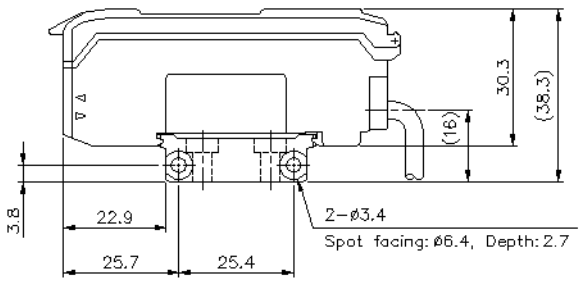
Dimensions

* Download CAD file or product manual for larger image/text and more detail.

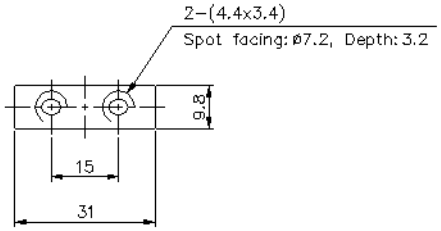
FS−V31/V31P/V33/V33P



When mounting bracket is attached
OP−73880 (Option)



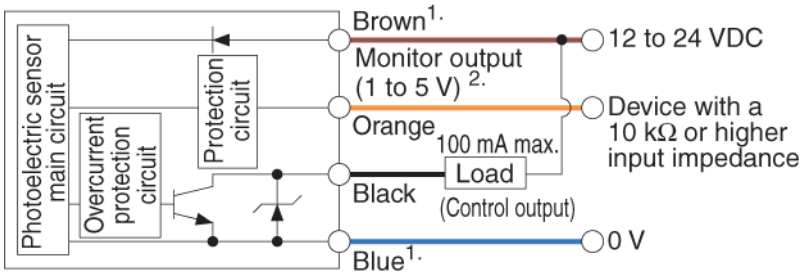
Back side of bracket



I/O Circuit Connection diagram

* Download CAD file or product manual for larger image/text and more detail.

I/O Circuit



1. FS-V31/31M only. 2. FS-V31M only.