



## FS-N11N

Fibre Amplifier, Cable Type, Main Unit, NPN



## SPECIFICATIONS

Model	FS-N11N	
Type	Standard 1 output Cable	
Output	NPN	
Main unit/Expansion unit	Main unit	
Control output	1 NPN open collector 24 V; 1 output max: 100 mA or less; 2 output total: 100 mA or less (used stand-alone)/20 mA or less (multiple connections); residual voltage 1 V or less	
Monitor output (1-5 V)	-	
External input		
Response time	50 $\mu$ s (HIGH SPEED) /250 $\mu$ s (FINE) /500 $\mu$ s (TURBO) /1 ms (SUPER) /4 ms (ULTRA) /16 ms (MEGA)	
Multiple connections to Expansion units	Up to 16 units can be connected total (two output type is treated as two units)	
Light source	Red, 4-element LED	
APC	ON/OFF switchable (Factory setting: OFF)	
Number of interference prevention units	0 for HIGH SPEED; 4 for FINE; 8 for TURBO/SUPER/ULTRA/MEGA (When set to double, the number of interference-prevention units will be doubled.)	
Rating	Power voltage	12 to 24 VDC $\pm$ 10 %, Ripple (P-P) 10 % or less
	Current Consumption	Normal: 900 mW or less (36 mA max. at 24 V, 48 mA max. at 12 V) <sup>1</sup> Eco on mode: 800 mW or less (32 mA max. at 24 V, 39 mA max. at 12 V) <sup>1</sup> Eco Full mode: 470 mW or less (19 mA max. at 24 V, 23 mA max. at 12 V)
Environmental resistance	Ambient light	Incandescent lamp: 20,000 lux or less, Sunlight: 30,000 lux or less
	Ambient temperature	-20 to +55 °C (No freezing) <sup>2</sup>
	Relative humidity	35 to 85 % RH (No condensation)
	Vibration resistance	10 to 55 Hz, Double amplitude 1.5 mm, 2 hours in each of the X, Y, and Z directions
	Shock resistance	500 m/s <sup>2</sup> , 3 times in each of the X, Y, and Z directions
Case material	Both main unit and expansion unit housing material: Polycarbonate	
Weight	Approx. 75 g	

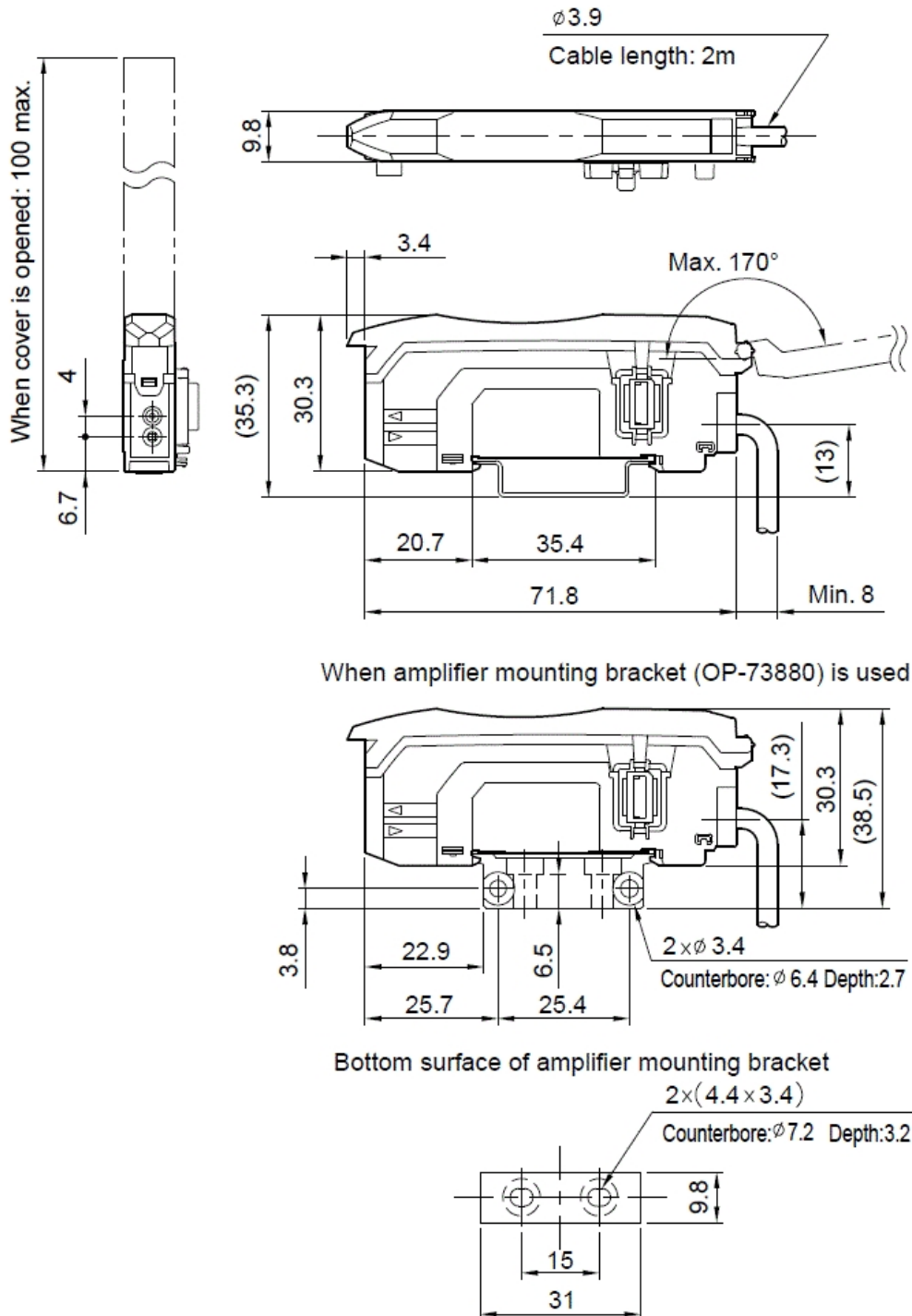
<sup>1</sup> Increases 100 mW (4.0 mA) for High Speed mode

<sup>2</sup> One or two more units connected: -20 to +55 °C; 3 to 10 more units connected: -20 to +50 °C; 11 to 16 more units connected: -20 to +45 °C. When using 2-outputs, one unit is counted as two units. All temperature regulations are for when the unit is mounted on a DIN rail and installed on metal sheeting.

## Dimensions

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

### FS-N11N / N11P / N13N / N13P / N11MN



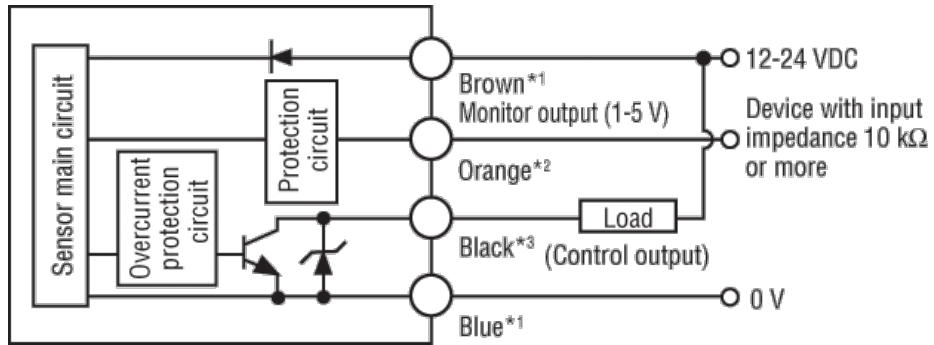
\* 1 FS-N11N(P)/N13N(P)/N11MN is not provided with an expansion connector.

\* 2 FS-N10 is not provided with cables.

I/O Circuit Connection diagram

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

Output Circuit Diagram



\*1 FS-N11N/N11MN/N13N only

\*2 FS-N11MN only

\*3 The FS-N13N/N14N has a white cable as separate output 2.