



FS-N42N

Amplifier Units Cable type Expansion 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-N42N	
Type	Cable	
Output	NPN	
Main unit/expansion unit	Expansion unit	
Response time	23 μ s (S-HSPD*1) / 50 μ s (HSPD*2) / 250 μ s (FINE) / 500 μ s (TURBO) / 1 ms (SUPER) / 4 ms (ULTRA) / 16 ms (MEGA) / 64 ms (TERA)	
Number of control outputs	1	
Number of external inputs	—	
Light source LED	Transmitter side: Red, four-element LED (wavelength: 660 nm)	
Control output	Open-collector, 30 V or less 100 mA or less per output, 100 mA or less total for 2 outputs (when used as a solitary unit) / 20 mA or less (when used as an expansion unit) Residual voltage: 1.4 V or less (output current: 10 mA or less) / 2 V or less (output current: 10 to 100 mA)	
External input	Input time: 2 ms (ON) / 20 ms (OFF) or longer*3	
Unit expansion	Up to 16 units (17 units connected in total including the main unit) . However, each dual output type will be treated as two expansion units.	
Protection circuit	Protection against reverse power connection, output overcurrent, output surge, and reverse output connection	
Mutual interference prevention	S-HSPD/HSPD: 0 units, FINE: 4 units, TURBO/SUPER/ULTRA/MEGA/TERA: 8 units (The mutual interference prevention values are twice those shown here when Double is set.)	
Power supply	Power voltage	10 to 30 VDC (including 10 % ripple (P-P) or less) , class 2 or LPS*4
	Power consumption	During normal operation: 870 mW or less (34 mA or less at 24 V/62 mA or less at 12 V) ECO ON: 800 mW or less (31 mA or less at 24 V/56 mA or less at 12 V) ECO FULL: 710 mW or less (28 mA or less at 24 V/49 mA or less at 12 V)*5
Environmental resistance	Ambient light	Incandescent lamp: 20,000 lx or less, sunlight: 30,000 lx or less
	Ambient temperature	-20 °C -4 °F to +55 °C +131 °F (no freezing)*6
	Vibration resistance	10 to 55 Hz; double amplitude 1.5 mm 0.06"; 2 hours each for X, Y, and Z axes
	Shock resistance	500 m/s ² ; 3 times each for X, Y, and Z axes
Case material	Main unit and cover: polycarbonate	
Weight	Approx. 48 g	

*1 Restrictions when S-HSPD is selected

Area detection, Area % Mode, DATUM, Rising edge, and Falling edge cannot be selected for Detection Mode.

Output timer, Limit Detection, and Display Gain cannot be used.

FULL cannot be selected for the ECO function.

*2 Restrictions when HSPD is selected

Display Gain cannot be used.

*3 The input time becomes 25 ms (ON)/25 ms (OFF) when external calibration input is selected.

*4 When expanding the system to 9 or more units, use a power supply voltage of 12 V or higher.

*⁵ The load current is excluded. The power consumption including the load when the maximum number of units are connected is 38 W max.

*⁶ When expanded by 1 to 2 units: -20°C **-4°F** to +55°C **+131°F**. When expanded by 3 to 10 units: -20°C **-4°F** to +50°C **+122°F**.

When expanded by 11 to 16 units: -20°C **-4°F** to +45°C **+113°F**. When using 2 outputs, 1 unit is counted as 2 units.

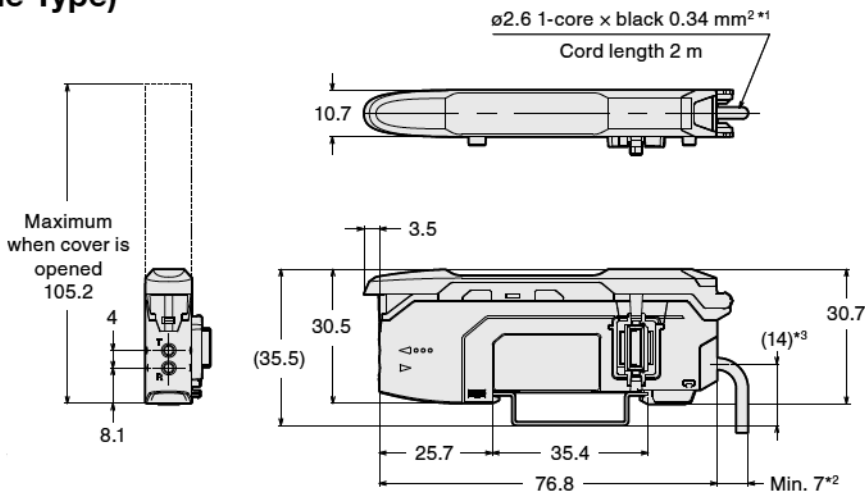
The prescribed values for the ambient temperature assume that the sensor amplifier has been mounted on a DIN rail installed on a metal surface.
Exercise special care when installing the product in an airtight space.

Dimensions

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

fs-n42_n44_dimension_01.gif

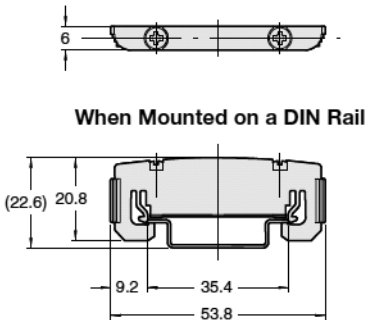
FS-N42N/N42P/N44N/N44P
Expansion Unit
(Cable Type)



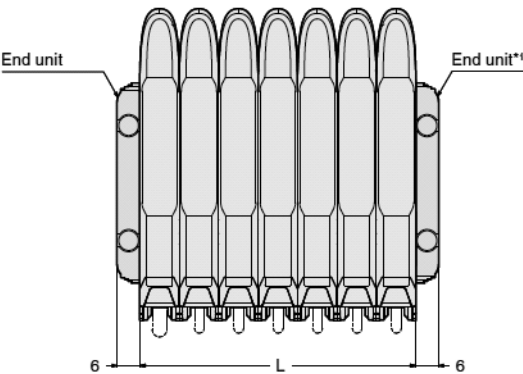
*1. FS-N44N/N44P is $\phi 3.9$, 3-core x black/white/pink 0.18 mm²
*2. Minimum 8 for FS-N44N/N44P
*3. (13) for FS-N44N/N44P

Common to All Models

End Unit
(OP-26751 Option, Sold Separately)



When Several Units are Connected



*1. When using expansion units, be sure to use the end unit. (Optional)