

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 µs (S-HSPD*1) /50 µs (HSPD*2) /250 µs (FINE) /500 µs (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/s²; 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.

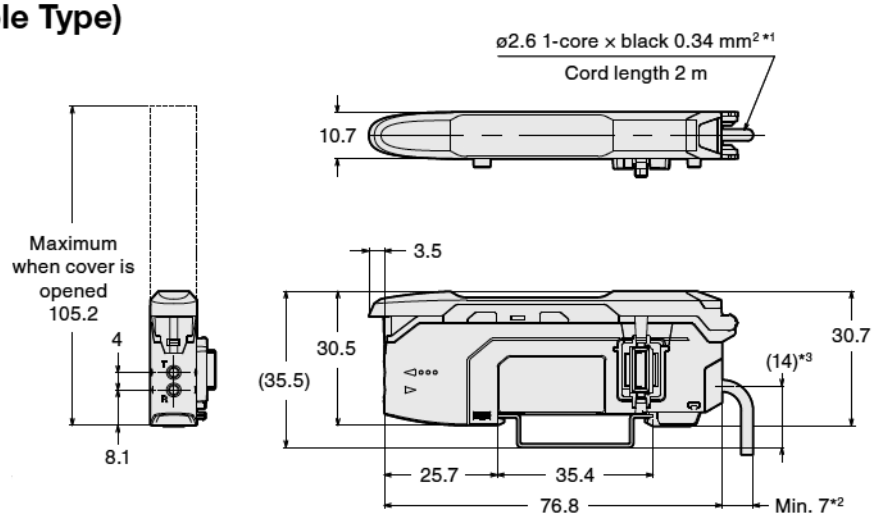
*5 The load current is excluded. The power consumption including the load when the maximum number of units are connected is 38 W max.
*6 When expanded by 1 to 2 units: -20°C -4°F to +55°C +131°F. When expanded by 3 to 10 units: -20°C -4°F to +50°C +122°F.
When expanded by 11 to 16 units: -20°C -4°F to +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 amplifi er 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

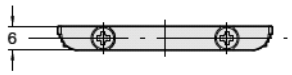
FS-N42N/N42P/N44N/N44P
Expansion Unit
(Cable Type)



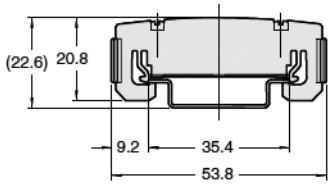
*1. FS-N44N/N44P is ø3.9, 3-core × black/white/pink 0.18 mm²
*2. Minimum 8 for FS-N44N/N44P
*3. (13) for FS-N44N/N44P

▮Common to All Models

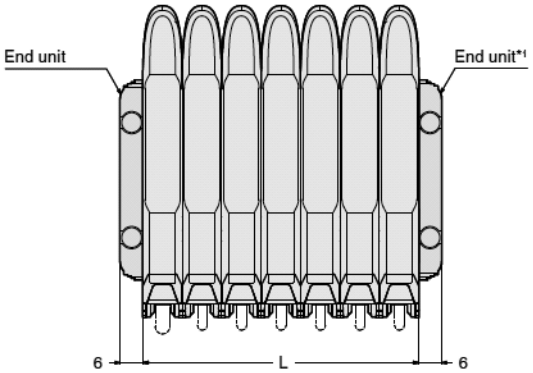
End Unit
(OP-26751 Option, Sold Separately)



When Mounted on a DIN Rail



When Several Units are Connected



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