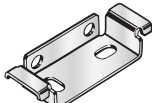


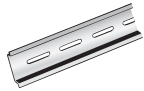
Mounting Bracket (Dimensions → page 22)

A Mounting Bracket is not provided with the Fiber Amplifier Unit. It must be ordered separately as required.

Appearance	Model	Quantity
	E39-L143	1

DIN Track (Dimensions → page 22)

A DIN Track is not provided with the Fiber Amplifier Unit. It must be ordered separately as required.

Appearance	Type	Model	Quantity
	Shallow type, total length: 1 m	PFP-100N	1
	Shallow type, total length: 0.5 m	PFP-50N	
	Deep type, total length: 1 m	PFP-100N2	

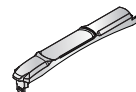
End Plate (Dimensions → page 22)

Two End Plates are provided with the Sensor Communications Unit. End Plates are not provided with the Fiber Amplifier Unit. They must be ordered separately as required.

Appearance	Model	Quantity
	PFP-M	1

Cover

Attach these Covers to Amplifier Units.
Order a Cover when required, e.g., if you lose the covers.

Appearance	Model	Quantity
	E39-G25 FOR E3NX-FA	1

Related Products**Sensor Communications Units**

Type	Appearance	Model
Sensor Communications Unit for EtherCAT		E3NW-ECT
Sensor Communications Unit for CompoNet		E3NW-CRT *1
Sensor Communications Unit for CC-Link		E3NW-CCL
Distributed Sensor Unit *2		E3NW-DS

Refer to your OMRON website for details.

*1. E3NX-FAH0 can not be connected.

*2. The Distributed Sensor Unit can be connected to any of the Sensor Communications Units.

EtherCAT® is a registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany.

CompoNet is a registered trademark of the ODVA.
CC-Link is a registered trademark of Mitsubishi Electric Corporation. The trademark is managed by the CC-Link Partner Association.

Ratings and Specifications

Standard models/ Advanced models/ Infrared models

Type		Standard models			Advanced models					Infrared models		
		NPN output	E3NX-FA11	E3NX-FA6	E3NX-FA11-5*1	E3NX-FA21	E3NX-FA7	E3NX-FA7TW	E3NX-FA24	---	E3NX-FAH11	E3NX-FAH6
Item		PNP output	E3NX-FA41	E3NX-FA8	---	E3NX-FA51	E3NX-FA9	E3NX-FA9TW	E3NX-FA54	E3NX-FA54TW	E3NX-FAH41	E3NX-FAH8
	Connecting method	Pre-wired	Wire-saving Connector	Pre-wired	Pre-wired	Wire-saving Connector		M8 Connector		Pre-wired	Wire-saving Connector	
Inputs/ outputs	Outputs	1 output				2 outputs	1 output	2 outputs	1 output	2 outputs	1 outputs	
	External inputs	---				1 input	1 input	---	1 input	---	---	
Light source (wavelength)		Red, 4-element LED (625 nm)									Infrared LED (870nm)	
Power supply voltage		10 to 30 VDC, including 10% ripple (p-p)										
Power consumption *2		At Power supply voltage of 24 VDC Standard Models: Normal mode : 840 mW max. (Current consumption at 35 mA max.) Eco function ON : 650 mW max. (Current consumption at 27 mA max.) Eco function LO : 750 mW max. (Current consumption at 31 mA max.) Advanced Models or Model for Sensor Communications Unit: Normal mode : 920 mW max. (Current consumption at 38 mA max.) Eco function ON : 680 mW max. (Current consumption at 28 mA max.) Eco function LO : 800 mW max. (Current consumption at 33 mA max.) Infrared models: Normal mode : 1080 mW max. (Current consumption at 45 mA max.) Eco function ON : 920 mW max. (Current consumption at 38 mA max.) Eco function LO : 1020 mW max. (Current consumption at 42 mA max.)										
Control output		Load power supply voltage: 30 VDC max., open-collector output (depends on the NPN/PNP output format) Load current: Groups of 1 to 3 Amplifier Units: 100 mA max., Groups of 4 to 30 Amplifier Units: 20 mA max. Residual voltage: At load current of less than 10 mA: 1 V max. At load current of 10 to 100 mA: 2 V max. OFF current: 0.1 mA max.										
External inputs		---				Refer to *3.		---	Refer to *3.		---	
Indicators		7-segment displays (Sub digital display: green, Main digital display: white) Display direction: Switchable between normal and reversed. OUT indicator (orange), L/D indicator (orange), ST indicator (blue), DPC indicator (green), and OUT selection indicator (orange, only on models with 2 outputs)										
Protection circuits		Power supply reverse polarity protection, output short-circuit protection, and output reverse polarity protection										
Response time	Super-high-speed mode (SHS)	Operate or reset for model with 1 output: 30 μs (Super High Speed mode (SHS2) of E3NX-FA11-5 is 60 μs each), with 2 outputs: 32 μs										
	High-speed mode (HS)	Operate or reset: 250 μs										
	Standard mode (Std)	Operate or reset: 1 ms										
	Giga-power mode (GIGA)	Operate or reset: 16 ms										
Sensitivity adjustment		Smart Tuning (2-point tuning, full auto tuning, position tuning, maximum sensitivity tuning, power tuning, or percentage tuning (-99% to 99%)) or manual adjustment										
Maximum connectable Units		30										
No. of Units for mutual interference prevention *4	Super-high-speed mode (SHS)	0 Note: 2 units when the detection mode is set to Super High Speed mode (SHS2), and for other models, the mutual interference prevention function is disabled.										
	High-speed mode (HS)	10										
	Standard mode (Std)	10										
	Giga-power mode (GIGA)	10										

*1. This type can prevent mutual interference for two units in the SHS2 mode.

*2. At Power supply voltage of 10 to 30 VDC

Standard Models:

Normal mode : 990 mW max. (Current consumption: 33 mA max. at 30 VDC, 65 mA max. at 10 VDC)

Eco function ON : 780 mW max. (Current consumption: 26 mA max. at 30 VDC, 42 mA max. at 10 VDC)

Eco function LO : 840 mW max. (Current consumption: 28 mA max. at 30 VDC, 45 mA max. at 10 VDC)

Advanced Models:

Advanced Models:
Normal mode

Eco function ON : 810 mW max. (Current consumption: 27 mA max. at 30 VDC, 44 mA max. at 10 VDC)

Eco function I_Q : 870 mW max. (Current consumption: 29 mA max. at 30 VDC, 48 mA max. at 10 VDC)

Infrared models:

Infrared models:
Normal mode : 1.260 mW max. (Current consumption: 12 mA max. at 30 VDC, 80 mA max. at 10 VDC)

Normal mode : 1,280 mW max. (Current consumption: 42 mA max. at 30 VDC, 80 mA max. at 10 VDC)
Eco function ON : 1,050 mW max. (Current consumption: 35 mA max. at 30 VDC, 60 mA max. at 10 VDC)

Eco function LO : 1.140 mW max. (Current consumption: 38 mA max. at 30 VDC, 70 mA max. at 10 VDC)

***3.** The following details apply to the input.

	Contact input (relay or switch)	Non-contact input (transistor)	Input time *3-1
NPN	ON: Shorted to 0 V (Sourcing current: 1 mA max.). OFF: Open or shorted to Vcc.	ON: 1.5 V max. (Sourcing current: 1 mA max.) OFF: Vcc – 1.5 V to Vcc (Leakage current: 0.1 mA max.)	ON: 9 ms min. OFF: 20 ms min.
PNP	ON: Shorted to Vcc (Sinking current: 3 mA max.). OFF: Open or shorted to 0 V.	ON: Vcc – 1.5 V to Vcc (Sinking current: 3 mA max.) OFF: 1.5 V max. (Leakage current: 0.1 mA max.)	

***3-1.** Input time is 25 ms (ON)/(OFF) only when (in tUnE) or (in PtUn) input is selected.

*4. The tuning will not change the number of units. The least unit count among the mutual interference prevention units of E3NX and E3NC. Check the mutual interference prevention unit count and response speed of each model.