

Digital Fiber Amplifier Unit

E3X-DA-S/MDA

CSM_E3X-DA-S_MDA_DS_E_15_4



Advanced Fiber Amplifier Units

- Features a Power Tuning function that optimizes light reception at the press of a button.
- APC circuits to suppress LED aging degradation used with 4-element LEDs.
- 2-channel models achieve the thinnest* profile in the industry, at only 5 mm per channel.
- 2-channel models also offer AND/OR control output.
- The E3X-MDA0 with two channels supports an EtherCAT Sensor Communications Unit or CompoNet Sensor Communications Unit.

* (Based on July 2012 OMRON investigation.)



Be sure to read *Safety Precautions* on page 15.

Note: Manufacture of the E3X-DA□SE-S/DA□-S/DA□AT-S/DA□IRM-S/DA□TW-S will be discontinued in March 2017.

For the most recent information on models that have been certified for safety standards, refer to your OMRON website.

Features

Models available for a wide variety of applications at manufacturing sites

Industry Leading Two Amplifiers Loaded in a Small Body . . . 2-channel models

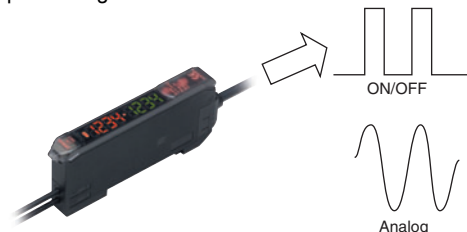
Two amplifiers are loaded in a 10 mm-wide body. Space usability can be approximately doubled. In addition, approximately 40% of the energy can be saved. (compared to the value per channel of the former model)



High-speed and High-resolution Analog Output Supports Wide Variety of Applications . . . Advanced Analog Output Models

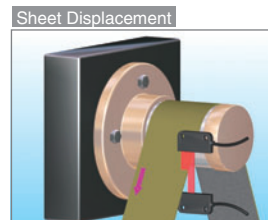
Analog Control Output

The voltage in the range of 1 to 5 V is output according to the incident level (digital display). Wide variety of applications is possible including positioning control or difference detection with multiple levels.



High-speed and High Resolution

Detection modes can be switched in accordance with applications. High-speed response of 80 μ s (super-high-speed mode) supports the positioning controls that require high-speed control.



Ordering Information

Fiber Amplifier Units

Amplifier Units with Cables (2 m) [Refer to *Dimensions* on page 17.]

Item		Appearance	Functions	Model	
				NPN output	PNP output
Single-function models			---	E3X-DA11SE-S 2M *	E3X-DA41SE-S 2M *
Standard models			E3X-DA11-S 2M *	E3X-DA41-S 2M *	
Mark-detecting models (multiple color light sources)	Green LED		E3X-DAG11-S 2M	E3X-DAG41-S 2M	
	Blue LED		E3X-DAB11-S 2M	E3X-DAB41-S 2M	
	Infrared LED		E3X-DAH11-S 2M	E3X-DAH41-S 2M	
Advanced models	External-input models		Remote setting, counter, differential operation	E3X-DA11RM-S 2M *	E3X-DA41RM-S 2M *
	Twin-output models		Area output, self-diagnosis, differential operation	E3X-DA11TW-S 2M *	E3X-DA41TW-S 2M *
	ATC function models		ATC (Threshold value automatic correction)	E3X-DA11AT-S 2M *	E3X-DA41AT-S 2M *
	Analog output models		Analog output models	E3X-DA11AN-S 2M	E3X-DA41AN-S 2M
2-channel models			AND/OR output	E3X-MDA11 2M	E3X-MDA41 2M

* Manufacture of the E3X-DA□SE-S/DA□-S/DA□AT-S/DA□RM-S/DA□TW-S will be discontinued in March 2017.

Amplifier Units with Wire-saving Connectors [Refer to *Dimensions* on page 18.]

Item		Appearance	Functions	Model	
				NPN output	PNP output
Single-function models			---	E3X-DA6SE-S *1	E3X-DA8SE-S *1
Standard models				E3X-DA6-S *1,2	E3X-DA8-S *1,2
Mark-detecting models (multiple color light sources)	Green LED		Timer, Response speed change	E3X-DAG6-S *2	E3X-DAG8-S *2
	Blue LED			E3X-DAB6-S *2	E3X-DAB8-S *2
	Infrared LED			E3X-DAH6-S *2	E3X-DAH8-S *2
External-input models				Remote setting, counter, differential operation	E3X-DA6RM-S *1,2
Advanced models	Twin-output models		Area output, self-diagnosis, differential operation	E3X-DA6TW-S *1,2	E3X-DA8TW-S *1,2
	ATC function models		ATC (Threshold value automatic correction)	E3X-DA6AT-S *1	E3X-DA8AT-S *1
2-channel models				AND/OR output	E3X-MDA6 *2

*1. Manufacture of the E3X-DA□SE-S/DA□-S/DA□AT-S/DA□RM-S/DA□TW-S will be discontinued in March 2017.

*2. These models allow you to use an E3X-DRT21-S VER.3 Sensor Communications Unit. When using the E3X-DRT21-S VER.3, use an E3X-CN02 Connector without a Cable for the Wire-saving Connector.

Amplifier Units with Connectors for EtherCAT or CompoNet Sensor Communications Units [Refer to *Dimensions* on page 19.]

Item	Appearance	Functions	Model	Applicable Sensor Communications Unit
2-channel model		AND/OR output	E3X-MDA0	E3X-ECT E3X-CRT

Ratings and Specifications

Type		Light source	Response time	Control output/input			Functions					
				ON/OFF output	Input	Analog output	Power tuning	Timer	Interference prevention	Differential detection	counter	ATC
Single-function models		Red LED	1 ms	Only main	---	---	---	---	○	---	---	---
Standard models			50 μs to 4 ms				○	○				
Mark-detecting models	E3X-DA□G-S	Green LED	50 μs to 4 ms	Only main	---	---	○	○	○	---	---	---
	3X-DA□B-S	Blue LED					○	○	○	---	---	---
	E3X-DA□H-S	Infrared LED					○	○	○	---	---	---
Ad- vanced models	Twin-output models	Red LED	50 μs to 4 ms	Only main	(1 line)	---	○	○	○	○	---	---
	External-input models		80 μs to 4 ms	Main + sub (2 lines)								
	ATC function models		130 μs to 4 ms	---	○					---		○
	Analog output		80 μs to 4 ms	Only main	(1 line)					---		---
2-channel models		Red LED	130 μs to 4 ms	Main + main (2 independent lines)	---	---	○	○	○	---	---	---