

NO: PH-197 **PRODUCT:** E3X-DA-N Fiber-optic Amplifier
DATE: April 2015 **TYPE:** Partial Discontinuation Notice

Select E3X-DA-N Fiber-Optic Sensor Amplifiers to be Discontinued; Replace with E3X-HD or E3NX-FA Series

Discontinuation date: February 2017

Note: Date is subject to change based on raw materials and components availability at the factory.

Affected Parts

Product discontinuation	Recommended replacement
E3X-DA11D 2M	E3X-HD11 2M
E3X-DA11-N 0.5M	E3X-HD11 2M
	E3NX-FA11 2M
E3X-DA11-N 2M	E3X-HD11 2M
	E3NX-FA11 2M
E3X-DA11-N 5M	E3X-HD11 5M
	E3NX-FA11 5M
E3X-DA41D 2M	E3X-HD41 2M
E3X-DA41-N 2M	E3X-HD41 2M
	E3NX-FA41 2M
E3X-DA6	E3X-HD6
	E3NX-FA6
E3X-DA6D	E3X-HD6
E3X-DA8	E3X-HD8
	E3NX-FA8
E3X-DA8D	E3X-HD8
E3X-DA11-N-6 2M	No recommended replacement
E3X-DA11-N-C1	No recommended replacement
E3X-DA11-N-ECON 0.3M	No recommended replacement
E3X-DA11-N-M1J 0.3M	No recommended replacement
E3X-DA11-N-R 2M	No recommended replacement
E3X-DA6-6	No recommended replacement
E3X-DA6-P	No recommended replacement
E3X-DAS8	No recommended replacement
E3X-RM1-1	No recommended replacement
E3X-RM1-2	No recommended replacement

Note: The part numbers above with a "2M" ending may also exist without the "2M". Consider these two parts as equivalent.

See the following pages for an explanation of Detail of Differences.

Cautions on Applying Replacements

- 1) Optical communication to E3X-DA-N/NA/SD series is not available. Notice that channel recognition and Mutual interference prevention is not available at communication status.
- 2) Mobile console E3X-MC11 is not available.
- 3) The Communication Unit E3X-DRT21, E3X-SRT21 and E3X-CIF11 cannot be connected.
- 4) When using Fiber head E32-D61/D73/D81R/T61/T81R/T84S (D81R/T61/T81R/T84S are discontinued) series, notice that the pitch between emitter and receiver hole is different compared with E3X-HD series, and they are not compatible. Please also change the Fiber head to the following types: E32-D61-S/D73-S/D81R-S/T61-S/T81R-S/T84S-S series

Detail of Differences

Body Color

Product discontinuation Model E3X-DA-N series	Recommended replacement 1 Model E3X-HD series	Recommended replacement 2 Model E3NX-FA series
 <p>Sensor:black Cover printing:orange Case: black (no printing lable)</p>	 <p>Sensor:black Cover printing:silver Case: nameplate with silver printing</p>	 <p>Sensor:black Cover printing:silver Case: nameplate with silver printing</p>
<p>Operation panel</p>  <p>7-seg display:red Operation button:: orange Operation panel printing:orange</p>	 <p>7-seg display:green+orange Operation button:: black Operation panel printing:white</p>	 <p>7-seg display:green+white Operation button:: black Operation panel printing:white</p>
<p>Cable</p>  <p>Dark grey</p>	 <p>Black</p>	

Fiber Insertion Ports

Product discontinuation Model E3X-DA-N series	Recommended replacement 1 Model E3X-HD series	Recommended replacement 2 Model E3NX-FA series
<p>Common</p> <p>The pitch between emitter and receiver hole: 8mm</p> 	<p>The pitch between emitter and receiver hole: 4.5mm</p> 	

Wiring Diagrams

Product discontinuation Model E3X-DA-N series	Recommendable replacement 1 Model E3X-HD series	Recommended replacement 2 Model E3NX-FA series
NPN Output (E3X-DA11/6(D)-N) 	NPN Output (E3X-HD11/6) 	NPN Output (E3NX-FA11/6)
PNP Output (E3X-DA41/8(D)-N) 	PNP Output (E3X-HD41/8) 	PNP Output (E3NX-FA41/8)

Mounting Dimensions

Product discontinuation Model E3X-DA-N series	Recommended replacement 1 Model E3X-HD series	Recommended replacement 2 Model E3NX-FA series
	<p>Note: All amplifiers are designed for DIN rail mounting. The M3 mounting shown here is available when using the E39-L143 mounting bracket, which is sold separately.</p>	

Dimensions

Product discontinuation Model E3X-DA-N series	Recommended replacement 1 Model E3X-HD series	Recommended replacement 2 Model E3NX-FA series
Pre-wired type 		

Product discontinuation Model E3X-DA-N series	Recommended replacement 1 Model E3X-HD series	Recommended replacement 2 Model E3NX-FA series
<p>Wire-saving connector</p>		

Characteristics

Item	Product discontinuation Model E3X-DA-N series	Recommended replacement 1 Model E3X-HD series	Recommended replacement 2 Model E3NX-FA series	
Light source (wavelength)	Red LED (660nm)	Red, 4-element LED (625nm)		
Power supply voltage	12 to 24 VDC±10% ripple (p-p) 10% max.		10 to 30 VDC±10%, ripple (p-p) 10% max.	
Power consumption (at power supply voltage of 24VDC)	Normally mode	960mW max. (Current consumption: 40mA max.)	720mW max. (Current consumption: 30mA max.)	
	Eco mode (Digital display not lit)	600mW max. (Current consumption: 25mA max.)	530mW max. (Current consumption: 22mA max.)	
	Eco Lo mode (Luminance change of digital display)	720mW max. (Current consumption: 30mA max.)	640mW max. (Current consumption: 26mA max.)	
Control output	Load power supply voltage: 26.4V DC max. Open-collector output Load current: 50mA Residual voltage: At load current of less than 50mA: 1V max.	Load power supply voltage: 26.4V DC max. Open-collector output Load current: Groups of 1 to 3 Amplifier Units: 100mA max. Groups of more than 4 Amplifier Units: 20mA max. Residual voltage: At load current of less than 10mA: 1V max. At load current of 10 to 100mA: 2V max.	Load power supply voltage: 30V DC max Open-collector output Load current: Groups of 1 to 3 Amplifier Units: 100mA max. Groups of more than 4 Amplifier Units: 20mA max. Residual voltage: At load current of less than 10mA: 1V max. At load current of 10 to 100mA: 2V max.	
Protection circuits	Power supply reverse polarity protection	Provided		
	Output short-circuit protection	Provided		
	Out reverse polarity protection	Not Provided	Provided	
	Mutual interference prevention (supported for up to 10Units)	Provided		

Item	Product discontinuation Model E3X-DA-N series	Recommended replacement 1 Model E3X-HD series	Recommended replacement 2 Model E3NX-FA series	
Response time	Super-high-speed mode; Operate/reset: 0.25ms Standard mode Operate/reset: 1ms Super-long-distance mode Operate/reset: 4ms The communications function and mutual interference prevention function are disabled when the detection mode is set to Super-high-speed mode.	Super-high-speed mode Operate/reset: 0.05ms High-speed mode Operate/reset: 0.25ms Standard mode Operate/reset: 1ms Giga power mode Operate/reset: 16ms The communications function and mutual interference prevention function are disabled when the detection mode is set to Super-high-speed mode.	Super-high-speed mode Operate/reset: 0.03ms High-speed mode Operate/reset: 0.25ms Standard mode Operate/reset: 1ms Giga power mode Operate/reset: 16ms The communications function and mutual interference prevention function are disabled when the detection mode is set to Super-high-speed mode.	
Sensitivity setting	Teaching or manual method			
Functions	OFF delay timer: 0 to 200ms Using Mobile Console: OFF delay, ON delay or one shot (selectable)	OFF delay timer: 0 to 200ms Using Mobile Console: OFF delay, ON delay or one shot (selectable)	Timer disable/OFF delay/ON delay/one shot, or ON delay + OFF delay (selectable)	
	Automatic power control (APC)	Always enabled		
	Zero-reset	Negative values can be displayed	Negative values can be displayed (Threshold value is shifted)	
	Initial-reset	Provided	Initial reset/user reset(selectable)	
Indicators	Operation indicator (orange) 7-segment digital incident level display (red), 7-segment digital incident level percentage display (red), threshold and excess gain 2-color double bar indicators (green and red), 7-segment digital threshold display (red)	Operation indicator (orange) 7-segment digital incident level display (Sub digital incident level display: green + Main digital incident level display: red), L/D indicator (orange), ST indicator (blue), DPC indicator (green)	7-segment displays (Sub digital display: green + Main digital display: white) OUT indicator (orange), L/D indicator (orange), ST indicator (blue), DPC indicator (green), OUT selection indicator (orange, only on models with 2 outputs)	
Display timing	Normal/peak-hold/bottom-hold possible	Normal/peak-hold/peak • bottom-hold/percent display/bar display/channel number possible	Normal/peak-hold/peak • bottom-hold/percent display/bar display/channel number /change finder possible	
Display orientation	Switching between normal/reverse possible			
Optical axis adjustment (hyper-flashing function)	Provided	Not provided		
Ambient Illumination (receiver side)	Incandescent lamp	10,000 lx max.	20,000 lx max.	
	Sunlight	20,000 lx max.	30,000 lx max.	
Ambient temperature	Operating	Groups of 1 to 3 Amplifiers: -25 to +55°C Groups of 4 to 11 Amplifiers: -25 to +50°C Groups of 12 to 16 Amplifiers: -25 to +45°C	Groups of 1 to 2 Amplifiers: -25 to +55°C Groups of 3 to 10 Amplifiers: -25 to +50°C Groups of 11 to 16 Amplifiers: -25 to +45°C Groups of 17 to 30 Amplifiers: -25 to +40°C	
	Storage	-30 to +70°C (with no condensation)		
Weight (Packed state)	Pre-wired (standard cable length: 2 m)	Approx. 100g	Approx. 105g	Approx. 115g
	Standard connector	Approx. 55g	Approx. 60g	
Material	Case	Polybutylene terephthalate (PBT)	Polycarbonate (PC)	
	Cover	Polycarbonate (PC)		

Operation Ratings

<p>Product discontinuation Model E3X-DA-N series</p>	<p>Sensing distance</p> <table border="1"> <thead> <tr> <th rowspan="2">Model</th> <th colspan="3">Sensing distance (mm)</th> </tr> <tr> <th>Super-long-distance mode</th> <th>Standard mode</th> <th>Super-high-speed mode</th> </tr> </thead> <tbody> <tr> <td>E32-T11R 2M</td> <td>670</td> <td>530</td> <td>200</td> </tr> <tr> <td>E32-D11R 2M</td> <td>220</td> <td>170</td> <td>80</td> </tr> </tbody> </table>	Model	Sensing distance (mm)			Super-long-distance mode	Standard mode	Super-high-speed mode	E32-T11R 2M	670	530	200	E32-D11R 2M	220	170	80				
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Please refer to the catalog about combination of other fiber heads.

Operation Methods

<p>Product discontinuation Model E3X-DA-N series</p>	<p>Recommended replacement 1 Model E3X-HD series</p>	<p>Recommended replacement 2 Model E3NX-FA series</p>
<p>Operation with slide switch and button</p> <p>Lock Button Level Display Setting Buttons TEACH MODE Mode Selector</p> <p>Operation Indicator ON when output is ON. OFF when output is OFF.</p> <p>Operating Mode Selector Use to switch between Light ON and Dark ON modes. Mode Selector Use to select SET, ADJ, or RUN mode.</p>	<p>Operation with button</p> <p>[I/LD Indicator] Indicates the setting status: Light ON (L) or Dark ON (D).</p> <p>[I/ST Indicator] Turns ON when Smart Tuning is in progress.</p> <p>[I/PC Indicator] Turns ON when Dynamic Power Control is effective.</p> <p>[I/LO Button] Use to switch between Light ON (L) and Dark ON (D).</p> <p>[I/TUNE Button] Automatically sets the entire power and set values.</p> <p>[I/UP/DOWN Button] Used to fine-tune the threshold or change set values.</p> <p>[I/OUT Indicator] Turns ON when the output is ON.</p> <p>[I/THRESHOLD] Threshold Level Green digital display</p> <p>[I/INCIDENT] Incident Level Red digital display</p> <p>[I/MODE Button] Use to switch between Detection Mode and Setting Mode.</p>	<p>Operation with button</p> <p>[I/LD Indicator] Indicates the setting status: Light ON or Dark ON.</p> <p>[I/ST Indicator] Turns ON when Smart Tuning is in progress.</p> <p>[I/PC Indicator] Turns ON when Dynamic Power Control is effective.</p> <p>[I/LO Button] Use to switch between Light ON and Dark ON.</p> <p>[I/TUNE Button] Use to fine-tune the threshold or change set values.</p> <p>[I/UP/DOWN Button] Used to fine-tune the threshold or change set values.</p> <p>[I/OUT Indicator] Turns ON when the output is ON.</p> <p>[I/THRESHOLD] Threshold Level Green digital display</p> <p>[I/INCIDENT] Incident Level White digital display</p> <p>[I/MODE Button] Use to switch between Detection Mode and Setting Mode.</p> <p>[I/TEACH Button] Use to select SET, ADJ, or RUN mode.</p>

Please refer to the instruction sheet about in-depth operating method.

Specifications and prices in this product news are as of the issue date and are subject to change without notice. Only main changes in specifications are described in this document. Please be sure to read the relevant catalogs, datasheets, product specifications, instructions, and manuals for precautions and necessary information when using products.