Standard Models (Typical model: E3X-DA21-S)

NEW

Pre-wired Models

NEW

Models with Connectors*

Full Color Models (Typical model: E3X-DAC11-S)

Two-channel Models (Typical model: E3X-MDA11)

Previous Models (Typical model: E3X-DA11-S)

Order Information

Pre-wired Models

Appearance	Functions	Model	
		NPN output	PNP output
	• Timer • Tough Mode • Differential operation • External input • Twin output • Self-diagnosis • ATC	E3X-DA21-S 2M	E3X-DA51-S 2M

Models with Connectors*

Appearance	Functions	Model	
		NPN output	PNP output
	• Timer • Tough Mode • Differential operation • Twin output • Self-diagnosis • ATC	E3X-DA7-S	E3X-DA9-S

* The applicable connectors are the E3X-CN21 (master connector with four conductors) and E3X-CN22 (slave connector with two conductors).

Ratings and Specifications

Item / Model		E3X-DA□-S (□: 21/51/7/9)
Light source (wavelength)		Red LED (625 nm)
Power supply voltage		12 to 24 VDC ±10%, ripple (p-p) 10% max.
Power consumption		Normal: 960 mW max. (Current consumption: 40 mA max. at 24 VDC, 80 mA max. at 12 VDC) Power saving ECO1: 720 mW max. (Current consumption: 30 mA max. at 24 VDC, 60 mA max. at 12 VDC) Power saving ECO2: 600 mW max. (Current consumption: 25 mA max. at 24 VDC, 50 mA max. at 12 VDC)
Control output		Load power supply voltage: 26.4 VDC max.; Open-collector output (models available for NPN or PNP output); Load current: 50 mA max. (Residual voltage: 2 V max.); OFF current: 0.5 mA max.
External input *1		No-voltage input (contacts/transistor) *2
Protection circuits		Reverse polarity for power supply connection, output short-circuit, Reversed output polarity protection
Response time (operate and reset)		Super-high-speed Mode *3: 80 µs; High-speed Mode: 250 µs; Standard Mode: 1 ms; High-resolution mode: 4 ms; Tough Mode: 16 ms
Sensitivity adjustment		Teaching or manual method
Functions	Power tuning	Light emission power and reception gain, digital control method
	Differential detection	Switchable between single edge and double edge detection mode Single edge: Can be set to 250 µs, 500 µs, 1 ms, 10 ms, or 100 ms. Double edge: Can be set to 500 µs, 1 ms, 2 ms, 20 ms, or 200 ms.
	Timer function	Select from OFF-delay, ON-delay, one-shot, or ON-delay + OFF-delay timer.
		1 ms to 5 s (1 to 20 ms set in 1-ms increments, 20 to 200 ms set in 5-ms increments, 200 ms to 1 s set in 100-ms increments, and 1 to 5 s set in 1 s-increments)
	Automatic power control (APC)	High-speed control method for emission current
	ATC (Automatic Threshold Compensation)	Supported
	Zero-reset	Negative displays are possible. (The threshold value also shifts.)
	Resetting settings	Select from initial reset (factory defaults) or user reset (saved settings).
	Mutual interference prevention	Up to 10 Units *4
	ECO mode *5	Select from lit display, dimmed display, or OFF.
	External input setting *1	Select from teaching operations, power tuning, zero reset, emitter OFF, or ATC start.
	Output setting	Select from output for each channel, area output, or self-diagnosis.
Display		Operation indicator for channel 1 (orange), Operation indicator for channel 2 (orange)

*1. Only for pre-wired models.
*2. Refer to the datasheet (Cat. No. E336) for details on the input.
*3. The communications function and mutual interference prevention function are disabled if detection is set to Super-high-speed Mode.
*4. Mutual interference prevention can be used for only up to 6 Units if power tuning is enabled.
*5. When the ECO Mode is enabled, the rated sensing distance is approx. 1/2 and the incident level is approx. 1/3 of the normal levels.
Note: The E3X-MC11-SV2 Mobile Console does not currently support the new Tough Mode and ON-delay + OFF-delay timer. You also cannot use the E3X-MC11-S.

Sensing Distance (Typical Examples)

Type		Model	Tough Mode	High-resolution Mode	Standard Mode	High-speed Mode	Super-high-speed Mode
Through-beam	Flexible	E32-T11R *1	2,000	1,400	1,000	700	280
		E32-T21R *2	450	300	250	150	60
	Standard	E32-TC200 *1	2,800	2,000	1,550	1,000	400
Retroreflective	Flexible	E32-D11R *3	840	600	350	240	100
		E32-D21R *2	140	100	60	40	16
	Standard	E32-DC200 *3	1,400	1,000	600	400	180
	Co-axial and flexible	E32-CC200R *3	700	500	300	200	90
	Co-axial	E32-CC200 *3	1,400	1,000	600	400	180
		E32-C31 *2	330	240	150	100	44

*1. The appearance is same as models with M4 screws.
*2. The appearance is same as models with M3 screws.
*3. The appearance is same as models with M6 screws.

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