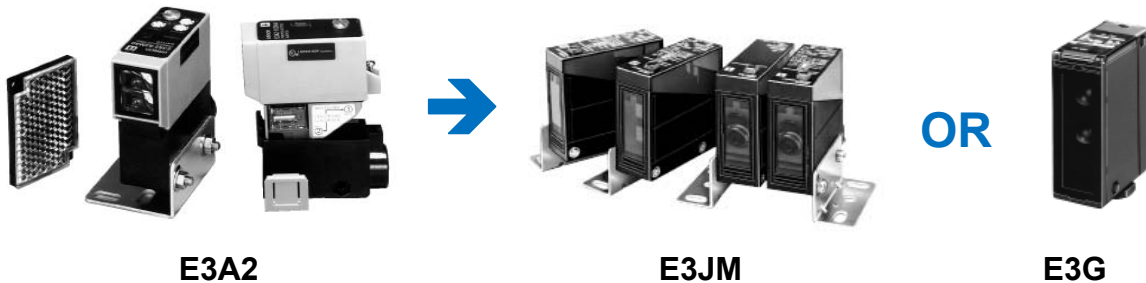


Channel ACTION ALERT!



NO: PH-169 **PRODUCT:** E3A2 Photoelectric Sensor
DATE: November 2012 **TYPE:** Discontinuation Notice

Photoelectric Sensor E3A2 and Fiber-Optic Model E3A2-X will be Discontinued March 2013; Use E3JM and E3G



The E3A2 Slim Photoelectric Sensors and E3A2-X Fiber-optic Amplifiers will be discontinued March 2013. Omron Industrial Automation recommends using E3JM and E3G Sensors as conditional replacements for E3A2 models. There is no suggested replacement for E3A2-X fiber-optic models. The discontinuation includes models with built-in timer, designated with “D” or “T” in the part number.

The unique feature of E3A2 is the plug-in replaceable output. This is not available on the recommended replacements. The E3A2-X fiber-optic amplifier offered an AC/DC powered option to industry standard DC power only models.

Discontinued Products/Suggested Replacements

Product discontinuation	Recommended replacement
Diffuse reflective models	
E3A2-DS70M4	E3JM-DS70M4-US
E3A2-DS70M4D	E3JM-DS70M4T-US
E3A2-DS70M4T	E3JM-DS70M4T-US
E3A2-DS70M4-G1	E3G-ML79-G
E3A2-DS70M4-G	E3JM-DS70M4-G
E3A2-DS70M4D-G	E3JM-DS70M4T-G
E3A2-DS70M4T-G	E3JM-DS70M4T-G
Retro-reflective models	
E3A2-R3M4	E3G-MR19
E3A2-R3M4-G	E3G-MR19-G
E3A2-R3M4D-G	E3G-MR19-G
E3A2-R3M4T-G1	E3G-MR19T-G
E3A2-R3M4D	E3G-MR19T
E3A2-R3M4T	E3G-MR19T
E3A2-R3M4-GN	E3G-MR19-G
E3A2-R3M4-GN1	E3G-MR19-G
E3A2-R3M4D-GN	E3G-MR19T-G
E3A2-R3M4D-GN1	E3G-MR19T-G
E3A2-R3M4D-G1-31	E3G-MR19T-G
E3A2-R3M4T-G	E3G-MR19T-G

Product discontinuation	Recommended replacement
Through-beam models	
E3A2-10M4	E3JM-10M4-US
E3A2-10M4D	E3JM-10M4T-US
E3A2-10M4T	E3JM-10M4T-US
E3A2-10M4-G	E3JM-10M4-G-N
E3A2-10M4D-G	E3JM-10M4T-G-N
E3A2-10M4T-G	E3JM-10M4T-G-N
E3A2-10L	E3JM-10L-US
Fiber-optic amplifier models	
E3A2-XCM4	None
E3A2-XCM4D	None
E3A2-XCM4T	None
E3A2-XCM4-G	None
E3A2-XCM4D-G	None
E3A2-XCM4T-G	None

Summary of Differences

The table below shows the key differences between E3A2 and replacement models E3JM and E3G:

Series Name	E3A2	E3JM	E3G
Wiring	Terminals 3, 4, and 5 are for output	Terminals 1, 2, and 3 are for output	Terminals 1, 2, and 3 are for output
Mounting holes	36mm apart	42mm apart	37mm x 74mm apart
Timing Functions	Normal, ON-delay, OFF-delay, one-shot or equal ON and OFF Delays	ON-delay, OFF-delay, and one-shot	ON-delay, OFF-delay, or one-shot
Response Time	15 ms maximum (ON and OFF)	30 ms maximum (ON and OFF)	30 ms maximum (ON and OFF)

For a detailed comparison, see the following pages.

Reference Documentation

Please refer to the E3A2, E3JM, and E3G Sensor Datasheets for complete details.

Description	Media	Publication number
E3A2 Photoelectric Sensor Datasheet	PDF only	CEDSA4 E3A2
E3A2-X Fiber-Optic Amplifier Datasheet	PDF only	CEDSA4 E3A2-X
E3JM Datasheet	PDF only	CEDSA4 E3JM
E3G Datasheet	PDF only	CEDSA4 E3G

Body Color

Product discontinuation	Recommended replacement
Yellow+Black	Black

Dimensions (Unit: mm)

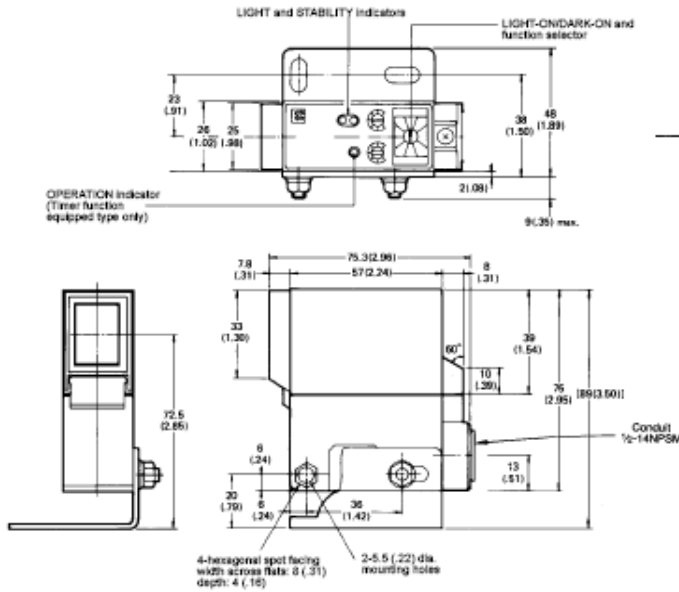
Product discontinuation	Recommended replacement
<p>Model E3A2-DS70□□(-G) series</p>	<p>E3JM-DS70□4(T)-G/US With Mounting Bracket Attached</p> <p>*1. Light indicator (without timer function) Operation indicator (with timer function) *2. Mounting Brackets can be used on the A side.</p> <p>Note: The operating mode switch, timer mode switch, and sensitivity adjuster (sensitivity adjuster: E3JM-DS70□4(T) only) are located inside the cover.</p>

<p>Model E3A2-DS70M4T-G1</p> <p>Unit: mm (inch)</p>	<p>Model E3G-ML79</p> <p>*The ON- or OFF-delay adjuster is not available with the E3G-ML79.</p>
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Product discontinuation

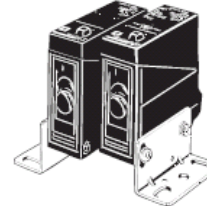
Model E3A2-10□□(-G) series

Unit: mm (inch)

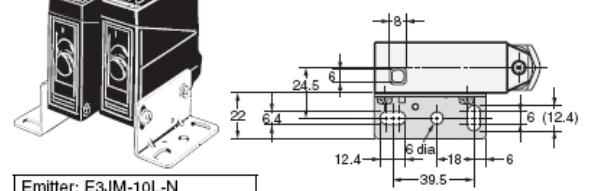


Recommended replacement

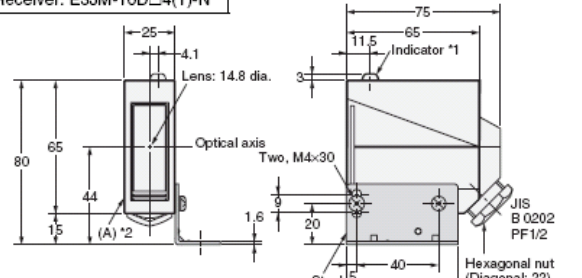
E3JM-10□4(T)-G-N/US



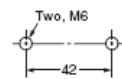
With Mounting Bracket Attached



Emitter: E3JM-10L-N
Receiver: E3JM-10D□4(T)-N



Mounting Holes

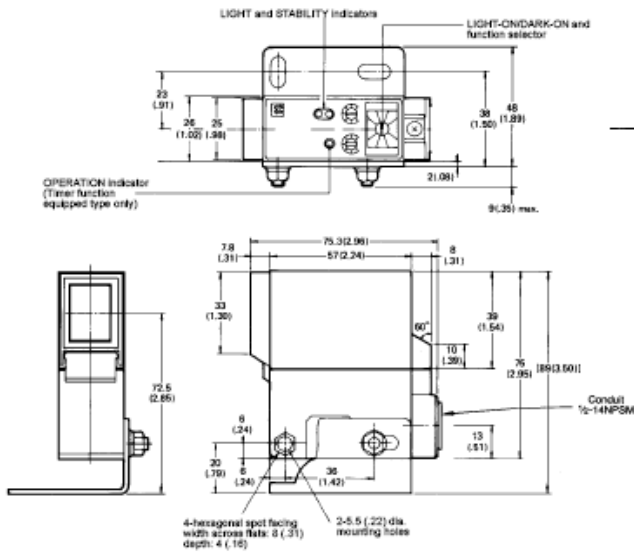


- *1. Emitter: Power indicator
Receiver: Light indicator (without timer function)
Operation indicator (with timer function)
- *2. Mounting Brackets can be used on the A side.

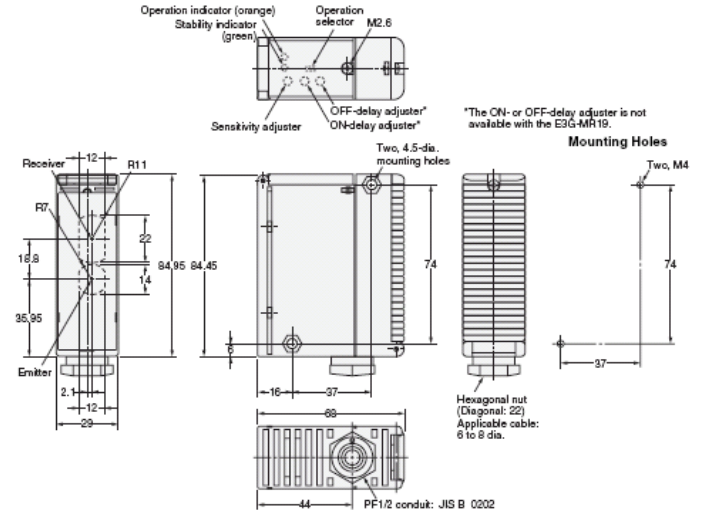
Note: The operating mode switch and timer mode switch are located inside the cover.

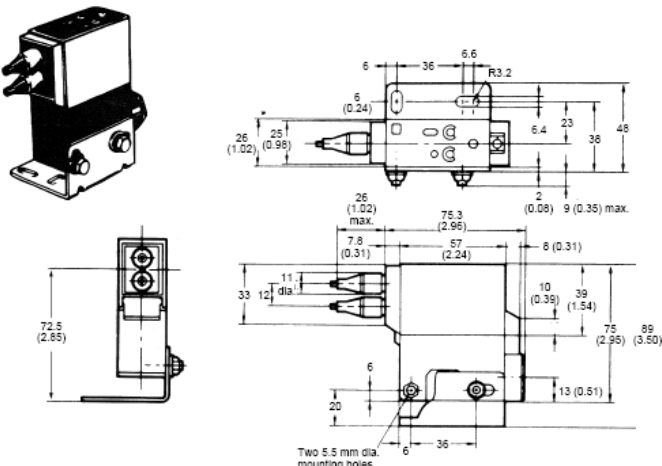
Model E3A2-R3□□(-G) series

Unit: mm (inch)

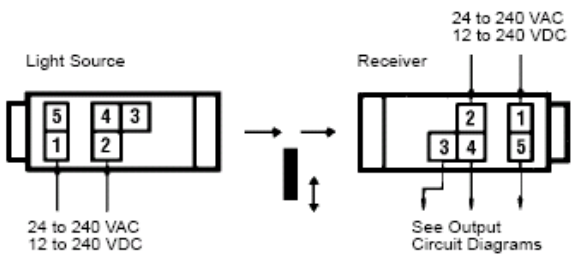
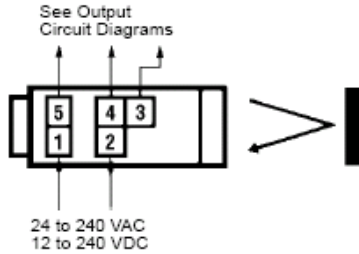
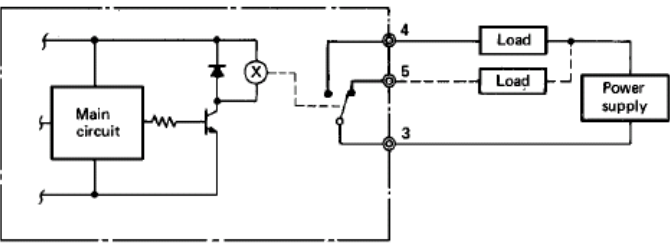
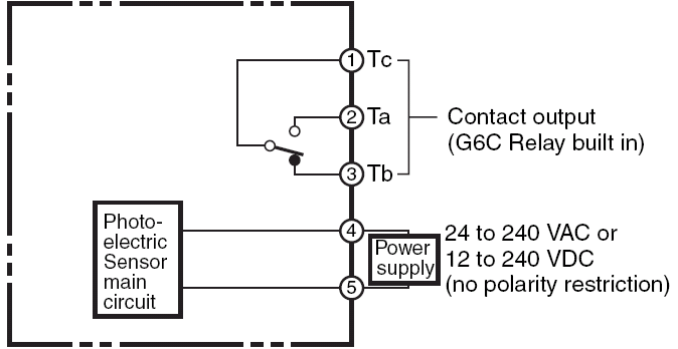


Model E3G-MR19(T)(-G)

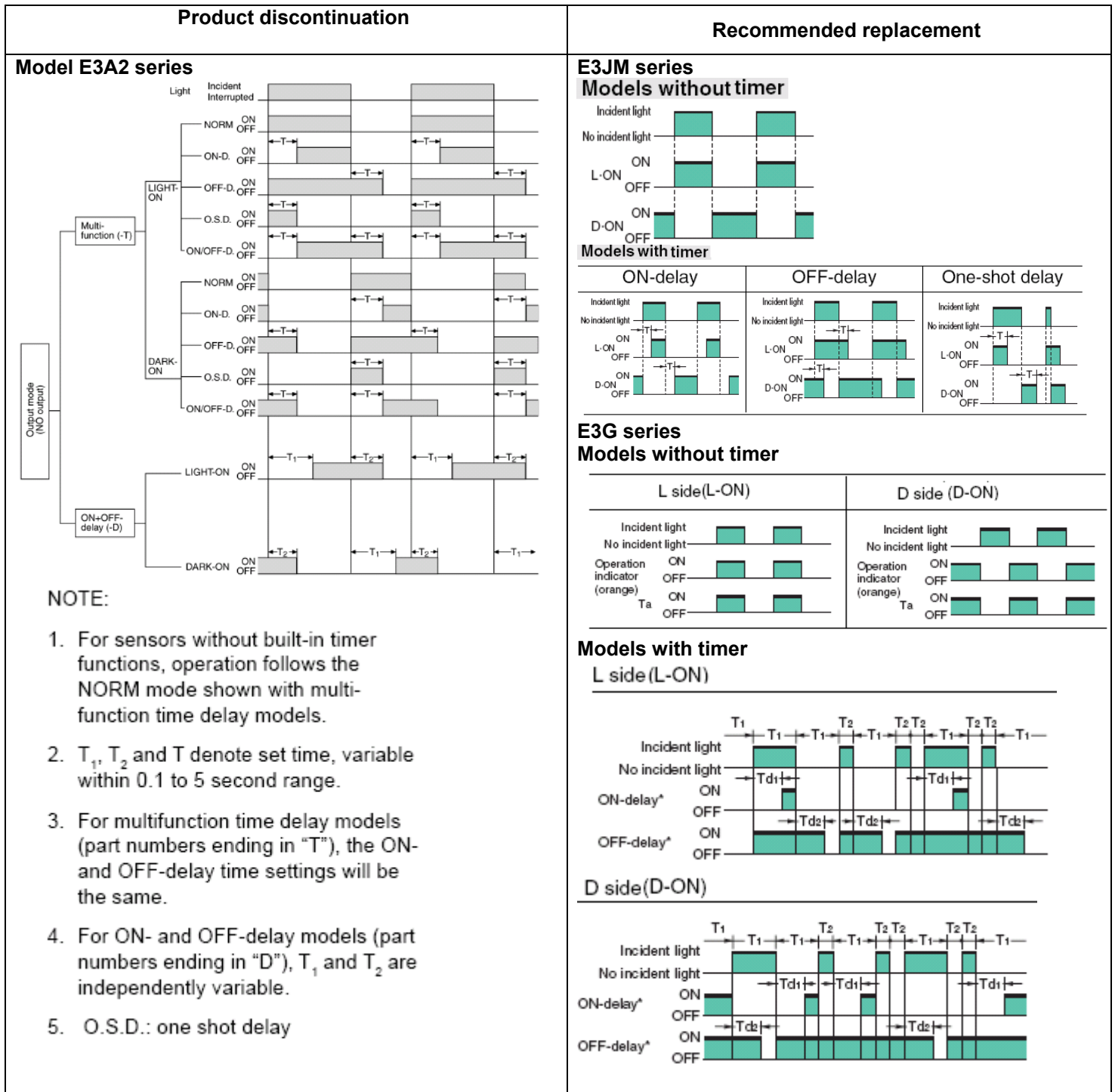


Product discontinuation	Recommended replacement
<p>Model E3A2-XC type</p> 	<p>None</p>

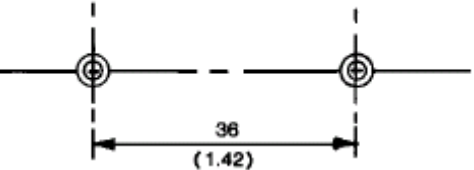
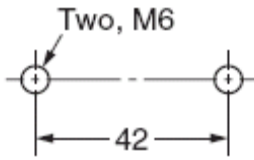
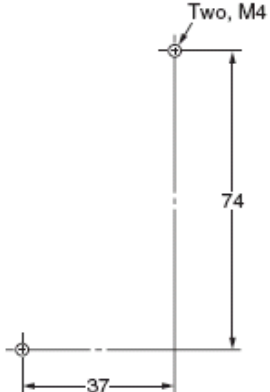
Wire Connection

Product discontinuation	Recommended replacement
<p>Model E3A2-10□□□(-G) Through-beam types</p>  <p>Model E3A2-DS70M4□/ R3M□ Retractive and Diffuse Reflective Types</p>  <p>Relay output</p> 	<p>Model E3JM-10□4(T)-G-N/US Model E3JM-DS70□4(T)-G/US Model E3G-MR19(T)(-G)</p> 

Timing Chart



Mounting Dimensions

Product discontinuation	Recommended replacement
<p>Model E3A2 series Mounting holes</p> 	<p>Model E3JM-10□4(T)-G-N/US Model E3JM-DS70□4(T)-G/US</p>  <p>Model E3G-MR19(T)(-G) Mounting Holes</p> 

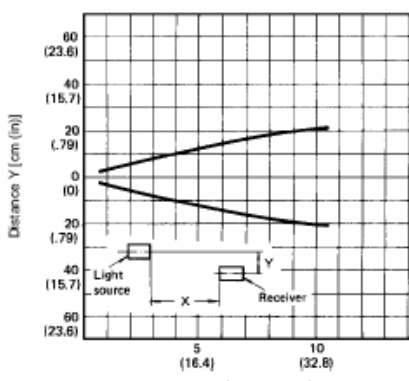
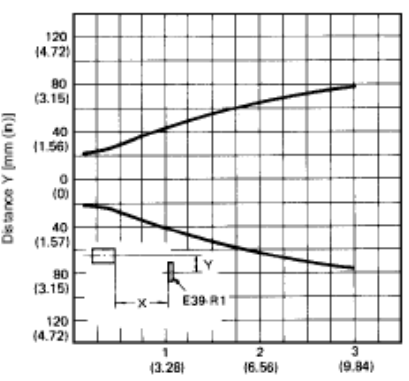
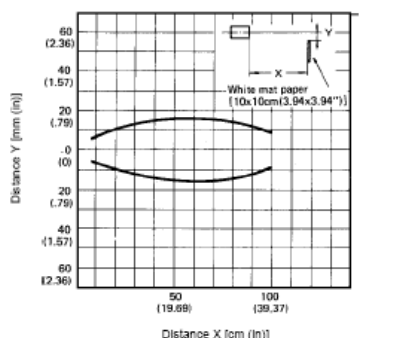
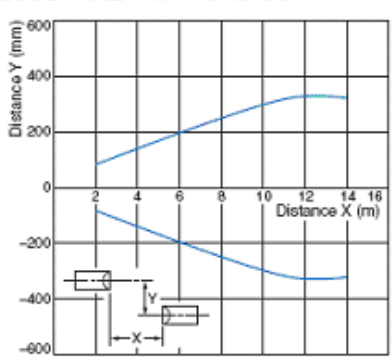
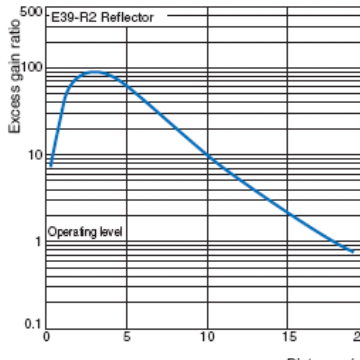
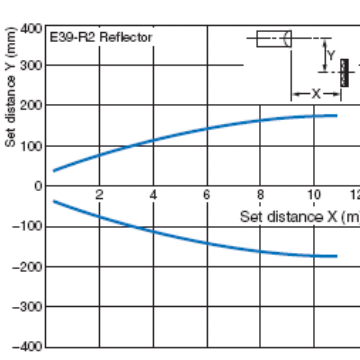
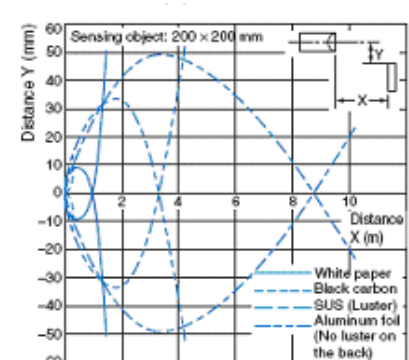
Characteristics

Item		Product discontinuation	Recommended replacement	
		E3A2-10□□□(-G)	E3JM-10□4(T)-G-N/US	
Sensing distance		10 m (32.8 ft)	10 m	
Power supply voltage		24 to 240 VAC, 50/60 Hz; 12 to 240 VDC	12 to 240 VDC ±10%, ripple (p-p): 10% max. 24 to 240 VAC ±10% at 50/60 Hz	
Light source (wavelength)		Infrared LED (950 nm)	Infrared LED (950 nm)	
Power/Current Consumption		Relay output type	3 W max. Emitter: 1.5 W max. Receiver: 1.5 W max.	
		DC solid-state output		Emitter: 0.82 W. max. Receiver: 1.2 W max.
		AC solid-state output		Emitter: 0.82 VA max. Receiver: 1.2 VA max.
Control output	Relay	Type	Relay output (E3JM-□□M4 (T) model): SPDT, 3 A at 250 VAC (cosφ = 1) 10 mA min. at 5 VDC	
		Max. load		3 A, 250 VAC (p.f. = 1); 3 A, 30 VDC
Response Time (ON and OFF)	Relay output type	15 ms max. with G6C-2117P-DC8 output module (standard)	E3JM-□□M4 (T) models) Operate or reset: 30 ms max.	
Timer function	Type E3A2-□□□T	Normal, ON-delay, OFF-delay, one-shot or equal ON- and OFF-delays, switch selectable	ON-delay/OFF-delay/One-shot delay switch selectable (Only for E3JM-□□□4T)	
	Type E3A2-□□□D	Independent ON- and OFF-delays		
	Range	0.1 to 5 seconds	0.1 to 5 seconds (adjustable), only for E3JM-□□□4T	
Degree of protection		IEC 60529: IP66	IEC 60529: IP66	

Item		Product discontinuation		Recommended replacement	
		E3A2-DS70□□□(-G)		E3JM-DS70□4(T)-G/US	
Sensing distance		70 cm (27.6 in) with 10 x 10 cm (3.94 x .94 in) 90% reflectance white matte paper		70 cm with 20 x 20 cm white paper	
Power supply voltage		24 to 240 VAC, 50/60 Hz; 12 to 240 VDC		12 to 240 VDC ±10%, ripple (p-p): 10% max. 24 to 240 VAC ±10% at 50/60 Hz	
Light source (wavelength)		Infrared LED (950 nm)		Infrared LED (950 nm)	
Power/Current Consumption		Relay output type	1.5 W max.	2 W max.	
		DC solid-state output			
		AC solid-state output	2 VA max.		
Control output	Relay		SPDT with G6C-2117P-DC8 output module (standard)	Relay output (E3JM-□□M4 (T) model): SPDT, 3 A max. at 250 VAC (cosφ =1) 10 mA min. at 5 VDC	
			3 A, 250 VAC (p.f. = 1); 3 A, 30 VDC		
Response Time (ON and OFF)	Relay output type	15 ms max. with G6C-2117P-DC8 output module (standard)		Operate or reset: 30 ms max.	
Timer function		Type E3A2-□□□T	Normal, ON-delay, OFF-delay, one-shot or equal ON- and OFF-delays, switch selectable	ON-delay/OFF-delay/One-shot delay switch selectable (Only for E3JM-□□□4T)	
		Type E3A2-□□□D	Independent ON- and OFF-delays		
		Range	0.1 to 5 seconds	0.1 to 5 seconds (adjustable), only for E3JM-□□□4T	
Degree of protection		IEC 60529: IP66		IEC 60529: IP66	

Item		Product discontinuation	Recommended replacement	
		E3A2-R3□□□(-G)	E3G-MR19(T)(-G)	
Sensing distance		3 m (9.8 ft) with E39-R1 reflector (included)	10 m (500 mm) when using E39-R2	
Power supply voltage		24 to 240 VAC, 50/60 Hz; 12 to 240 VDC	12 to 240 VDC ±10%, ripple (p-p): 10% max. 24 to 240 VAC ±10% at 50/60 Hz	
Light source (wavelength)		Pulse modulated red LED, polarized (680 nm)	Red LED (650 nm)	
Power/Current Consumption		Relay output type	2 W max.	
		DC solid-state output		1.5 W max.
		AC solid-state output		2 VA max.
Control output	Relay	Type	Relay output: SPDT, 3 A ($\cos\phi = 1$) max. at 250 VAC or 3 A max. at 30 VDC Light-ON/Dark-ON, selectable	
		Max. load		3 A, 250 VAC (p.f. = 1); 3 A, 30 VDC
Response Time (ON and OFF)	Relay output type	15 ms max. with G6C-2117P-DC8 output module (standard)	Operate or reset: 30 ms max.	
Timer function		Type E3A2-□□□T	ON-delay/OFF-delay/One-shot delay; 0.1 to 5 seconds adjustable (only for E3G-MR19T)	
		Type E3A2-□□□D		Independent ON- and OFF-delays
		Range	0.1 to 5 seconds	0.1 to 5 seconds
Degree of protection		IEC 60529: IP66	IEC 60529: IP67 (with protective cover)	

Operation Ratings

Product discontinuation	Recommended replacement
<p>■ LIGHT SOURCE/RECEIVER SETTING RANGE</p> <p>Through-Beam Type</p>  <p>■ REFLECTOR SETTING RANGE</p> <p>Retroreflective Type</p>  <p>■ OPERATING RANGE</p> <p>Diffuse Reflective Type</p> 	<p>Through-beam</p> <p>E3JM-10□4(T)-G-N/US</p>  <p>E3G-R/MR Retro-reflective Models</p> <p>Excess Gain vs. Set Distance</p>  <p>Parallel Operating Range</p>  <p>Diffuse-reflective</p> <p>E3JM-DS70□4(T)-G/US</p> 

Operation Methods

Product discontinuation	Recommended replacement
<p>Sensitivity adjustment: E3A2-10□□□:fixed E3A2- R3□□□/DS70□□□: one-turn adjuster</p>	<p>Sensitivity adjustment: E3JM-10M4(T): fixed E3G-MR19(T)/E3JM-DS70M4(T): one-turn adjuster</p>