

Universal AC/DC Photoelectric Sensor with Built-in Timer

- Easy-to-wire terminal block
- Built-in timer offers selectable ON-delay, OFF-delay and one-shot
- Relay or transistor output models
- Polarized, through-beam and diffuse models
- Light-ON/Dark-ON operation switch selectable



Ordering Information

■ SENSORS WITHOUT TIMER

Method of detection		Through-beam	Polarized retroreflective	Diffuse reflective
Sensing distance		10 m (32.8 ft)	4 m (13.1 ft)	70 cm (2.3 ft)
Output type	Relay	E3JM-10M4-US	E3JM-R4M4-US	E3JM-DS70M4-US
	NPN transistor	E3JM-10S4-US	E3JM-R4S4-US	E3JM-DS70S4-US
	PNP transistor	E3JM-10R4-US	E3JM-R4R4-US	E3JM-DS70R4-US

■ SENSORS WITH BUILT-IN TIMER

Method of detection		Through-beam	Polarized retroreflective	Diffuse reflective
Sensing distance		10 m (32.8 ft)	4 m (13.1 ft)	70 cm (2.3 ft)
Output type	Relay	E3JM-10M4T-US	E3JM-R4M4T-US	E3JM-DS70M4T-US
	NPN transistor	E3JM-10S4T-US	E3JM-R4S4T-US	E3JM-DS70S4T-US
	PNP transistor	E3JM-10R4T-US	E3JM-R4R4T-US	E3JM-DS70R4T-US

■ ACCESSORIES

Description	Part number
Mounting bracket for E39-R1 reflector	E39-L7
Small reflector for retroreflective sensors	E39-R3
Glass-bead reflector with tape backing for retroreflective sensors	E39-RSB

■ REPLACEMENT PARTS

Description	Part number
Mounting bracket (supplied with each sensor)	E39-L53
Reflector (supplied with retroreflective sensors)	E39-R1

Specifications

Part number		E3JM-10□4□-US	E3JM-R4□4□-US	E3JM-DS70□4□-US	
Method of detection		Through-beam	Polarized retroreflective	Diffuse reflective	
Supply voltage		24 to 240 VAC ±10%, 50/60 Hz 12 to 240 VDC, 10% max. ripple peak-to-peak			
Current consumption		Emitter: 1 W max. Receiver: 2 W max.	2 W max.	2 W max.	
Sensing distance		10 m (32.8 ft)	4 m (13.1 ft) with E39-R1 reflector (supplied)	70 cm (2.3 ft) with 20 x 20 cm (7.9 x 7.9 in) white mat paper	
Light source		Infrared LED	Polarized red LED	Infrared LED	
Detectable object type		Opaque, 16 mm (0.63 in) minimum	Opaque, 56 mm (2.2 in) minimum with E39-R1	Opaque and translucent	
Operation mode		Light-ON/Dark-ON, switch selectable			
Sensitivity adjustment		Fixed	Fixed	Adjustable	
Mutual interference protection		Not provided			
Control output	Contact	Type	SPDT relay (E3JM-□□M4□-US)		
		Max. load	3 A, 250 VAC maximum (p.f. = 1)		
		Min. load	10 mA, 5 VDC minimum		
		Response time	30 ms for ON, 30 ms for OFF (models without timer) 0.1 to 5 sec (adjustable) ON-delay, OFF-delay or one-shot (models with timer)		
	DC solid-state	Type	NPN open collector solid-state output (E3JM-□□S4□-US) PNP open collector solid-state output (E3JM-□□R4□-US)		
		Max. load	100 mA, 48 VDC max.		
		Max. ON-state voltage drop	2 V max.		
		Response time	5 ms max. (models without timer) 0.1 to 5 seconds (adjustable) ON-delay, OFF-delay or one-shot (models with timer)		
		Timing functions	Type	ON-delay, OFF-delay, and one-shot; switch selectable (E3JM-□□□□4T-US)	
		Range	0.1 to 5 seconds		
Circuit protection	Output short-circuit	Provided on DC solid-state output models (E3JM-□□R4□-US and E3JM-□□S4□-US)			
	DC power supply reverse polarity	Not provided			
Indicators		Light Incident (red LED) on models without timer (E3JM-□□□□4-US) Output Operation (red LED) on models with timer (E3JM-□□□□4T-US)			
Materials	Lens	Plastic, PMMA			
	Case	Plastic, ABS base/PMMA cover			
Mounting		Two side mount through hole or mounting bracket E39-L53 (supplied)			
Connections	Conduit	1/2-14 NPT; use 5-conductor cable of 6 to 8 mm (0.24 to 0.32 in) OD			
Weight		Emitter: 110 g (3.9 oz.) Receiver: 130 g (4.6 oz.)	130 g (4.6 oz.)	130 g (4.6 oz.)	
Enclosure ratings	UL	—			
	NEMA	—			
	IEC 144	IP66			
Approvals	UL	Recognized, File Number E41515			
	CSA	Certified, File Number LR45951			
Ambient temperature	Operating	-25° to 55°C (-13° to 131°F)			
	Storage	-30° to 70°C (-22° to 158°F)			