

8 mm Metal Cylindrical Photoelectric

E3HT

Threaded Cylindrical M8 Size with Built-in DC Amplifier

- Rugged Nickel-plated brass housing
- 1 m range through-beam
- Dual output NPN and TTL logic
- Light-ON or Dark-ON models
- Cable and connector models



Ordering Information _____

■ SENSORS

Method of detection		Through-beam	Diffuse reflective	Connector style
Sensing distance		1 m (3.28 ft)	3.5 cm (1.38 in)	_
Part	Light-ON operation	E3HT-1E1	E3HT-DS3E1	E3HT-DS3E1-M1J
number	Dark-ON operation	E3HT-1E2	E3HT-DS3E2	_

■ REPLACEMENT PARTS

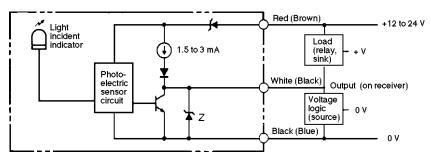
Description	Part number
Mounting hardware set, includes two mounting nuts and lock washers	M8-MHWS

Specifications_____

Part nun	mber		E3HT-1E□	E3HT-D3E□	E3HT-DS3E1-M1J
Method of detection		on	Through-beam	Diffuse reflective	
Supply voltage			12 to 24 VDC		
Current	consumpt	tion	Emitter: 25 mA max.	30 mA max.	
·			Receiver: 15 mA max.		
Sensing	distance		1 m (3.28 ft)	3.5 cm (1.38 in)	
				with 3 x 3 cm (1.18 x 1.18 in)	
				90% reflectance white mat pape	r
Light so	urce			Pulse modulated infrared LED	
Detectal	ble object	type	Opaque materials,	Opaque materials	
			6 mm (0.24 in) min. dimension		
Operation	on mode		Light-ON: E3HT-□□□E1		
			Dark-ON: E3HT-□□□E2		
Sensitivi	ity		Fixed		
Mutual i	nterferenc	ce protection	Not provided		
Control	DC	Туре	NPN and TTL Logic		
output	solid	Max. load	Load (relay, sink) logic: 80 mA		
·	state		Voltage (source) logic: 1.5 to 3	mA	
		Max. on-state	1 VDC at 80 mA		
		voltage drop			
Respons	se time	On	5 ms max.	3 ms max.	
		Off	5 ms max.	3 ms max.	
Circuit p	rotection		Short circuit and reverse polarity	protection	
Indicato	rs		Emitter: Power On (red LED)	Light Incident (red LED)	
			Receiver: Light Incident		
			(red LED)		
Material	ls	Lens	Plastic	-	
		Case	Metal, nickel-plated brass		
Mountin	ıg	1	M8 threaded body, two nuts and	l lock washers provided	
Connect		Prewired	Emitter: 2-conductor cable,	3-conductor cable, 2 m (6.56 ft)	
			2 m (6.56 ft) length	(* * * * * * * * * * * * * * * * * * *	
			Receiver: 3-conductor cable,		
Weight			2 m (6.56 ft) length	45 c (1 C oz.)	
			Emitter: 40 g (1.4 oz.)	45 g (1.6 oz.)	
Faster.		1 1 11	Receiver: 45 g (1.6 oz.)		
ratings UL NEMA IEC 144		_	1		
			1, 3, 4X, 6, 12		
		IEC 144	IP66		
Approvals		1	CE		
Ambient Operating			-25° to 55°C (-13° to 131°F)		
temperature Storage		Storage	-30° to 70°C (-22° to 158°F)		

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■ OUTPUT CIRCUIT DIAGRAM



Note: IEC colors are shown in parentheses.

■ TIMING CHARTS

Light-ON operation mode

Light	Incident Interrupted	
Light incident indicator	ON OFF	
Output transistor	ON OFF	
Load (between +V and output)	ON OFF	
Voltage logic (between 0 V and output)	ON OFF	

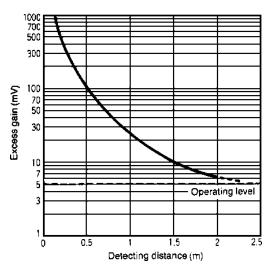
Dark-ON operation mode

Light	Incident Interrupted	
Light incident indicator	ON OFF	
Output transistor	ON OFF	
Load (between +V and output)	ON OFF	
Voltage logic (between 0 V and output)	ON OFF	

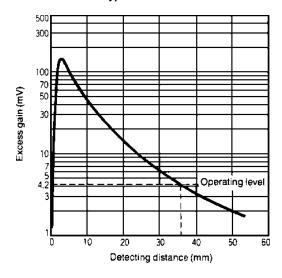
Engineering Data

■ EXCESS GAIN

Through-beam type

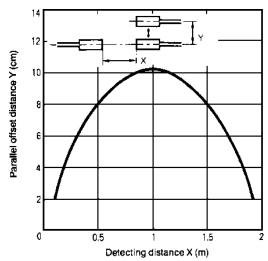


Diffuse reflective type



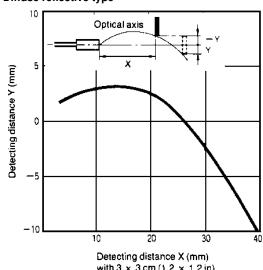
■ PARALLEL OFFSET

Through-beam type



■ OPERATING RANGE

Diffuse reflective type

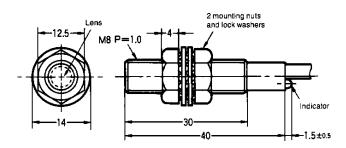


with 3×3 cm (1.2 x 1.2 in) 90% reflectance mat paper

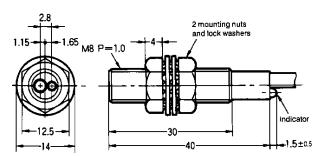
Dimensions.

Unit: mm

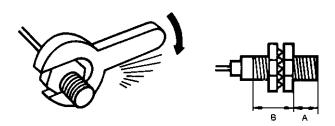
■ THROUGH-BEAM TYPE



■ DIFFUSE REFLECTIVE TYPE



Mounting



Do not exceed the torque listed in the table below when tightening the mounting nuts.

Drawing section	Α	В
	1 1	
Length	Front 12 mm	Back 18 mm
	(0.47 in)	(0.71 in)
Maximum	20 kg-cm	30 kg-cm
allowable torque	17.3 in-lbs	26 in-lbs

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