

The OMRON logo is displayed in a bold, blue, sans-serif font. The letters are thick and rounded, with a consistent blue color throughout. The logo is centered horizontally within a light yellow rectangular background.

Automatización Eléctrica
Especialistas en Automatización

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Photoelectric sensor in miniature plastic housing

Small sized photoelectric sensors in flat and side view shape for demanding mounting conditions.

- Small size with precision pinpoint LED where space is crucial
- 3.5 mm flat model with reliable background suppression and small black/white error
- Unique optical alignment technology ensuring minimal deviation of optical axis
- High EMC and ambient light immunity

Ordering information

Sensor type	Sensing distance	Connection method				Operation mode	Mounting screw size	Order code*1	
								NPN output	PNP output
Through-beam 	2 m	—	—	2 m	For ordering pigtail versions replace '2M' of cable types with: - M1J: M12 with 30 cm cable - M3J: M8 4-pin with 30 cm cable - M5J: M8 3-pin with 30 cm cable	Light-ON	M2	E3T-ST31 2M	E3T-ST33 2M
	1 m	Dark-ON	M2	E3T-ST32 2M		E3T-ST34 2M			
		Light-ON	M2	E3T-ST11 2M		E3T-ST13 2M			
	300 mm	M3	E3T-ST11M 2M	E3T-ST13M 2M					
		Dark-ON	M2	E3T-ST12 2M		E3T-ST14 2M			
	Light-ON	M3	E3T-ST12M 2M	E3T-ST14M 2M					
		M2	E3T-ST21 2M	E3T-ST23 2M					
	Dark-ON	M3	E3T-ST21M 2M	E3T-ST23M 2M					
		M2	E3T-ST22 2M	E3T-ST24 2M					
	M3	E3T-ST22M 2M	E3T-ST24M 2M						
		Light-ON	M2	E3T-FT11 2M		E3T-FT13 2M			
	Dark-ON	M2	E3T-FT12 2M	E3T-FT14 2M					
Light-ON	M2	E3T-FT21 2M	E3T-FT23 2M						
Dark-ON	M2	E3T-FT22 2M	E3T-FT24 2M						
Light-ON	M2	E3T-SR41-C 2M*3	E3T-SR43-C 2M*3						
	Dark-ON	M2	E3T-SR42-C 2M*3	E3T-SR44-C 2M*3					
Diffuse-reflective 	5 to 30 mm	Light-ON	M2	E3T-FD11 2M		E3T-FD13 2M			
		M3	E3T-FD11M 2M	E3T-FD13M 2M					
	Dark-ON	M2	E3T-FD12 2M	E3T-FD14 2M					
	M3	E3T-FD12M 2M	E3T-FD14M 2M						
Limited-reflective 	5 to 15 mm	Light-ON	M2	E3T-SL11 2M		E3T-SL13 2M			
		M3	E3T-SL11M 2M	E3T-SL13M 2M					
	Dark-ON	M2	E3T-SL12 2M	E3T-SL14 2M					
	M3	E3T-SL12M 2M	E3T-SL14M 2M						
Light-ON	5 to 30 mm	M2	E3T-SL21 2M	E3T-SL23 2M					
		M3	E3T-SL21M 2M	E3T-SL23M 2M					
	Dark-ON	M2	E3T-SL22 2M	E3T-SL24 2M					
	M3	E3T-SL22M 2M	E3T-SL24M 2M						
Diffuse-reflective (background suppression) 	1 to 15 mm	Light-ON	M2	E3T-FL11 2M	E3T-FL13 2M				
		Dark-ON	M2	E3T-FL12 2M	E3T-FL14 2M				
	1 to 30 mm	Light-ON	M2	E3T-FL21 2M	E3T-FL23 2M				
		Dark-ON	M2	E3T-FL22 2M	E3T-FL24 2M				

*1 For pre-wired models with robotic cables add '-R' to the order code (example: E3T-FT21R 2M)

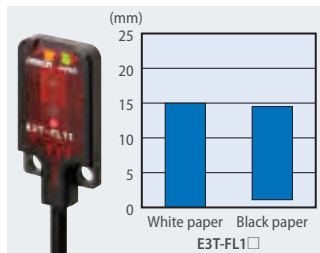
*2 The distances are measured with reflector E39-R4 and reflective foil E39-R37-CA. For applications with shorter distances between the sensor and the reflector contact your OMRON representative.

*3 Order reflector separately. Models with included reflectors are available.

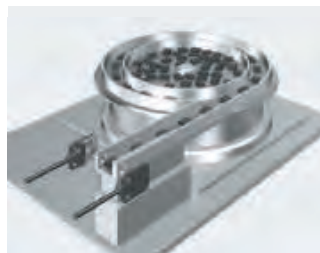
Specifications

Item	Through-beam		Retro-reflective
	Side-view	Flat	Side-view
	E3T-ST1 E3T-ST2 E3T-ST3	E3T-FT1 E3T-FT2	E3T-SR4
Sensing distance	E3T-ST3_: 2 m E3T-ST1_: 1 m E3T-ST2_: 300 mm	E3T-FT1_: 500 mm E3T-FT2_: 300 mm	30 to 200 mm (with E39-R4) 10 to 100 mm (with E39-R37-CA)
Light source (wave length)	Red LED ("Pin-point" LED) $\lambda = 650$ nm		
Power supply voltage	12 to 24 VDC \pm 10%, ripple (p-p) 10% max.		
Protective circuits	Power supply and control output reverse polarity protection Output short-circuit protection		Power supply and control output reverse polarity protection Output short-circuit protection, mutual interference prevention, surge suppressor
Response time	1 ms max.		
Ambient temperature	Operating	-25 to 55°C (with no icing or condensation)	
	Storage	-40 to 70°C (with no icing or condensation)	
Degree of protection	IEC60529 IP67		
Material	Case	PBT (polybutylene terephthalate)	
	Display window	Denatured polyarylate	
	Lens	Denatured polyarylate	Methacrylic resin

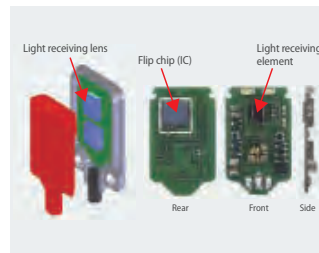
Item	Diffuse-reflective	Limited-reflective		Diffuse-reflective (background suppression)	
	Flat	Side-view	Flat		
	E3T-FD1	E3T-SL1	E3T-SL2	E3T-FL1	E3T-FL2
Sensing distance	5 to 30 mm	5 to 15 mm	5 to 30 mm	1 to 15 mm	1 to 30 mm
Black/white error	-				15% max.
Light source (wave length)	Red LED ("Pin-point" LED) $\lambda = 650$ nm				
Power supply voltage	12 to 24 VDC \pm 10%, ripple (p-p) 10% max.				
Protective circuits	Power supply and control output reverse polarity protection Output short-circuit protection, Mutual interference prevention				
Response time	1 ms max.				
Ambient temperature	Operating	-25 to 55°C			
	Storage	-40 to 70°C (with no icing or condensation)			
Degree of protection	IEC60529 IP67				
Material	Case	PBT (polybutylene terephthalate)			
	Display window	Denatured polyarylate			
	Lens	Denatured polyarylate			



Minimal black / white error



The coaxial optics and the small focal lens of the retro-reflective models allow the detection of small (dia 2 mm) objects or through small holes (dia 2 mm).



The unique light receiving lens shape and the chip mounting technology, provide appropriate sensing distances for very precise and reliable detection even through smallest slits and gaps with e.g. 0.5 mm dia.



Models with mounting holes for M2 or M3 screws

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- Quote per purchase volume in real time.
- Online documentation and datasheets of all products.
- Estimated delivery time enquiry in real time.
- Logistics systems for the shipment of materials almost anywhere in the world.
- Purchasing management, order record and tracking of shipments.

To access the product, [click on the green button.](#)

Product	Code	Reference	Product link
Photoelectric sensor,diffuse, 5-30mm, DC, 3-wire, NPN, dark-on, side-view, 2m cable, M2 mounting	104111	E3T-SL22 2M	Buy on EAN
Photoelectric sensor Miniature 3h 1m Lateral PNP Light Barrier	130098	E3T-ST13 2M	Buy on EAN
Photoelectric sensor Miniature 3h 1m Barrera Lateral PNP Osc.	130099	E3T-ST14 2M	Buy on EAN
Photoelectric sensor Miniature 3h Plana 500mm PNP Light Barrier	130100	E3T-FT13 2M	Buy on EAN
Photoelectric sensor Miniature 3h Barrera Plana 500mm PNP Osc.	130101	E3T-FT14 2M	Buy on EAN
Photoelectric sensor,diffuse, 5-30mm, DC, 3-wire, PNP, light-on, side-view, 2m cable, M2 mounting	130103	E3T-SL23 2M	Buy on EAN
Photoelectric sensor,diffuse, 5-30mm, DC, 3-wire, PNP, dark-on, side-view, 2m cable, M2 mounting	130104	E3T-SL24 2M	Buy on EAN
Photoelectric sensor Miniature 3h 1m Barrera Lateral NPN Osc.	130180	E3T-ST12 2M	Buy on EAN
Photoelectric sensor Miniature Flat NPN 500mm 3h Barrera Osc	130183	E3T-FT12 2M	Buy on EAN
Photoelectric sensor Miniature 30mm SLR 3h Plana NPN Light	130184	E3T-FD11 2M	Buy on EAN
Photoelectric sensor Miniature 3h Plana NPN 30mm SLR Osc.	130185	E3T-FD12 2M	Buy on EAN
Photoelectric sensor, mirror adhesive 38x20mm	131460	E39-R3	Buy on EAN
Photoelectric sensor, mirror 23x14mm	131468	E39-R4	Buy on EAN
Photoelectric sensor Miniature 3h Plana PNP 30mm SLR Osc.	142150	E3T-FD14 2M	Buy on EAN

Photoelectric sensor,diffuse, 5-15mm, DC, 3-wire, PNP, light-on, side-view, 2m cable, M2 mounting	145481	E3T-SL13 2M	Buy on EAN
Photoelectric sensor,diffuse, 5-30mm, DC, 3-wire, NPN, light-on, side-view, 2m cable, M2 mounting	147720	E3T-SL21 2M	Buy on EAN
Photoelectric sensor Miniature 3h Plana NPN 500mm Light Barrier	149691	E3T-FT11 2M	Buy on EAN
Photoelectric sensor,diffuse, 5-15mm, DC, 3-wire, PNP, dark-on, side-view, 2m cable, M2 mounting	149692	E3T-SL14 2M	Buy on EAN
Photoelectric sensor Miniature 3h 1m Lateral NPN Light Barrier	156502	E3T-ST11 2M	Buy on EAN
Photoelectric sensor,diffuse, 5-15mm, DC, 3-wire, NPN, light-on, side-view, 2m cable, M2 mounting	156503	E3T-SL11 2M	Buy on EAN
Photoelectric sensor Miniature 30mm SLR 3h Plana PNP Light	156504	E3T-FD13 2M	Buy on EAN
Photoelectric sensor Miniature 3h BGS Plana 15mm PNP Light	224245	E3T-FL13 2M	Buy on EAN
Photoelectric sensor Miniature 3h BGS Plana 30mm PNP Light	224249	E3T-FL23 2M	Buy on EAN
Photoelectric sensor Miniature 3h Plana PNP 300mm Light Barrier	224644	E3T-FT23 2M	Buy on EAN
Photoelectric sensor Miniature 3h Barrera NPN 300mm Plana Osc.	224647	E3T-FT22 2M	Buy on EAN
Photoelectric sensor Miniature 3h Barrera 300mm PNP Plana Osc.	224652	E3T-FT24 2M	Buy on EAN
Photoelectric sensor Miniature 3h NPN Light Without Mirror 200mm	249831	E3T-SR41-C 2M	Buy on EAN
Photoelectric sensor Miniature 3h 200 mm PNP Light Without Mirror	249833	E3T-SR43-C 2M	Buy on EAN
Photoelectric sensor Miniature 3h Without Mirror 200mm PNP Osc	249834	E3T-SR44-C 2M	Buy on EAN
Photoelectric sensor, miniature mirror E3T-SR4 *	249845	E39-R37-CA	Buy on EAN
Photoelectric sensor Miniature 3h BGS Plana 30mm PNP Osc.	224250	E3T-FL24 2M	Buy on EAN
Photoelectric sensor Miniature 3h 300mm Lateral PNP Light Barrier	224653	E3T-ST23 2M	Buy on EAN
Photoelectric sensor Miniature 3h 2m Lateral PNP Light Barrier	351530	E3T-ST33 2M	Buy on EAN
Photoelectric sensor Miniature Barrera 3h 2m PNP Dark Side	351532	E3T-ST34 2M	Buy on EAN
Photoelectric sensor Miniature 3h 1m Lateral PNP Light Barrier Screws M3	351557	E3T-ST13M 2M	Buy on EAN
Photoelectric sensor Miniature 3h BGS Plana 30mm NPN Light	224247	E3T-FL21 2M	Buy on EAN
Photoelectric sensor Miniature 3h BGS Plana 15mm PNP Osc.	224246	E3T-FL14 2M	Buy on EAN

Photoelectric sensor Miniature 3h 2m Lateral NPN Light Barrier	351526	E3T-ST31 2M	Buy on EAN
Photoelectric sensor Miniature 3h 300mm Lateral NPN Light Barrier	182984	E3T-ST21 2M	Buy on EAN
Photoelectric sensor Miniature 3h 300mm Lateral PNP Barrera Darkness	224649	E3T-ST24 2M	Buy on EAN
Photoelectric sensor Miniature 3h Barrera Lateral NPN 300mm Darkness	224648	E3T-ST22 2M	Buy on EAN
Photoelectric sensor,diffuse, 5-30mm, DC, 3-wire, PNP, light-on, side-view, 2m cable, M3 mounting	351547	E3T-SL23M 2M	Buy on EAN
Photoelectric sensor,diffuse, 5-15mm, DC, 3-wire, NPN, dark-on, side-view, 2m cable, M2 mounting	130182	E3T-SL12 2M	Buy on EAN
Photoelectric sensor Miniature Barrera 3h 2m NPN Dark Side	351528	E3T-ST32 2M	Buy on EAN
Photoelectric sensor Miniature Barrera 3h 1m PNP Dark Sifor Screws M3	351558	E3T-ST14M 2M	Buy on EAN
Photoelectric sensor Miniature 3h 300mm Lateral NPN Light Barrier Screws M3	351559	E3T-ST21M 2M	Buy on EAN
Photoelectric sensor Miniature 3h 1m Barrier Screws M3 Dark Sifor NPN	351556	E3T-ST12M 2M	Buy on EAN
Photoelectric sensor Miniature 3h 1m Lateral NPN Light Barrier Screws M3	351555	E3T-ST11M 2M	Buy on EAN
Photoelectric sensor Miniature 3h Barrera 300mm Lateral PNP Osc. 0.3M + M8	351562	E3T-ST24M 2M	Buy on EAN
Photoelectric sensor Miniature 3h 300mm Lateral PNP Light Barrier Screws M3	351561	E3T-ST23M 2M	Buy on EAN
Photoelectric sensor Miniature 3h NPN Dark Sifor Barrier 300mm M3 screws	351560	E3T-ST22M 2M	Buy on EAN
Photoelectric sensor Miniature 3h BGS Plana 15mm NPN Light	224243	E3T-FL11 2M	Buy on EAN