

Diffuse, Separate and Mark Sensor – Miniature E3C Series



- High speed subminiature photoswitches designed to operate with E3C series controllers (detailed below)
- Colour mark sensor can detect various combinations of colour mark with coloured background

Separate and diffused versions use infra-red light. Colour mark sensor uses visible red light.

Sensing distance	
Diffuse	100mm
Separate, ultra-thin	200mm
Separate	100mm
Mark sensor	30mm (sensing ± 5mm)
Sealing	
170-918, 170-919, 170-920:	IP64,
179-253:	IP50
Temperature range	
	-25°C to +70°C

179-253: H = 12.5, W = 2.8, D = 20, 170-918: H = 10, W = 6, D = 14
170-919/920: H = 15, W = 10, D = 28

Mfrs. List No. E3C-S20W = 179-253, E3C-S10 = 170-918, E3C-DS10 = 170-919,
E3C-VS3R = 170-920

SEN77X

Type	Order Code	Price Each		
		1+	5+	10+
Diffuse	170-919			
Separate, ultra-thin	179-253			
Separate	170-918			
Mark sensor	170-920			

Controllers – E3C Series



170-921 H = 48, W = 48, D = 83 179-254/5 H = 27.3, W = 20.7, D = 35.5 532-370 H = 32.5, W = 14, D = 60

- Control amplifiers for E3C series photoswitches
- Up to three photoswitches can be connected to each amplifier to achieve 'AND' or 'OR' operation
- Sensitivity adjustment and LED indication for output and stability

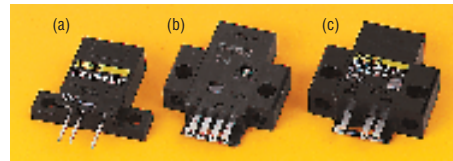
Order code	170-921
Supply voltage	100 to 240V ac ± 10% 50/60Hz
Power consumption	3W max.
Control output	NPN 80mA max., ON/OFF, one shot delay selectable 1 or 10 secs SPDT, 1A @ 240V ac
Response time	NPN 1 or 2ms selectable Relay 20ms max.
Operation mode	Light-on/Dark-on selectable
Mounting style	48 48 plug-in, supplied with socket
Order codes	179-254, 179-255, 532-370
Supply voltage	12 to 24V dc ± 10%
Current consumption	50mA max.
Control output	100mA max. (532-370 OFF delay selectable 40ms)
Response time	1 or 2ms selectable (532-370 1ms)
Operation mode	Light-on/Dark-on selectable
Mounting style	179-254/5 Plug-in, 532-370 surface or DIN rail

Mfrs. List No's. E3C-C = 170-921, E3C-GE4 = 179-254, E3C-GF4 = 179-255,
E3C-JC4P = 532-370, PYF14A = 176-963

SEN162X

Type	Output	Order Code	Price Each		
			1+	5+	10+
DIN48 plug-in	Relay+NPN+delays	170-921			
Plug-in	NPN	179-254			
Plug-in	PNP	179-255			
DIN rail/surface	NPN	532-370			
DIN rail/surface socket for 179-254/5		176-963.			

Subminiature – Diffuse EE-SPY, EE-SY Series



(a) EE-SPY 301/401/302/402: H = 20, W = 26, D = 7, F.C. = 20
(b) EE-SY 671/672: H = 25, W = 25.4, D = 7, F.C. = 19
(c) EE-SPY 311/411: H = 20, W = 26, D = 8, F.C. = 20

- Built-in amplifier circuitry allows direct switching of PLC and relay outputs
- Applications include robot control, cam timer switching, general position and object detection
- Wide supply voltage range 5 to 24Vdc

Slot Width	Output	Load	Supply Voltage	Connector Code*	Mfrs. List No.	Order Code
Modulated light, PCB mountable – Horizontal type						
5mm	Light – OFF	80mA	5–24V dc	3 or 4	EE-SPY301	721-3918
5mm	Light – ON	80mA	5–24V dc	3 or 4	EE-SPY401	721-3920
Modulated light, PCB mountable – Vertical type						
5mm	Light – OFF	80mA	5–24V dc	3 or 4	EE-SPY302	721-3931
5mm	Light – ON	80mA	5–24V dc	3 or 4	EE-SPY402	721-3943
Adjustable sensitivity – Horizontal type						
1 to 5mm	Light – OFF/ON	100mA	5–24V dc	1 or 2	EE-SY671	721-3955
Adjustable sensitivity – Vertical type						
1 to 5mm	Light – OFF/ON	100mA	5–24V dc	1 or 2	EE-SY672	721-3967
Convergent beam						
2 to 6mm	Light – OFF	80mA	5–24V dc	1 or 2	EE-SPY311	721-3979
2 to 6mm	Light – ON	80mA	5–24V dc	1 or 2	EE-SPY411	721-3980
Convergent beam – Vertical						
2 to 6mm	Light – OFF	80mA	5–24V dc	1 or 2	EE-SPY312	357-9797
2 to 6mm	Light – ON	80mA	5–24V dc	1 or 2	EE-SPY412	357-9803

Viewing types: Horizontal = top-viewing, Vertical = side-viewing

*Connector code: See OVERLEAF for suitable connector and connecting leads

SEN269

Mfrs. List No.	Order Code	1+	5+	10+
EE-SPY301	721-3918			
EE-SPY401	721-3920			
EE-SPY302	721-3931			
EE-SPY402	721-3943			
EE-SY671	721-3955			
EE-SY672	721-3967			
EE-SPY311	721-3979			
EE-SPY411	721-3980			
EE-SPY312	NEW 357-9797			
EE-SPY412	NEW 357-9803			

Photo-Microsensor Optical-Fibre Type with Built-in Amplifier



- Wide Operating voltage 5-24 vdc
- Easy adjustment and easy wiring
- Light modulation effectively reduces external light interference

Sensing Method	Sensing Distance	load	Supply Voltage	Output configuration	Order Code
Transmissive type	5mm	80mA	5-24vdc	Light-off	357-9864
Reflective type	1 to 3mm	80mA	5-24vdc	Light-On	357-9876

SEN412/SI

Mfrs. List No.	Order Code	1+	5+	10+
EE-SPZ301W-01	357-9864			
EE-SPZ401Y-01	357-9876			

Continued

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