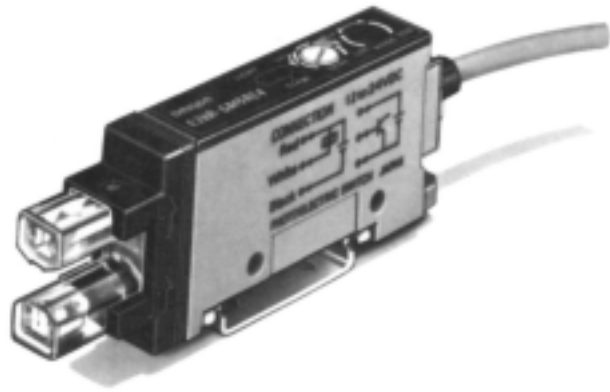


## Registration Sensor -Slotted

## E3XR-GM

Grooved Head Sensor Ideal for Register Mark Detection in Printing and Packaging Equipment

- Green or red light source according to color mark
- Fast response time, less than 1 ms
- Sensitivity adjuster and stability indicator allow fine tuning
- Switch selectable Light-ON/Dark-ON operation
- Pre-leaded with 2 m (6.6 ft) cable



## Ordering Information

### ■ SENSORS

Light source color		Red LED	Green LED
Part number	NPN output	E3XR-GM5RE4	E3XR-GM5GE4
	PNP output	E3XR-GM5RB4	E3XR-GM5GB4

### ■ ACCESSORIES

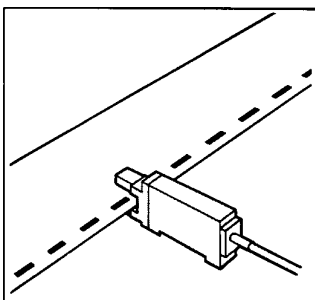
Description		Part number
Mounting track	DIN rail, 50 cm (1.64 ft) length	PFP-50N
	DIN rail, 1 m (3.28 ft) length	PFP-100N
	End plate	PFP-M
	Spacer	PFP-S

### ■ REPLACEMENT PARTS

Description	Part number
Mounting bracket (supplied with each sensor)	E39-L48

### ■ TYPICAL APPLICATION

Detecting marks on transparent film

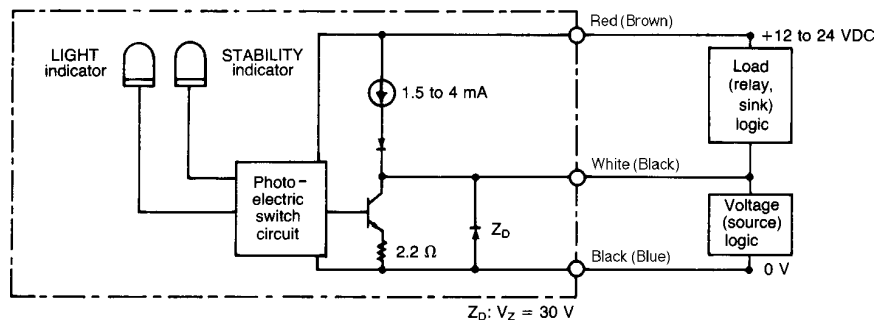


# Specifications

Part number		E3XR-GM5R□4	E3XR-GM5G□4
Supply voltage		12 to 24 VDC ± 10% with 10% max. permissible ripple peak-to-peak	
Method of detection		Through beam type mounted in a grooved head	
Current consumption		40 mA max.	
Sensing distance		5 mm (0.197 in) groove width	
Light source		Red LED, pulse modulated	Green LED, pulse modulated
Detectable object type		Marks of 2 x 3 mm (0.079 x 0.118 in) min. on transparent film	
Operation mode		Light-ON/Dark-ON, switch selectable	
Sensitivity		Adjustable, four-turn potentiometer	
Mutual interference protection		Provided	
Control output	DC solid state	Type	NPN with current source (E3XR-GM5□E4) PNP (E3XR-GM5□B4)
		Max. load	NPN: Load (sink) logic: 80 mA max. Voltage (source) logic: 1.5 to 4 mA max. PNP: Load (source) logic: 100 mA max.
		Max. on-state voltage drop	1 VDC at 80 mA
Response time	ON	0.5 ms max.	1 ms max.
	OFF	0.5 ms max.	1 ms max.
Circuit protection		Short-circuit and reverse polarity protection	
Indicators		Light Incident (red LED), Output Stability (green LED)	
Materials	Lens	Plastic	
	Case	Plastic	
	Cable sheath	Vinyl	
Mounting		Two 3.2 mm dia. side through holes, DIN rail track mount or E39-L48 mounting bracket included	
Connections	Prewired	3-conductor cable, 2 m (6.56 ft) length	
Weight		Approx. 80 g (3 oz.)	
Enclosure ratings	IEC 144	IP65	
Standards conformance		IEC 947-5-2	
Ambient temperature	Operating	-25° to 55° C (-13° to 131°F)	
	Storage	-25° to 70° C (-13° to 158°F)	

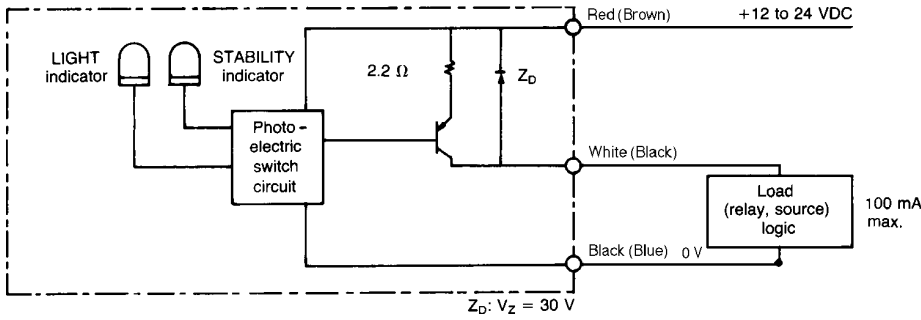
## ■ OUTPUT CIRCUIT DIAGRAMS

### NPN output E3XR-GM5□E4



Note: IEC colors are shown in parentheses.

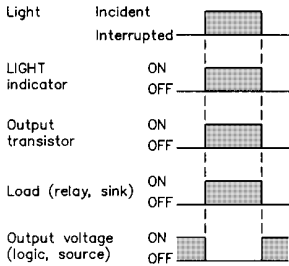
PNP output E3XR-GM5□B4



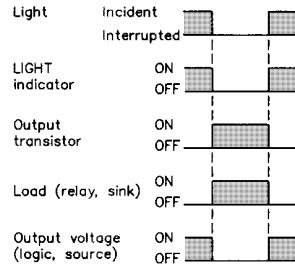
■ TIMING CHARTS

NPN output

Light-ON

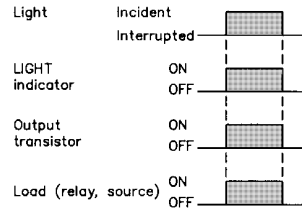


Dark-ON

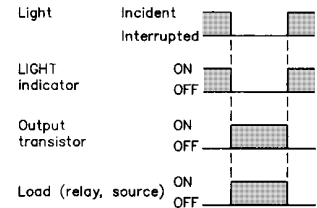


PNP output

Light-ON

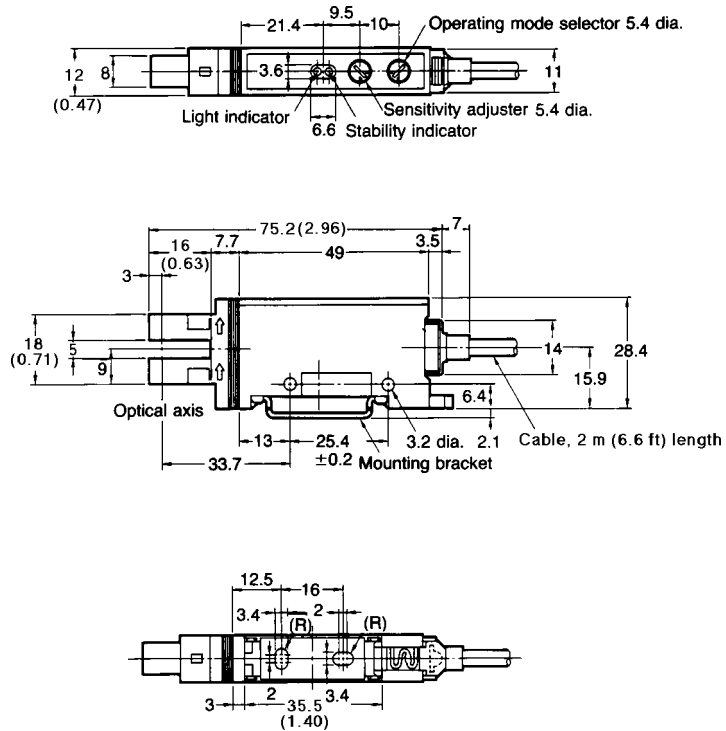
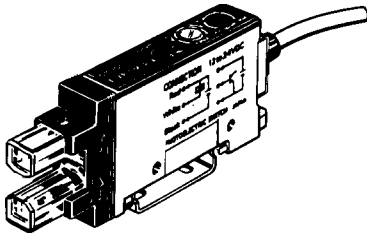


Dark-ON



Dimensions

Unit: mm (inch)





**OMRON ELECTRONICS LLC**

One East Commerce Drive  
Schaumburg, IL 60173

**1-800-55-OMRON**

Cat. No. CEDSAX4

11/01

**OMRON ON-LINE**

Global - <http://www.omron.com>  
USA - <http://www.omron.com/oei>  
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**OMRON CANADA, INC.**

885 Milner Avenue  
Scarborough, Ontario M1B 5V8

**416-286-6465**

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