

Photoelectrics Retro-reflective, Transistor Output Type PMR

CARLO GAVAZZI



- Range: 10 m
- Modulated, infrared light
- Rated operational voltage: 10 to 40 VDC
- Output: 200 mA, NPN or PNP
- Make or break switching function (switch selectable)
- Fully protected
- LED-indication for target detected
- High immunity to ambient light
- 25 x 65 x 81 mm reinforced PC housing, IP 67
- Timer options (adjustable)



Product Description

Retro-reflective photoelectric switch. Range up to 10 m. Fixed sensitivity. High immunity to ambient light. Output function switch selectable. Protection degree IP 67. Screw terminal connection.

25 x 65 x 81 mm polycarbonate housing. PG 13.5 or 1/2" NPT cable gland. Timer options: Delay on operate, delay on release, one shot (triggered on leading or trailing edge).

Ordering Key

PMR 10 P G T

Type _____
Range _____
Output _____
Cable gland type _____
Timing function _____

Type Selection

Housing W x H x D	Range S _n	Ordering no. without timer NPN	Ordering no. without timer PNP	Ordering no. with timer NPN	Ordering no. with timer PNP
25 x 65 x 81 PG 13.5 cable gland 1/2" NPT cable gland	10 m 10 m	PMR 10N G PMR 10N I	PMR 10P G PMR 10P I	PMR 10N GT PMR 10N IT	PMR 10P GT PMR 10P IT

Specifications

Rated operating distance (S_n)	10 m (0 to 5,000 lux) With reflector type ER 4, ref. target	Time delay before avail. (t_v)	≤ 300 ms (typ. 100 ms)
Rated operational volt. (U_B)	10 to 40 VDC	Output function	Switch selectable, make or break switching
Ripple (U_{rpp})	10%	Indication	Target detected LED, yellow
Output current		Optional timer	
Continuous (I _a)	≤ 200 mA	Delay on operate	0.1 to 7 s ± 2 s
Short-time (I)	200 mA, max. load capacity	Delay on release	0.1 to 7 s ± 2 s
	100 nF	One shot	0.1 to 7 s ± 2 s
No load supply current	≤ 40 mA	Environment	
OFF-state current (I_r)	Max. 100 µA	Overvoltage category	III (IEC 664/664A; 947-1)
Voltage drop (U_d)	≤ 2.5 VDC	Pollution degree	3 (IEC 664/664A; 947-1)
Transient voltage	IEC 947-5-2, level 3, 2.5 kV	Degree of protection	IP 67 (IEC 529; 947-1)
Dielectric voltage	2000 VAC rms (cont./supply)	Temperature	
Sensitivity	Fixed	Operating	-25° to +55°C (-13° to +131°F)
Light source	GaAlAs, LED, 880 nm	Storage	-30° to +80°C (-22° to +176°F)
Light type	Infrared, modulated	Vibration	10 to 150 Hz, 0.5 mm/7.5 g (IEC 68-2-6)
Optical angle	±2°	Shock	2 x 1 m & 100 x 0.5 m (IEC 68-2-32)
Light spot size	280 mm at 4 m	Rated insulation voltage	50 VAC (rms)
Operating frequency	100 Hz	Electrical protection	Short-circuit, reverse polarity, overvoltage, transients
Response time			
OFF-ON (t _{ON})	≤ 4 ms		
ON-OFF (t _{OFF})	≤ 6 ms		

Specifications (cont.)

Housing material

Body	PC, grey
Front	PC, black
Cover	PC, black
Cable gland	PA, black, reinforced
Mounting bracket	Steel, black

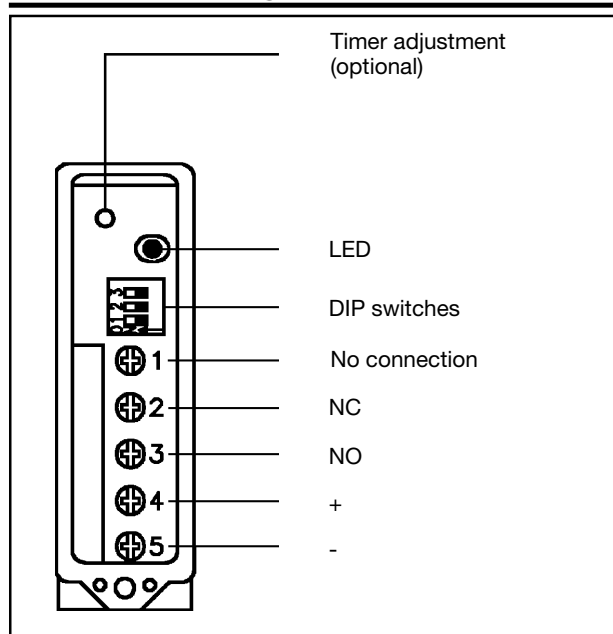
Connection

Screw terminal	5 x 2 x 1 mm ²
Cable gland	PG 13.5 or 1/2" NPT for cable 6 to 10 mm

Weight

90 g

Connection Diagram



Selection of Function

	Switch 1 2 3	
PMR		1 Break switching
		2 Make switching
PMRT		3 Delay on operate - Break switching
		4 Delay on operate - Make switching
		5 Delay on release - Break switching
		6 Delay on release - Make switching
		7 One shot, trailing edge - Break switching
		8 One shot, trailing edge - Make switching
		9 One shot, leading edge - Break switching
		10 One shot, leading edge - Make switching
		Don't care
	Upper position ON (Mode 1) Lower position OFF (Mode 0)	

Truth Table

	Make switching		Break switching	
Object present	Yes	No	Yes	No
LED	OFF	ON	OFF	ON
Load	Non-active	Active	Active	Non-active

Accessories

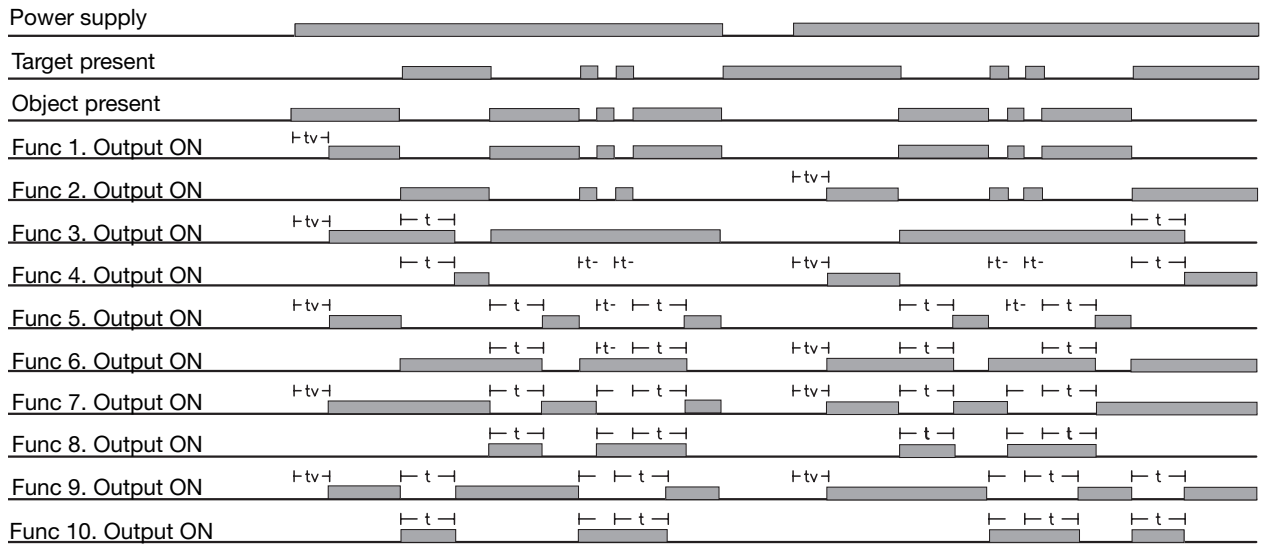
- Reflectors: ER series
- MB02 mounting bracket 90 mm long for mounting PMR from behind

Delivery Contents

- Photoelectric switch: PMR
- Cable gland
- Installation instruction
- Mounting bracket
- **Packaging:** Corrugated cardboard (environmentally friendly recycling material)

Operation Diagram

t = Time delay
tv = Power ON delay



Dimensions

