Photoelectrics
Retro-reflective, Polarized, Relay Output
Type PMP

- **Range: 6 m**
- **Modulated, visible light, polarized**
- **Make or break switching function (switch selectable)**
- **LED-indication for target detected**
- **Multi supply voltage:**
  12 to 240 VDC and
  24 to 240 VAC, 50/60 Hz
- **25 x 65 x 81 mm reinforced PC/ABS- housing, IP 67**
- **Timer options (adjustable)**
- **NO and NC output**

Product Description

Retro-reflective photoelectric switch with polarized light. Range up to 6 m. Fixed sensitivity. Immune to ambient light. Output function switch selectable. Protection degree IP 67. Screw terminal connection. 25 x 65 x 81 mm plastic 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

PMP 6 R G T

Type
Range
Output
Cable gland type
Timer function

Type Selection

Housing W x H x D	Range (S_n)	Ordering no. with timer
25 x 65 x 81		
PG 13.5 cable gland	6 m	**PMP 6R GT**
1/2" NPT cable gland	6 m	**PMP 6R IT**

Specifications

Rated operating dist. (S_n) (0 to 5,000 lux)	PMP6.. 6 m with reflector type ER 4, ref. target
Blind zone	≤ 0.15 m
Rated operational volt. (U_B) AC: 45 to 65 Hz	10.8 to 264 VDC 21.6 to 264 VAC
Rated operational power (relay ON)	≤ 2 W (2.5 VA)
Output	
Contact ratings (AgCdO)	µ (micro gap)
Resistive loads AC 1	3 A/250 VAC
DC 1	3 A/30 VDC
Small inductive loads AC 15	2 A/250 VAC
DC 13	3 A/30 VDC
Mechanical life (typical)	≥ 40 x 10^6 operations
Electrical life (typical)	≥ 5 x 10^5 operations at 220 VAC - 3 A resistive load: 360 impulses/h
Dielectric voltage	2,000 VAC (rms) (cont./supply)
Sensitivity	Fixed
Light source	GaAlAs, LED, 660 nm
Light type	Visible, modulated
Optical angle	±2°
Light spot size	280 mm at 4 m

Operating frequency	20 Hz
Response time	
OFF-ON (t_{ON})	≤ 20 ms
ON-OFF (t_{OFF})	≤ 30 ms
Power ON delay (t_v)	≤ 300 ms (typ. 100 ms)
Output function	Switch selectable, make or break switching
Indication	
Target detected	LED, yellow
Optional timer	
Delay on operate	0.1 to 7 s ± 2 s
Delay on release	0.1 to 7 s ± 2 s
One shot	0.1 to 7 s ± 2 s
Environment	
Overvoltage category	III (IEC 60664/60664A; 60947-1)
Pollution degree	3 (IEC 60664/60664A; 60947-1)
Degree of protection	IP 67 (IEC 60529; 60947-1)
Temperature	
Operating	-25° to +55°C (-13° to +131°F)
Storage	-30° to +80°C (-22° to +176°F)

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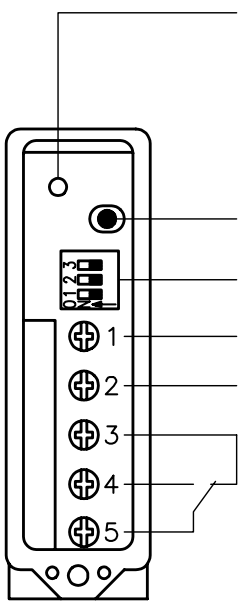
Specifications (cont.)

Vibration	10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6)
Shock	2 x 1 m & 100 x 0.5 m (IEC 60068-2-32)
Rated insulation voltage	250 VAC (rms)
Housing material	
Body	PC/ABS, grey
Front	PMMA, red
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	110 g
Approvals	UL, CSA
CE-marking	Yes

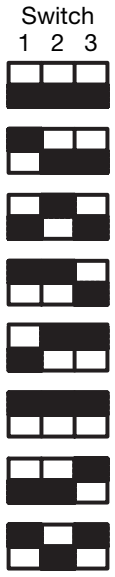
Truth Table

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

Connection Diagram



Selection of Function



1 Delay on operate - Break switching

2 Delay on operate - Make switching

3 Delay on release - Break switching

4 Delay on release - Make switching

5 One shot, trailing edge - Break switching

6 One shot, trailing edge - Make switching

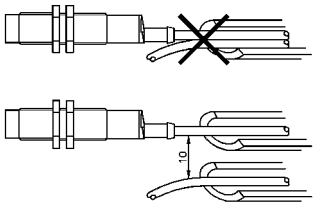
7 One shot, leading edge - Break switching

8 One shot, leading edge - Make switching

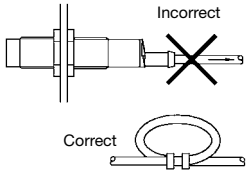
Upper postion ON (Mode 1)
Lower position OFF (Mode 0)

Installation Hints

To avoid interference from inductive voltage/ current peaks, separate the prox. switch power cables from any other power cables, e.g. motor, contactor or solenoid cables

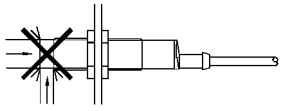


Relief of cable strain



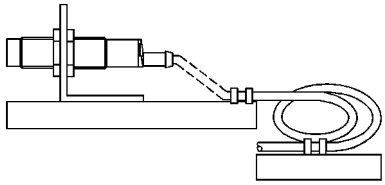
The cable should not be pulled

Protection of the sensing face



A proximity switch should not serve as mechanical stop

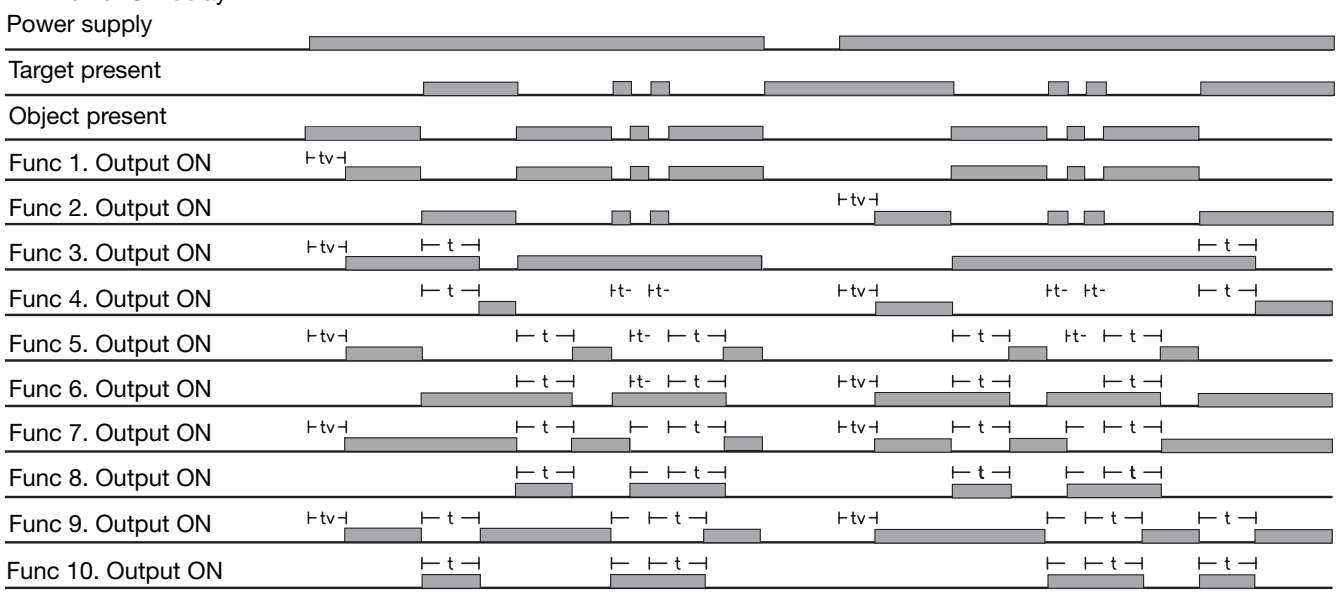
Switch mounted on mobile carrier



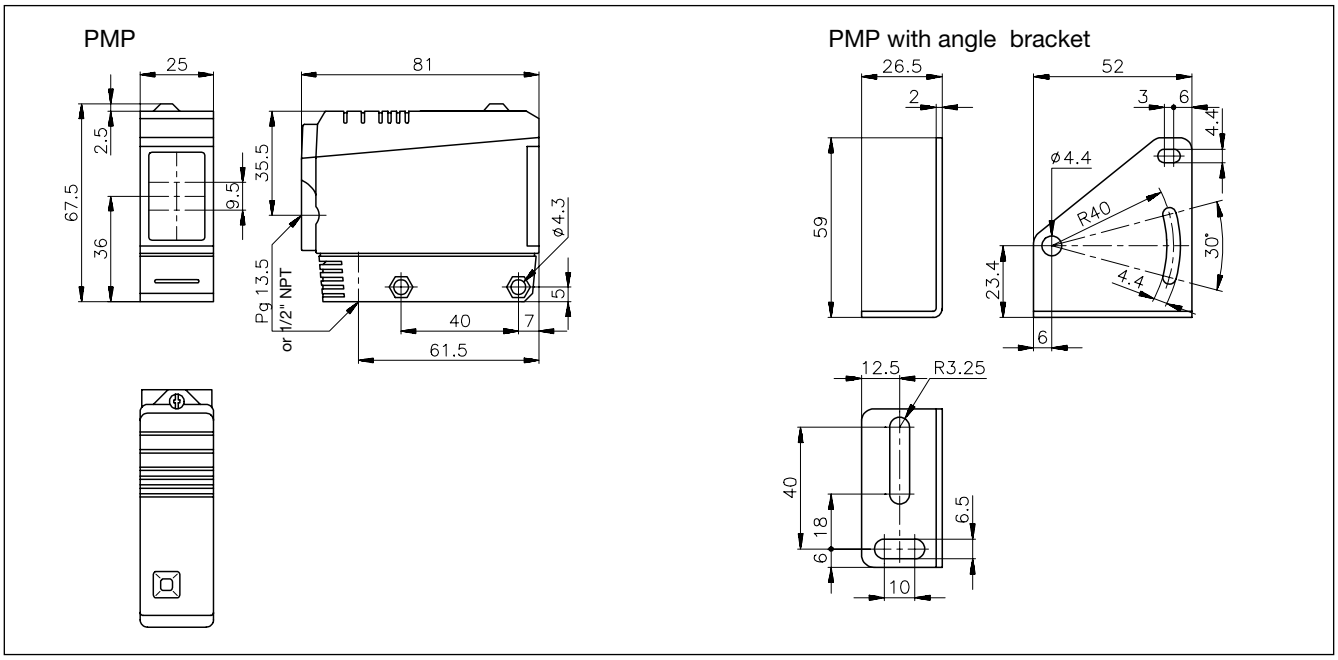
Any repetitive flexing of the cable should be avoided

Operation Diagram

t = Time delay
tv = Power ON delay



Dimensions



Accessories

- Reflectors: ER series
- MB02 (longer mounting bracket)

For further information refer to "Accessories".

Delivery Contents

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