

# Photoelectrics Retro-reflective, Polarized, Relay Output Type PMP12..

CARLO GAVAZZI



- Range: 12 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
- NO and NC output
- High EMC immunity
- UL, CSA and CE



## Product Description

The PMP12.. is a powerful polarized retro reflective sensor. The sensor is designed to meet the harsh requirements in industrial environments. With a sensing distance at 12 m the sensor is useful in applica-

tions where dust and weather conditions will influence on the sensing distance. The sensor is made in a strong glass reinforced PC/ABS housing with two cable glands for easy connection.

## Ordering Key

**PMP12RG**

Type family \_\_\_\_\_  
Type \_\_\_\_\_  
Sensing distance (m) \_\_\_\_\_  
Output relay \_\_\_\_\_  
Cable gland type \_\_\_\_\_

## Type Selection

Housing W x H x D	Range (S <sub>n</sub> )	Ordering no. without timer
25 x 65 x 81 PG 13.5 cable gland 1/2" NPT cable gland	12 m 12 m	<b>PMP 12 RG</b> <b>PMP 12 RI</b>

## Specifications

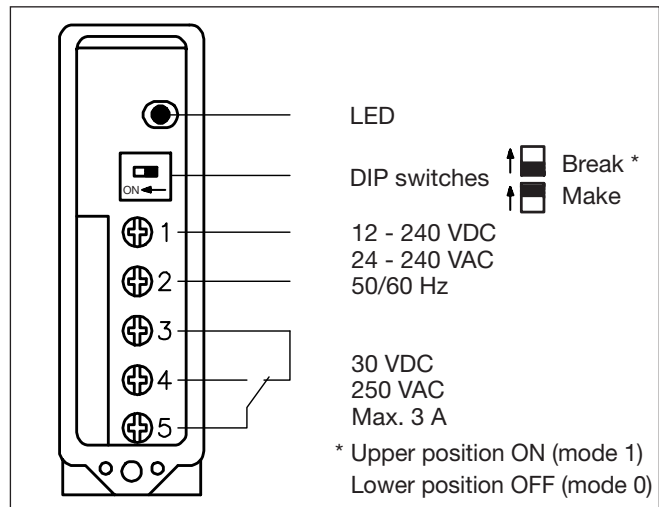
<b>Rated operating dist. (S<sub>n</sub>)</b> (0 to 5,000 lux)	12 m with reflector type ER 4, ref. target	<b>Optical angle</b>	± 1.5°
<b>Blind zone</b>	≤ 0.15 m	<b>Light spot size</b>	280 mm at 4 m
<b>Sensitivity</b>	Fixed	<b>Ambient light</b>	Max. 5'000 lux
<b>Temperature drift</b>	≤ 0.4 %/°C	<b>Operating frequency</b>	20 Hz
<b>Differential travel (H)</b> Hysteresis	3 to 20%	<b>Response time</b> OFF-ON (t <sub>ON</sub> ) ON-OFF (t <sub>OFF</sub> )	≤ 20 ms ≤ 30 ms
<b>Rated operational volt. (U<sub>B</sub>)</b>	10.8 to 264 VDC 21.6 to 264 VAC, 45 to 65 Hz	<b>Power ON delay (t<sub>v</sub>)</b>	≤ 300 ms (typ. 100 ms)
<b>Rated operational power</b> (relay ON)	≤ 2 W (2.5 VA)	<b>Output function</b>	Switch selectable, make or break switching
<b>Output</b> Contact ratings (AgCdO) Resistive loads AC 1 DC 1 Small inductive loads AC 15 DC 13 Mechanical life (typical) Electrical life (typical)	μ (micro gap) 3 A/250 VAC 3 A/30 VDC 2 A/250 VAC 3 A/30 VDC ≥ 40 x 10 <sup>6</sup> operations ≥ 5 x 10 <sup>5</sup> operations at 220 VAC - 3 A resistive load: 360 impulses/h	<b>Indication</b> Target detected	LED, yellow
<b>Dielectric voltage</b>	2,000 VAC (rms) (cont./supply)	<b>Environment</b> Overvoltage category Pollution degree Degree of protection	III (IEC 60664/60664A; 60947-1) 3 (IEC 60664/60664A; 60947-1) IP 67 (IEC 60529; 60947-1)
<b>Light source</b>	GaAlAs, LED, 660 nm	<b>Temperature</b> Operating Storage	-25° to +55°C (-13° to +131°F) -30° to +80°C (-22° to +176°F)
<b>Light type</b>	Visible, modulated	<b>Vibration</b>	10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6)
		<b>Shock</b>	2 x 1 m & 100 x 0.5 m (IEC 60068-2-32)
		<b>Rated insulation voltage</b>	250 VAC (rms)



## Specifications (cont.)

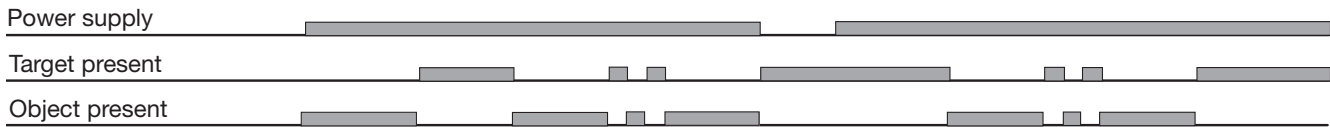
<b>Housing material</b>	
Body	PC/ABS, grey
Front	PMMA, red
Cover	PC, black
Cable gland	PA, black, reinforced
Mounting bracket	Steel, galvanized
<b>Connection</b>	
Screw terminal	5 x 2 x 1 mm <sup>2</sup>
Cable gland	PG 13.5 or 1/2" NPT for cable 6 to 10 mm
<b>Weight</b>	110 g
<b>Approvals</b>	UL, CSA
<b>CE-marking</b>	Yes

## Connection Diagram

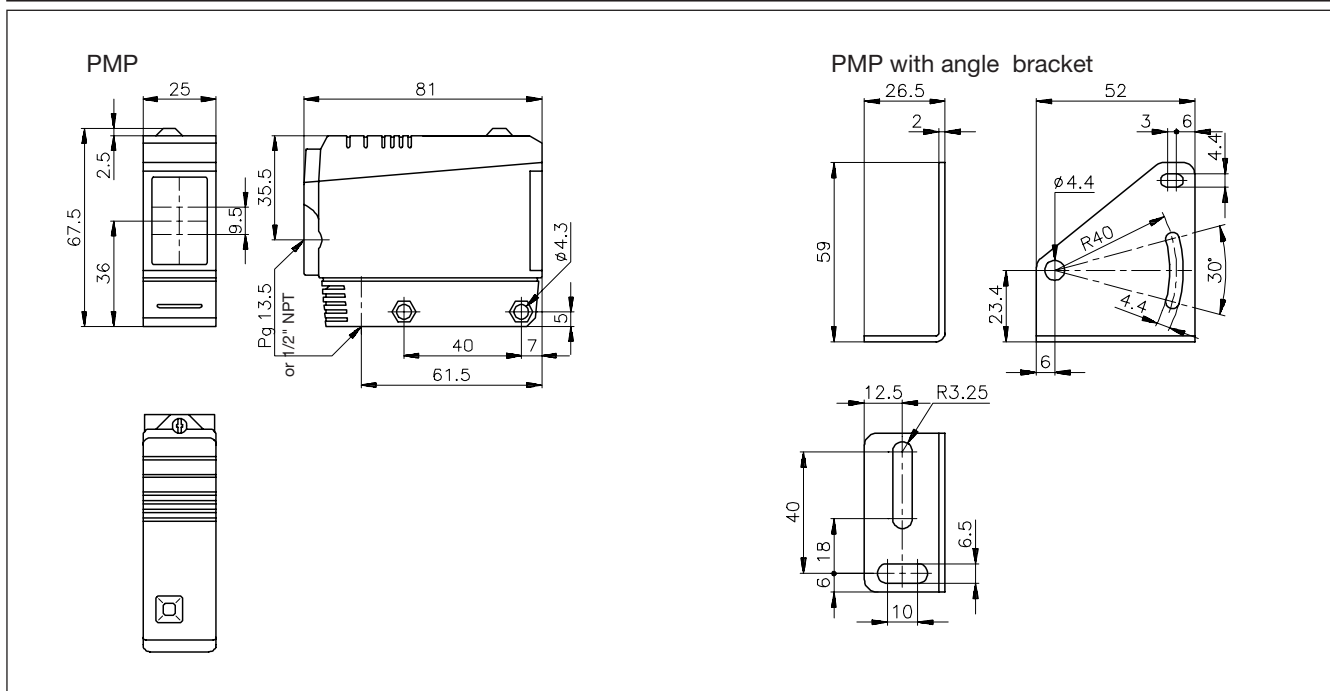


## Operation Diagram

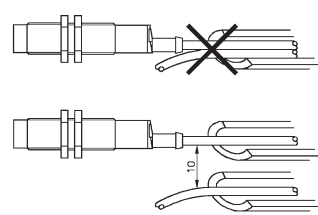
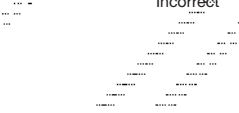
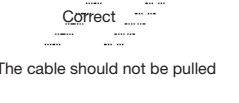
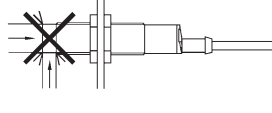
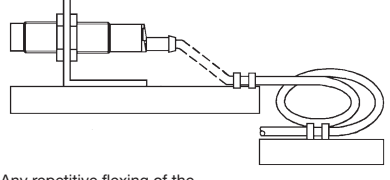
t = Time delay  
tv = Power ON delay



## Dimensions



## Installation Hints

<p>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</p> 	<p>Relief of cable strain</p> <p><b>Incorrect</b></p>  <p><b>Correct</b></p>  <p>The cable should not be pulled</p>	<p>Protection of the sensing face</p>  <p>A proximity switch should not serve as mechanical stop</p>	<p>Switch mounted on mobile carrier</p>  <p>Any repetitive flexing of the cable should be avoided</p>
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

## Delivery Contents

- Photoelectric switch: PMP12..
- Cable gland
- Installation instruction
- Mounting bracket
- **Packaging:** Cardboard box

## Accessories

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