

# Photoelectrics Retro-reflective Type PMR18..

CARLO GAVAZZI



- Range: 18 m
- Modulated, infrared light
- 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 housing, IP 67
- NO and NC output
- High EMC immunity
- UL, CSA and CE

## Product Description

The PMR18.. is a powerful retro reflective sensor. The sensor is designed to meet the harsh requirements in industrial environments. With a sensing distance of 18 m the sensor is useful in applications

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 connections.

## Ordering Key

**PMR18RG**

Type family \_\_\_\_\_  
 Type \_\_\_\_\_  
 Sensing distance \_\_\_\_\_  
 Output relay \_\_\_\_\_  
 Cable gland \_\_\_\_\_

## Type Selection

| Housing<br>W x H x D                | Range<br>S <sub>n</sub> | Ordering no.<br>without timer |
|-------------------------------------|-------------------------|-------------------------------|
| 25 x 65 x 81<br>PG 13.5 cable gland | 18 m                    | PMR 18 RG                     |
| 1/2" NPT cable gland                | 18 m                    | PMR 18 RI                     |

## Specifications

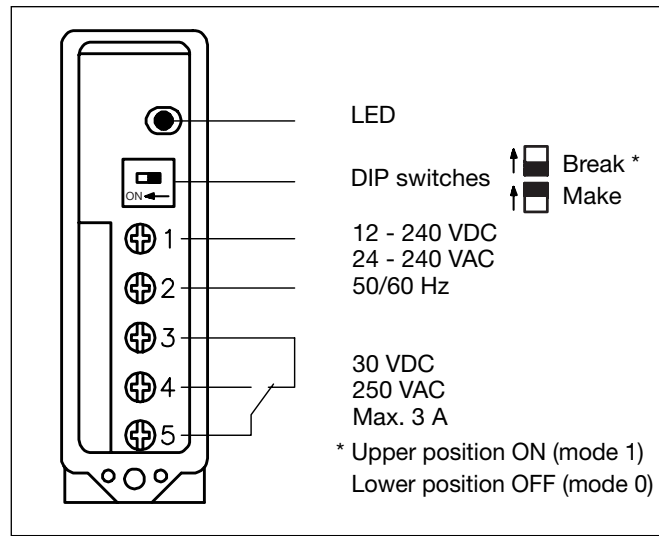
|   |  |   |
|---|--|---|
| <b>Rated operating dist. (S<sub>n</sub>)</b><br>(0 to 5,000 lux)    | 18 m<br>with reflector type ER 4,<br>ref. target                                       | <b>Light source</b><br>GaAlAs, LED, 880 nm                                      |
| <b>Blind zone</b>   | ≤ 0.20 m   | <b>Light type</b><br>Infrared, modulated  |
| <b>Temperature drift</b>  | ≤ 0.4%/°C  | <b>Optical angle</b><br>± 1.5°  |
| <b>Differential travel (H)</b>                                      | 3 to 20 %  | <b>Ambient light</b><br>Max. 5'000 lux  |
| <b>Rated operational volt. (U<sub>B</sub>)</b><br>(AC: 45 to 65 Hz) | 10.8 to 264 VDC<br>21.6 to 264 VAC, 45 to 65 Hz  | <b>Operating frequency (f)</b><br>20 Hz   |
| <b>Rated operational power</b><br>(Relay ON)                        | ≤ 2 W (2.5 VA)   | <b>Response time</b><br>OFF-ON (t <sub>ON</sub> )<br>ON-OFF (t <sub>OFF</sub> ) |
| <b>Output</b>   |  | ≤ 20 ms<br>≤ 30 ms  |
| Contact ratings (AgCdO)   | μ (micro gap)  | <b>Power ON delay (t<sub>v</sub>)</b><br>≤ 300 ms (typ. 100 ms)                 |
| Resistive loads AC 1  | 3 A/250 VAC  | <b>Output function</b><br>Switch selectable, make or<br>break switching         |
| DC 1  | 3 A/30 VDC   | <b>Indication</b><br>Target detected  |
| Small inductive loads AC 15   | 2 A/250 VAC  | LED, yellow   |
| DC 13   | 3 A/30 VDC   | <b>Environment</b>  |
| Mechanical life   | ≥ 40 x 10 <sup>6</sup> operations  | Overvoltage category  |
| Electrical life   | ≥ 5 x 10 <sup>5</sup> operations<br>at 220 VAC - 3 A resistive<br>load: 360 impulses/h | Pollution degree  |
| <b>Dielectric voltage</b>   | 2000 VAC rms (cont./supply)  | Degree of protection  |
| <b>Sensitivity</b>  | Fixed  | IP 67 (IEC 60529; 60947-1)  |
|   |  | <b>Temperature</b>  |
|   |  | Operating   |
|   |  | Storage   |
|   |  | -25° to +55°C (-13° to +131°F)<br>-30° to +80°C (-22° to +176°F)                |



## Specifications (cont.)

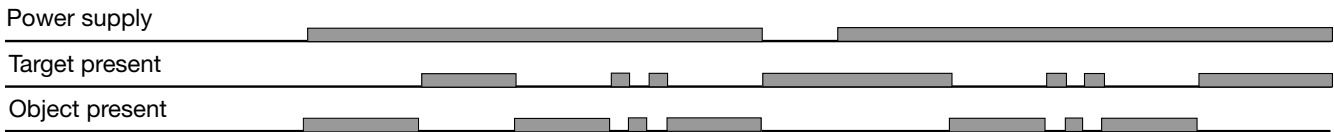
|                                 |   |
|---------------------------------|---|
| <b>Vibration</b>                | 10 to 150 Hz, 0.5 mm/7.5 g<br>(IEC 60068-2-6) |
| <b>Shock</b>                    | 2 x 1 m & 100 x 0.5 m<br>(IEC 60068-2-32)     |
| <b>Rated insulation voltage</b> | 250 VAC (rms)                                 |
| <b>Housing material</b>         |   |
| Body                            | PC, grey                                      |
| Front                           | PC, black                                     |
| 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<br>for cable 6 to 10 mm   |
| <b>Weight</b>                   | 110 g   |
| <b>Approvals</b>                | UL, CSA                                       |
| <b>CE-marking</b>               | Yes   |

## Connection Diagram

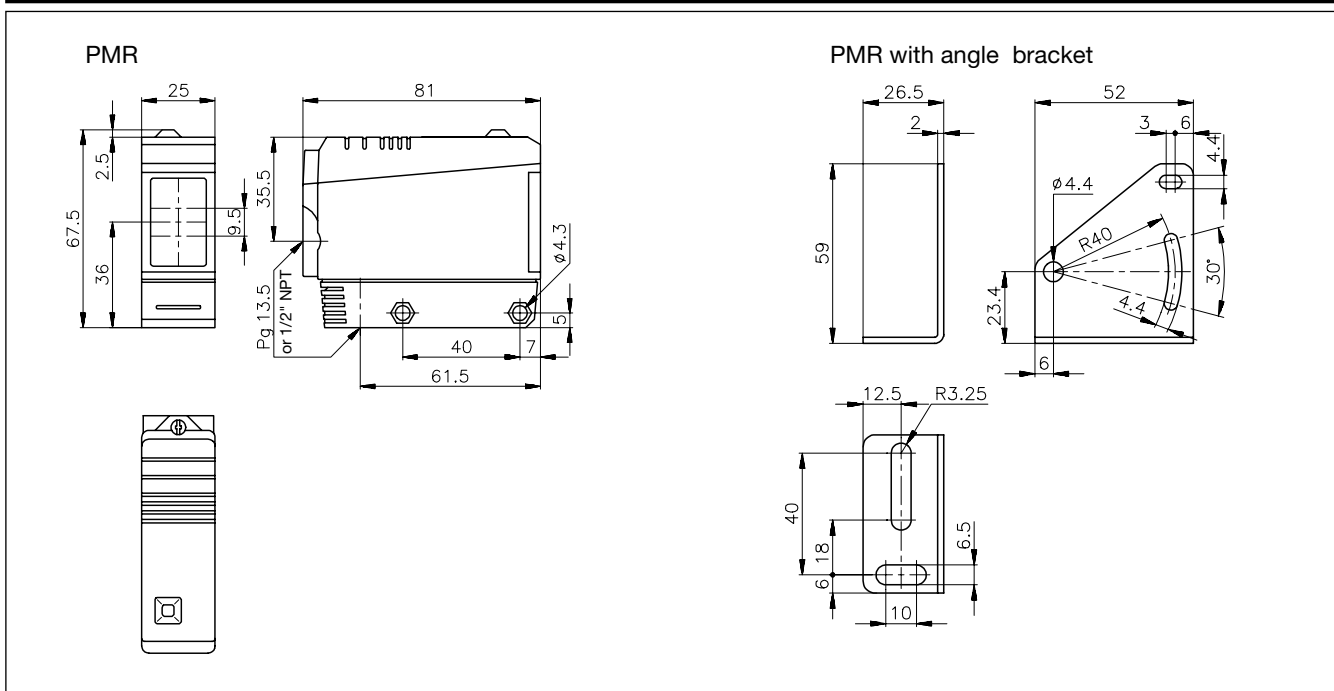


## Operation Diagram

t = Time delay  
tv = Power ON delay



## Dimensions





## Delivery Contents

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- Photoelectric switch: PMR18..
- Cable gland
- Installation instruction
- Mounting bracket
- **Packaging:** Cardboard box

## Accessories

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

For further information refer to "Accessories"