

Photoelectrics

Retro-reflective, Transistor Output

Type PMR



- 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)



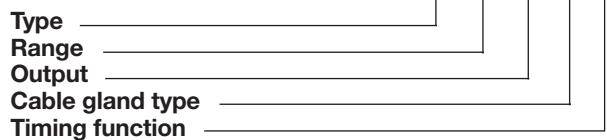
Product Description

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 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 | 10 m | PMR 10N G | PMR 10P G | PMR 10N GT | PMR 10P GT |
| 1/2" NPT cable gland | 10 m | PMR 10N I | PMR 10P I | PMR 10N IT | PMR 10P IT |

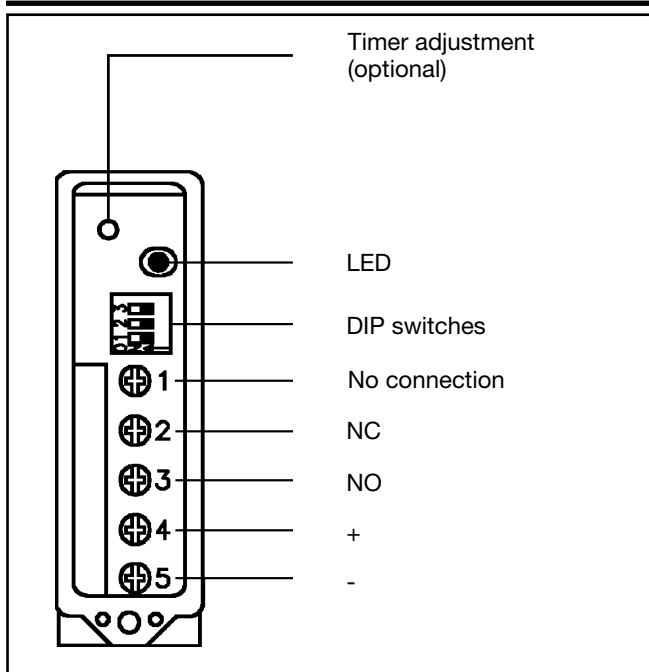
Specifications

| | | | |
|---|--|---|---|
| Rated operating distance (S_n) (0 to 5,000 lux) | 10 m 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, | Delay on release | 0.1 to 7 s ± 2 s |
| max. load capacity | 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 |
| PMR ... T | | 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 | |
|----------------|----------------|--------|-----------------|------------|
| | Yes | No | Yes | No |
| 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)