

## Product Description

Through-beam photoelectric switch. Range up to 20 m . Immune to ambient light. Precise detection through narrow beam. LED-indication. Protection degree IP 67. Screw terminal connection. $25 \times 65 \times 81 \mathrm{~mm}$ plastic
housing. PG 13.5 or $1 / 2^{\prime \prime}$ NPT cable gland. With Mute Input on the transmitter the sensor fullfill EN12978

- Range: $\mathbf{2 0}$ m
- Modulated, infrared light
- LED-indication for power supply ON (emitter) and target detected (receiver)
- Multi supply voltage:

24 VDC and 24 VAC, $50 / 60 \mathrm{~Hz}$

- $25 \times 65 \times 81 \mathrm{~mm}$ reinforced PC housing, IP 67
- CE, UL325 and UL508 approved


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Ordering Key
PMT20 R G M
Type

## Receiver

Cable gland
Mute Input

## Type Selection

| Housing <br> W x H x D | Ordering no. <br> Receiver without timer |
| :--- | :--- |
| $25 \times 65 \times 81$ |  |
| PG 13.5 cable gland <br> 1/2" NPT cable gland | PMT 20R GM <br> PMT 20R IM |

## Specifications Emitter

| Rated operational volt. $\left(\mathrm{U}_{\mathrm{B}}\right)$ <br> AC: 45 to 65 Hz | $24 \mathrm{VDC} \pm 20 \%$ <br> $24 \mathrm{VAC} \pm 20 \%$ |
| :--- | :--- |
| Rated operational power | $\leq 1 \mathrm{~W}(1.2 \mathrm{VA})$ |
| Light source | GaAIAs LED, 880 nm |
| Light type | Infrared, modulated |
| Optical angle | $\pm 2^{\circ}$ |
| Indication <br> Power supply ON | LED, green |
| Output function | Switch selectable, make or <br> break switching |

Ordering no. Emitter

PMT 20 GM
PMT 20 IM

## Specifications Receiver

| Rated operational volt. ( $\mathrm{U}_{\mathrm{B}}$ ) AC: 45 to 65 Hz | $\begin{aligned} & 24 V D C \pm 20 \% \\ & 24 V A C \pm 20 \% \end{aligned}$ |
| :---: | :---: |
| Rated operational power (Relay ON) | $\leq 2 \mathrm{~W}(2.5 \mathrm{VA})$ |
| Output |  |
| Contact ratings (AgCdO) | $\mu$ (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 Electrical life | $\geq 40 \times 10^{6}$ operations $\geq 5 \times 10^{5}$ operations at 220 VAC - 3 A resistive load: 360 impulses/h |
| Dielectric voltage | 2 kVAC (rms) (cont./supply) |
| Sensitivity | Adjustable, single turn pot. |
| Optical angle | $\pm 2^{\circ}$ |
| Rated operating dist. $\left(\mathrm{S}_{\mathrm{n}}\right)$ ( 0 to 5,000 lux) | 20 m |
| Operating frequency (f) | 20 Hz |
| $\begin{array}{ll}\text { Response time } & \text { OFF-ON (ton) } \\ \text { ON-OFF (tofF) }\end{array}$ | $\begin{aligned} & \leq 20 \mathrm{~ms} \\ & \leq 20 \mathrm{~ms} \end{aligned}$ |
| Power ON delay ( $\mathrm{t}_{\mathrm{v}}$ ) | $\leq 300 \mathrm{~ms}$ (typ. 100 ms ) |
| Output function | Mute function |

## General Specifications

| Environment |  |  |
| :---: | :---: | :---: |
| Overvoltage category |  | III (IEC 60664/60664A, 60947-1) |
| Pollution degree |  | $\begin{aligned} & 3 \text { (IEC 60664/60664A, } \\ & 60947-1) \end{aligned}$ |
| Degree of protection |  | IP 67 (IEC 60529, 60947-1) |
| Temperature |  |  |
| Operating |  | $-25^{\circ}$ to $+55^{\circ} \mathrm{C}\left(-13^{\circ}\right.$ to $\left.+131^{\circ} \mathrm{F}\right)$ |
| Storage |  | $-30^{\circ}$ to $+80^{\circ} \mathrm{C}\left(-22^{\circ}\right.$ to $\left.+176^{\circ} \mathrm{F}\right)$ |
| Vibration |  | $\begin{aligned} & 10 \text { to } 150 \mathrm{~Hz}, 0.5 \mathrm{~mm} / 7.5 \mathrm{~g} \\ & \text { (IEC } 60068-2-6) \end{aligned}$ |
| Shock |  | $\begin{aligned} & 2 \times 1 \mathrm{~m} \& 100 \times 0.5 \mathrm{~m} \\ & (\text { IEC 60068-2-32) } \end{aligned}$ |
| Housing material |  |  |
| Body |  | PC, grey, reinforced |
| Front |  | PC, black |
| Cover |  | PC, black |
| Cable gland |  | PA, black, reinforced |
| Mounting bracket |  | Steel, black |
| Connection |  |  |
| Screw terminal |  | $5 \times 2 \times 1 \mathrm{~mm}^{2}$ |
| Cable gland |  | PG 13.5 or $1 / 2^{\prime \prime}$ NPT for cable 6 to 10 mm |
| Weight |  |  |
| Emitter |  | 110 g |
| Receiver |  | 115 g |
| UL-Approval | $\mathbf{N D}_{\mathrm{us}}$ | UL325, CSA-C22.2 No. 247 |
| CE-marking |  | Yes |

## Selection of Function



## Connection Diagram



## Operation Diagram

t = Time delay
tv = Power ON delay


## Dimensions

PMT 20


PMT 20 with angle bracket



## Installation Hints

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

## Delivery Contents

- Photoelectric switch: PMT 20
- Cable gland
- Installation instruction
- Mounting bracket
- Packaging: Corrugated cardboard (environmentally friendly recycling material)


## Accessories

- MB02 (longer mounting bracket)


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