

# Photoelectrics Through-beam, Industrial Door Market Type PMT20.M, Mute Input

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- Range: 20 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 Hz
- 25 x 65 x 81 mm reinforced PC housing, IP 67
- CE, UL325 and UL508 approved



## 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 x 65 x 81 mm plastic

housing. PG 13.5 or 1/2" NPT cable gland. With Mute Input on the transmitter the sensor fulfill EN12978

## Ordering Key

**PMT20 R G M**

Type \_\_\_\_\_  
Receiver \_\_\_\_\_  
Cable gland \_\_\_\_\_  
Mute Input \_\_\_\_\_

## Type Selection

**Housing  
W x H x D**

25 x 65 x 81  
PG 13.5 cable gland  
1/2" NPT cable gland

**Ordering no.  
Receiver without timer**

**PMT 20R GM  
PMT 20R IM**

**Ordering no.  
Emitter**

**PMT 20 GM  
PMT 20 IM**



## Specifications Emitter

|   |  |
|---|--|
| <b>Rated operational volt. (U<sub>B</sub>)</b><br>AC: 45 to 65 Hz | 24 VDC ± 20%<br>24 VAC ± 20%               |
| <b>Rated operational power</b>                                    | ≤ 1 W (1.2 VA)                             |
| <b>Light source</b>   | GaAlAs LED, 880 nm                         |
| <b>Light type</b>   | Infrared, modulated                        |
| <b>Optical angle</b>  | ± 2°                                       |
| <b>Indication</b><br>Power supply ON                              | LED, green                                 |
| <b>Output function</b>  | Switch selectable, make or break switching |

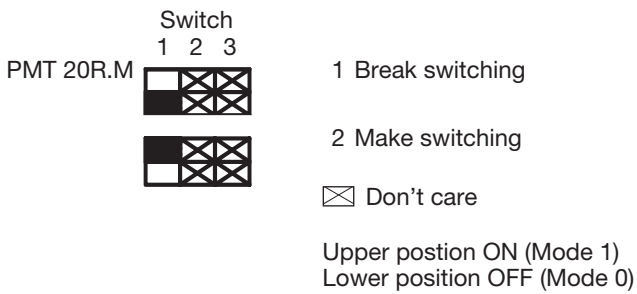
## Specifications Receiver

|  |  |
|--|--|
| <b>Rated operational volt. (U<sub>B</sub>)</b><br>AC: 45 to 65 Hz  | 24 VDC ± 20%<br>24 VAC ± 20%   |
| <b>Rated operational power</b><br>(Relay ON)   | ≤ 2 W (2.5 VA)   |
| <b>Output</b><br>Contact ratings (AgCdO)<br>Resistive loads<br>Small inductive loads<br>Mechanical life<br>Electrical life | μ (micro gap)<br>AC 1 3 A/250 VAC<br>DC 1 3 A/30 VDC<br>AC 15 2 A/250 VAC<br>DC 13 3 A/30 VDC<br>≥ 40 x 10 <sup>6</sup> operations<br>≥ 5 x 10 <sup>5</sup> operations<br>at 220 VAC - 3 A resistive<br>load: 360 impulses/h |
| <b>Dielectric voltage</b>  | 2 kVAC (rms) (cont./supply)  |
| <b>Sensitivity</b>   | Adjustable, single turn pot.   |
| <b>Optical angle</b>   | ± 2°   |
| <b>Rated operating dist. (S<sub>n</sub>)</b><br>(0 to 5,000 lux)   | 20 m   |
| <b>Operating frequency (f)</b>   | 20 Hz  |
| <b>Response time</b><br>OFF-ON (t <sub>ON</sub> )<br>ON-OFF (t <sub>OFF</sub> )  | ≤ 20 ms<br>≤ 20 ms   |
| <b>Power ON delay (t<sub>v</sub>)</b>  | ≤ 300 ms (typ. 100 ms)   |
| <b>Output function</b>   | Mute function  |

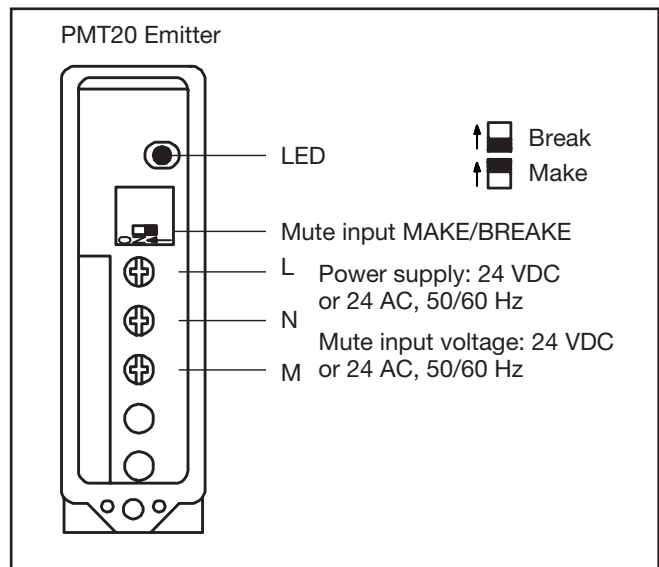
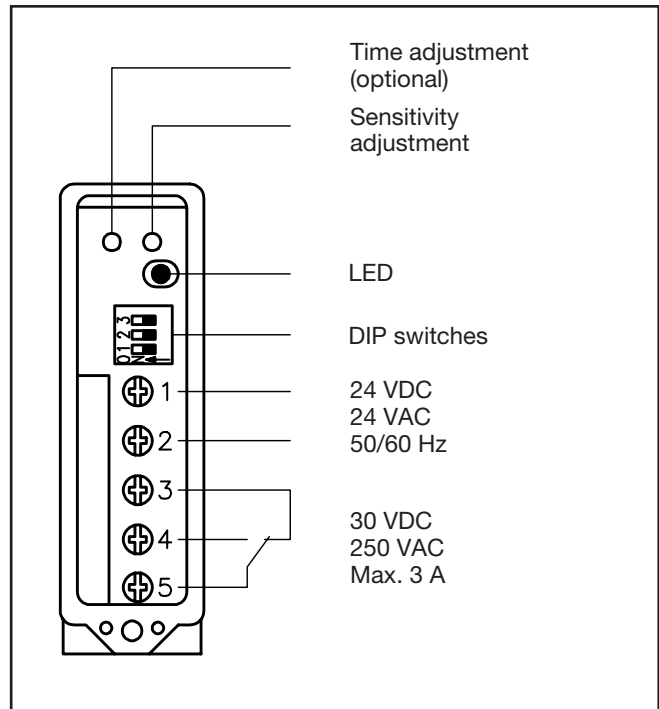
## General Specifications

|                         |  |
|-------------------------|--|
| <b>Environment</b>      |  |
| 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)   |
| <b>Temperature</b>      |  |
| Operating               | -25° to +55°C (-13° to +131°F)   |
| Storage                 | -30° to +80°C (-22° to +176°F)   |
| <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>Housing material</b> |  |
| Body                    | PC, grey, reinforced   |
| Front                   | PC, black  |
| Cover                   | PC, black  |
| Cable gland             | PA, black, reinforced  |
| Mounting bracket        | Steel, black   |
| <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>           |  |
| Emitter                 | 110 g  |
| Receiver                | 115 g  |
| <b>UL-Approval</b>      |  UL325, CSA-C22.2 No.247<br> UL508 |
| <b>CE-marking</b>       | Yes  |

## Selection of Function

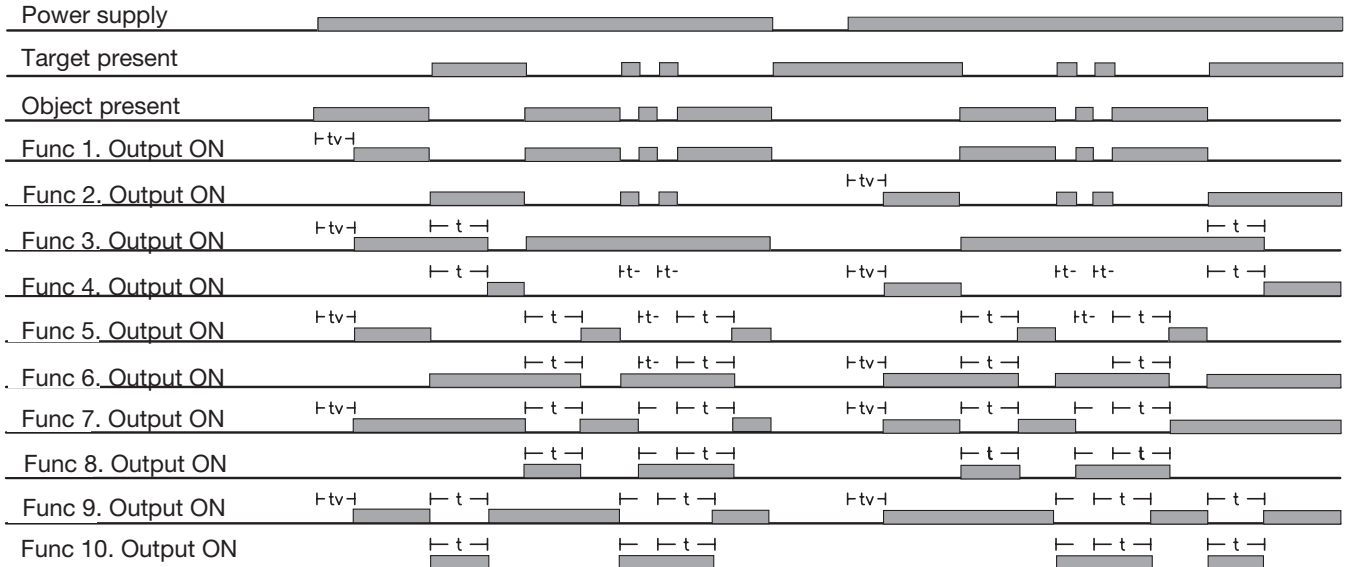


## Connection Diagram

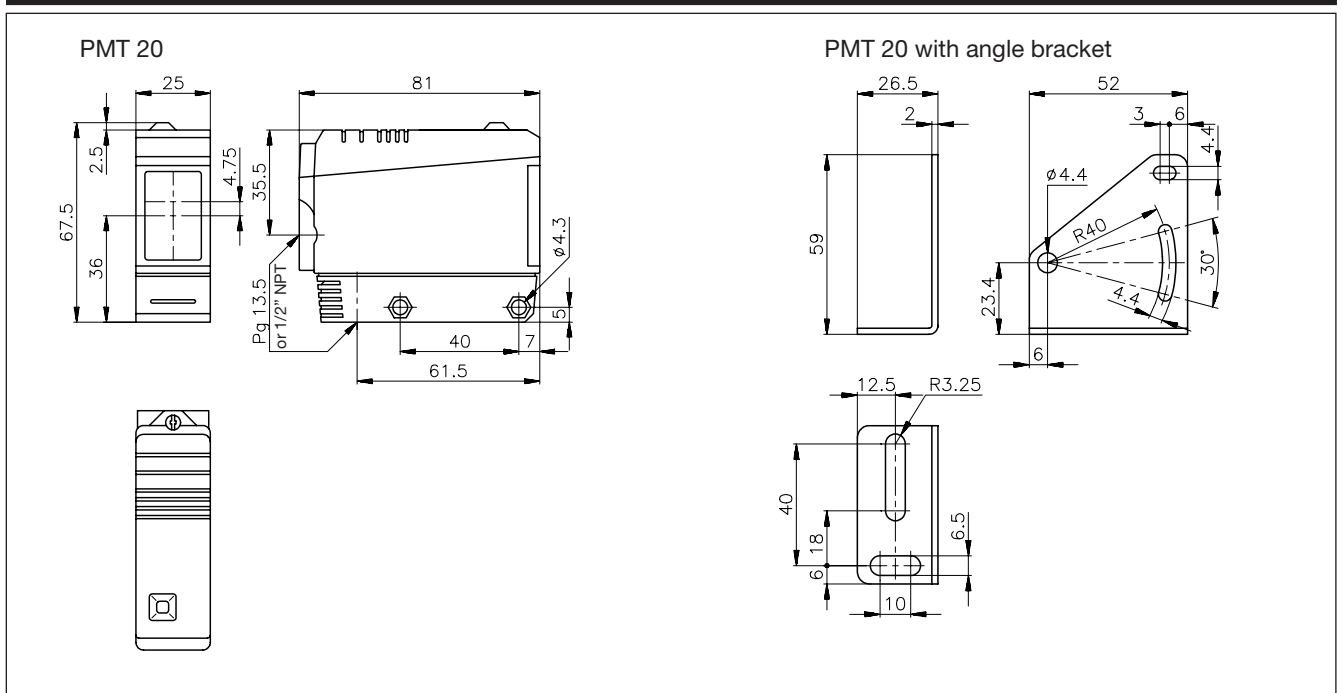


## Operation Diagram

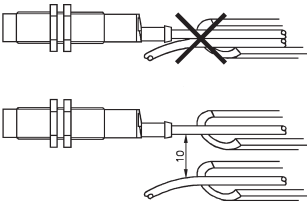
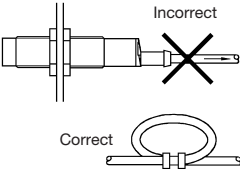
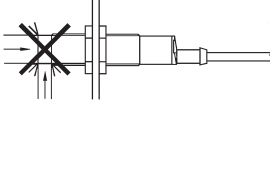
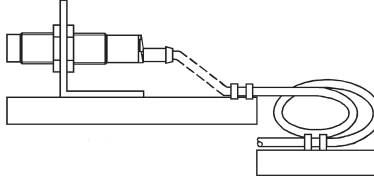
t = Time delay  
tv = Power ON delay



## Dimensions



## Installation Hints

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

## Delivery Contents

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

## Accessories

- MB02 (longer mounting bracket)