

Photoelectrics

Through-beam, Industrial Door Market

Type PMT20.M, Mute Input



- 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 fullfill EN12978

Type Selection

| Housing W x H x D | Ordering no. Receiver without timer | Ordering no. Emitter |
|---|--|-------------------------|
| 25 x 65 x 81 PG 13.5 cable gland 1/2" NPT cable gland | PMT 20R GM PMT 20R IM | PMT 20 GM PMT 20 IM |

Specifications Emitter

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

Ordering Key

PMT20 R G M

Type _____
Receiver _____
Cable gland _____
Mute Input _____

Specifications Receiver

| | |
|--|---|
| Rated operational volt. (U _B) AC: 45 to 65 Hz | 24 VDC ± 20% 24 VAC ± 20% |
| Rated operational power (Relay ON) | ≤ 2 W (2.5 VA) |
| Output | |
| Contact ratings (AgCdO) Resistive loads | μ (micro gap) AC 1 DC 1 |
| Small inductive loads | 3 A/250 VAC AC 15 DC 13 |
| Mechanical life | 2 A/30 VDC |
| Electrical life | ≥ 40 x 10 ⁶ operations ≥ 5 x 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 | ± 2° |
| Rated operating dist. (S _n) (0 to 5,000 lux) | 20 m |
| Operating frequency (f) | 20 Hz |
| Response time | OFF-ON (t _{ON}) ON-OFF (t _{OFF}) |
| Power ON delay (t _v) | ≤ 300 ms (typ. 100 ms) |
| Output function | Mute function |

General Specifications

Environment

| | |
|----------------------|---------------------------------|
| 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) |

Temperature

| | |
|-----------|--------------------------------|
| Operating | -25° to +55°C (-13° to +131°F) |
| Storage | -30° to +80°C (-22° to +176°F) |

Vibration

| | |
|--|--|
| | 10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6) |
| | 2 x 1 m & 100 x 0.5 m (IEC 60068-2-32) |

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 x 2 x 1 mm ² |
| Cable gland | PG 13.5 or 1/2" NPT for cable 6 to 10 mm |

Weight

| | |
|----------|-------|
| Emitter | 110 g |
| Receiver | 115 g |

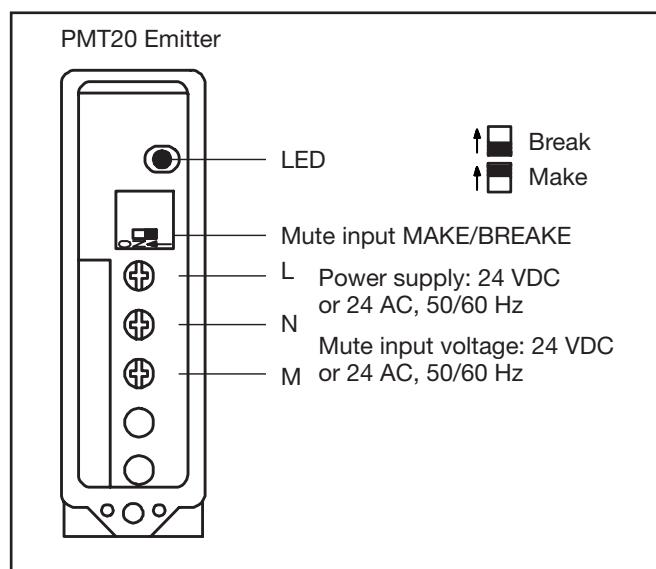
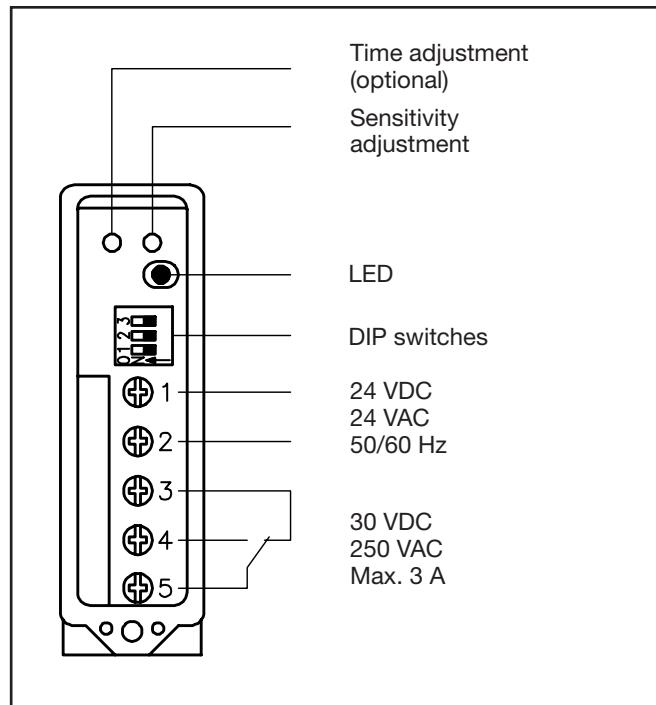
UL-Approval

| | |
|--|-------------------------|
|  us | UL325, CSA-C22.2 No.247 |
|  us | UL508 |

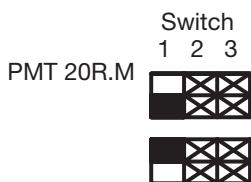
CE-marking

Yes

Connection Diagram



Selection of Function



1 Break switching

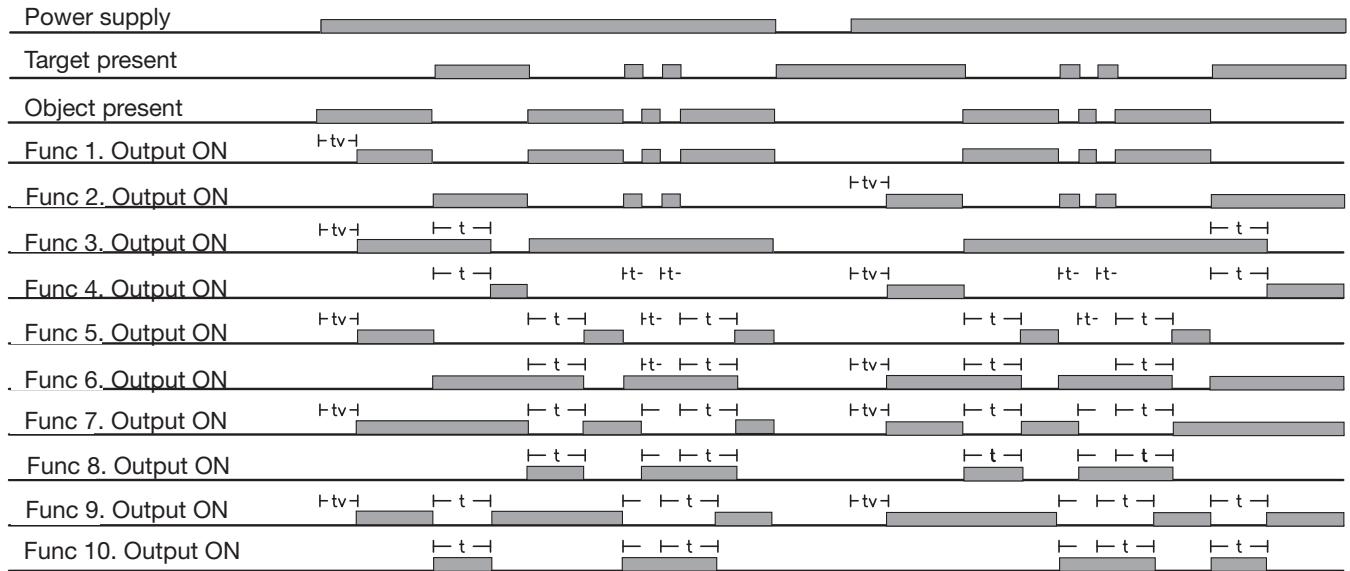
2 Make switching

3 Don't care

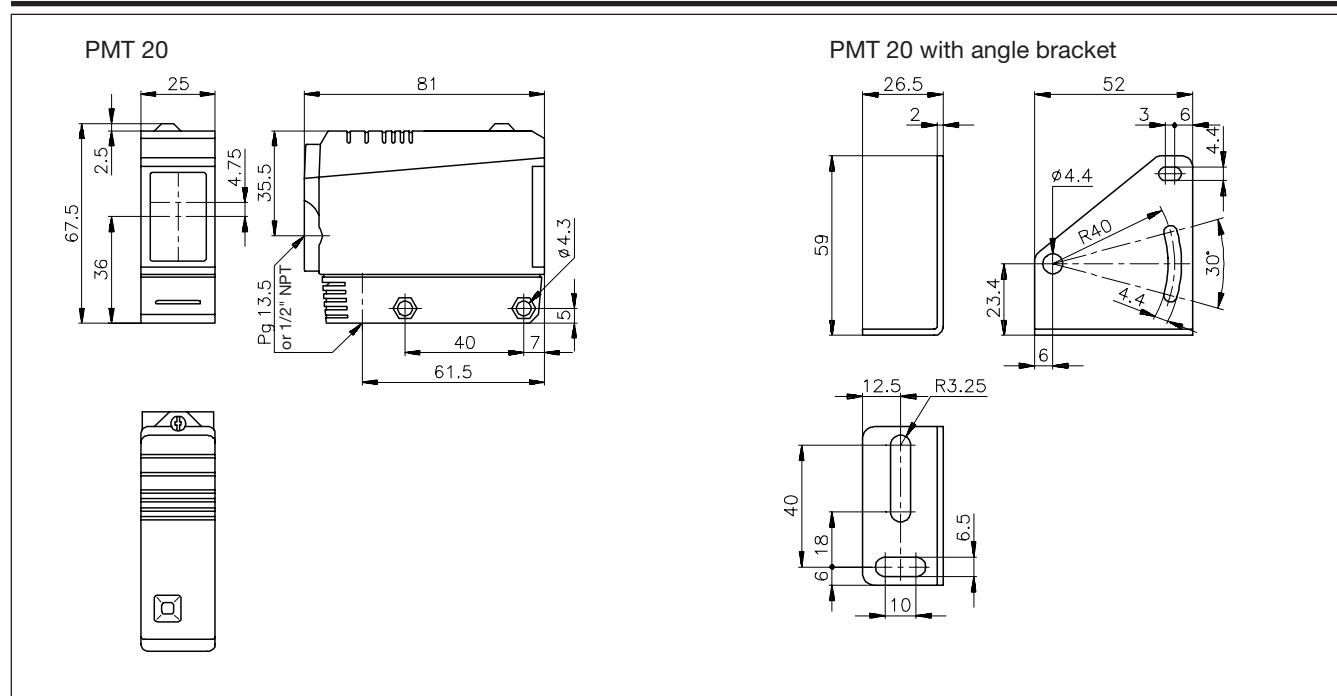
Upper position ON (Mode 1)
Lower position OFF (Mode 0)

Operation Diagram

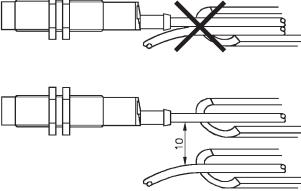
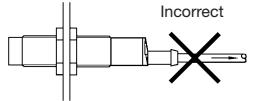
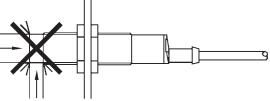
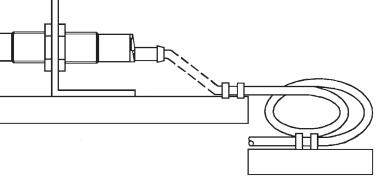
t = Time delay
tv = Power ON delay



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>Incorrect</p>  <p>Correct</p>  <p>The cable should not be pulled</p> | <p>Protection of the sensing face</p>  | <p>Switch mounted on mobile carrier</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), please refer to "Accessories"