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

Ordering Key

PMT20 R G M

Type
Receiver
Cable gland
Mute Input

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	**PMT 20R GM**	**PMT 20 GM**
1/2" NPT cable gland	**PMT 20R IM**	**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

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)		µ (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		≥ 40 x 10^6 operations
Electrical life		≥ 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})	≤ 20 ms
	ON-OFF (t_{OFF})	≤ 20 ms
Power ON delay (t_v)		≤ 300 ms (typ. 100 ms)
Output function		Mute function

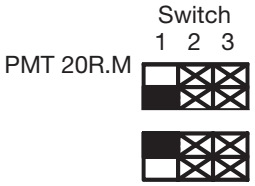
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General Specifications

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)
Shock	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 mm²
Cable gland	PG 13.5 or 1/2" NPT for cable 6 to 10 mm
Weight	
Emitter	110 g
Receiver	115 g
UL-Approval	UL325, CSA-C22.2 No.247
	UL508
CE-marking	Yes

Selection of Function



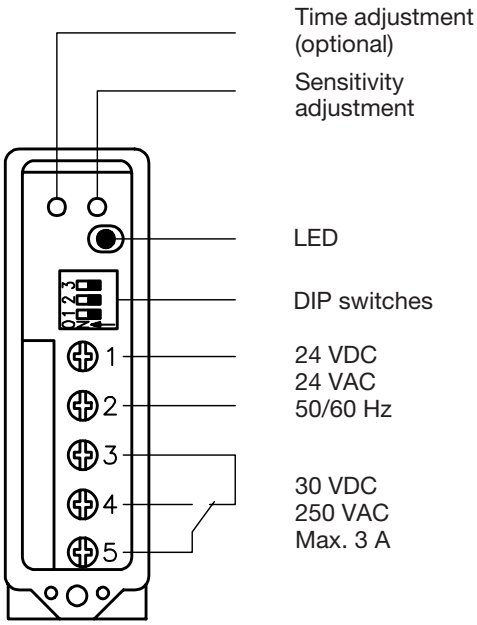
1 Break switching

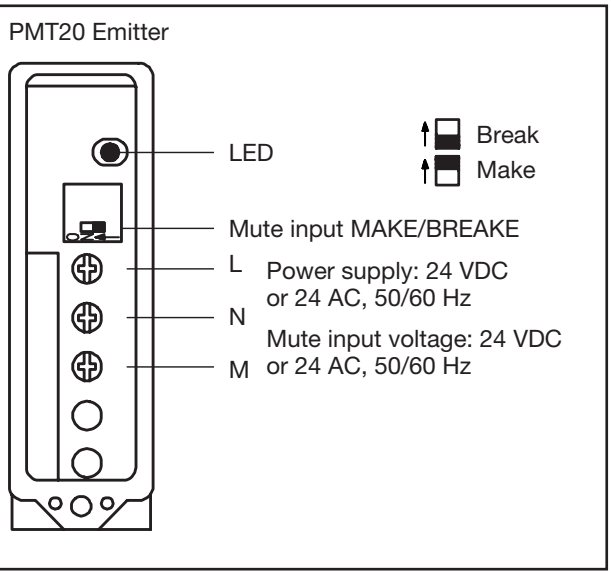
2 Make switching

☒ Don't care

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

Connection Diagram





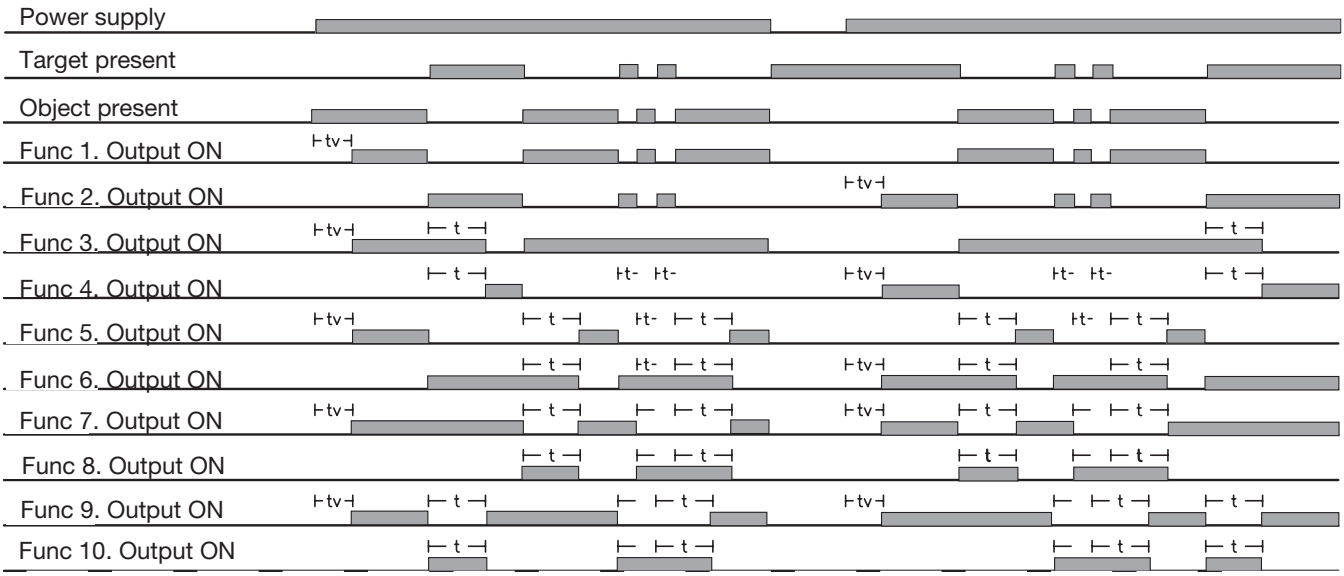
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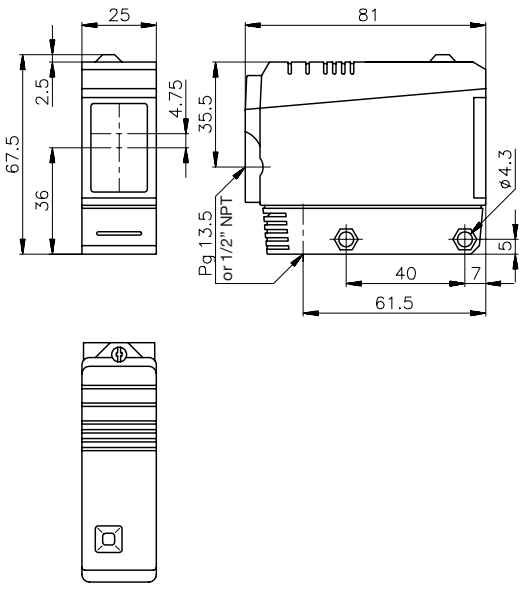
Operation Diagram

t = Time delay
tv = Power ON delay

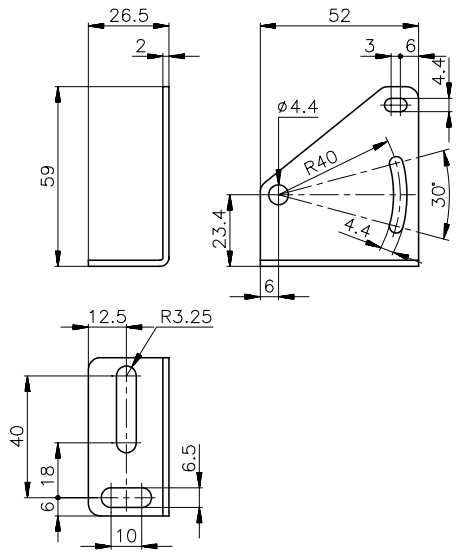


Dimensions

PMT 20



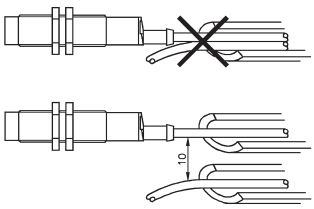
PMT 20 with angle bracket



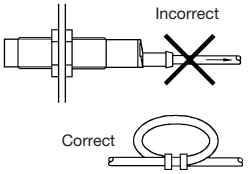
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Installation Hints

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

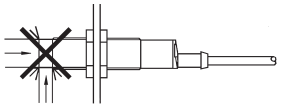


Relief of cable strain



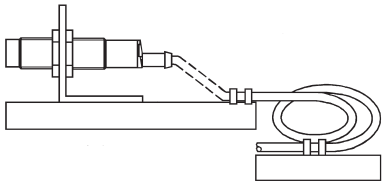
The cable should not be pulled

Protection of the sensing face



A proximity switch should not serve as mechanical stop

Switch mounted on mobile carrier



Any repetitive flexing of the cable should be avoided

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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