

Photoelectrics

Through-beam, Industrial Door Market

Type PMT20.M, Mute Input

CARLO GAVAZZI



- 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	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

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 AC 1 DC 1 Small inductive loads AC 15 DC 13	μ (micro gap) 3 A/250 VAC 3 A/30 VDC 2 A/250 VAC 3 A/30 VDC
Mechanical life 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})	≤ 20 ms ≤ 20 ms
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)
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 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	cULus
	UL325, CSA-C22.2 No.247
	cULus
	UL508
CE-marking	Yes

Selection of Function

Switch

1 2 3

PMT 20R.M

1 Break switching

2 Make switching

⊠ Don't care

Upper position ON (Mode 1)

Lower position OFF (Mode 0)

Connection Diagram

Time adjustment (optional)

Sensitivity adjustment

LED

DIP switches

24 VDC

24 VAC

50/60 Hz

30 VDC

250 VAC

Max. 3 A

PMT20 Emitter

LED

Mute input MAKE/BREAKE

L

N

M

↑ Break

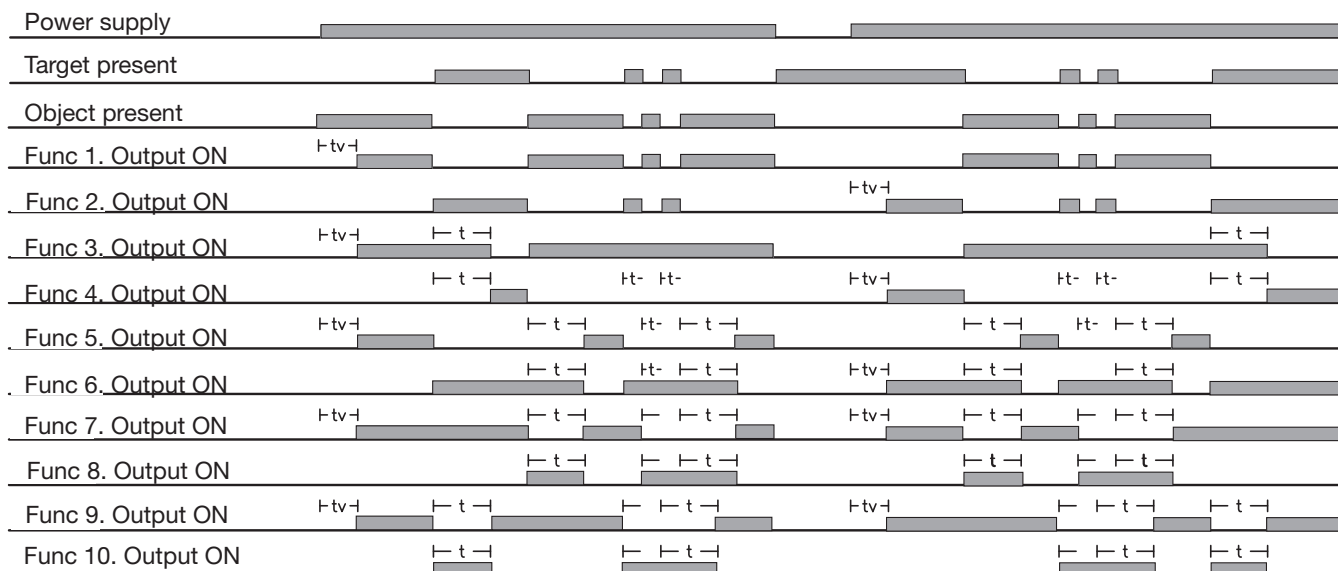
↑ Make

Power supply: 24 VDC or 24 AC, 50/60 Hz

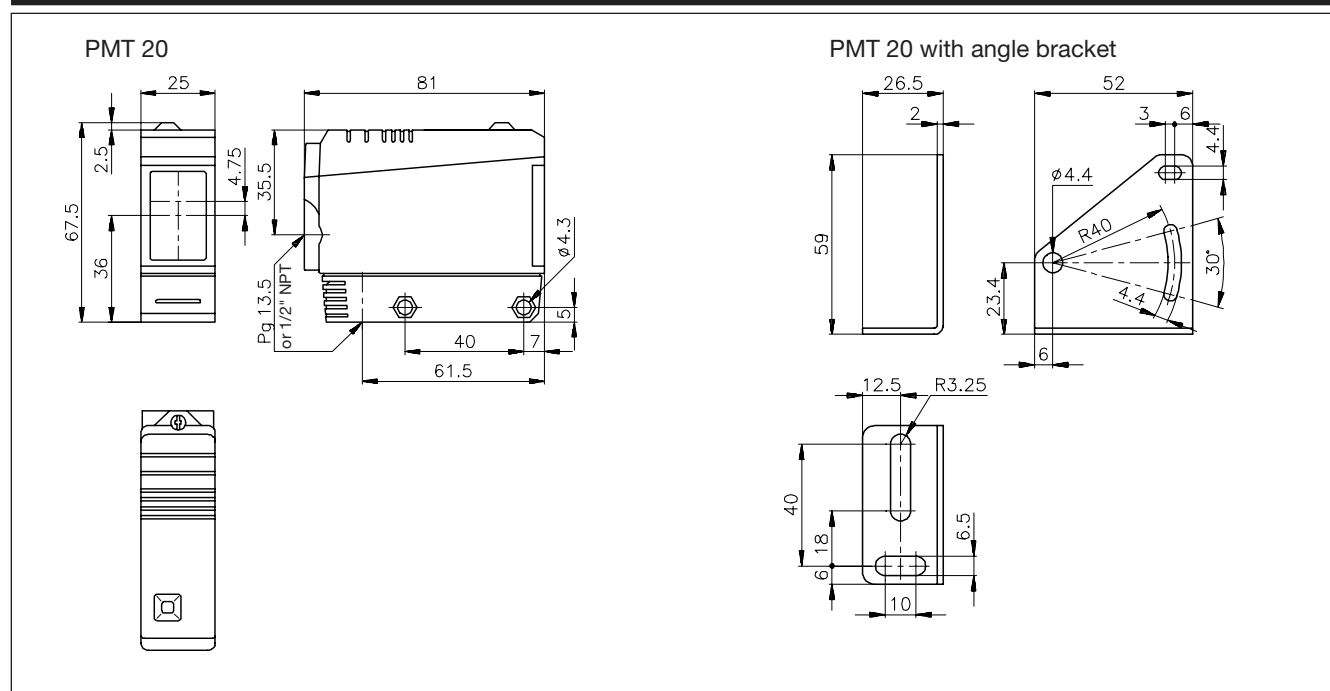
Mute input voltage: 24 VDC or 24 AC, 50/60 Hz

Operation Diagram

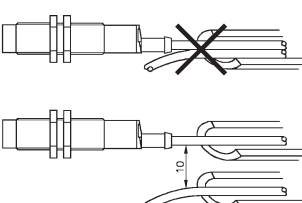
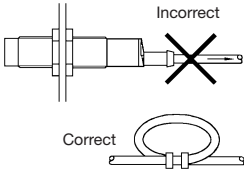
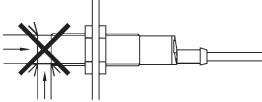
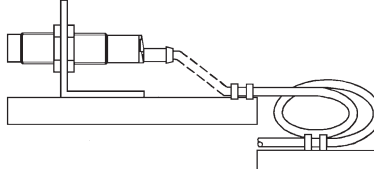
t = Time delay
tv = Power ON delay



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

Mouser Electronics

Authorized Distributor

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