

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 Small inductive loads Mechanical life Electrical life	μ (micro gap) 3 A/250 VAC 3 A/30 VDC 2 A/250 VAC 3 A/30 VDC ≥ 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	 UL325, CSA-C22.2 No.247
	 UL508
CE-marking	Yes

Selection of Function

Switch

1 2 3







1 Break switching

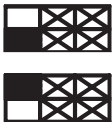
2 Make switching

 Don't care

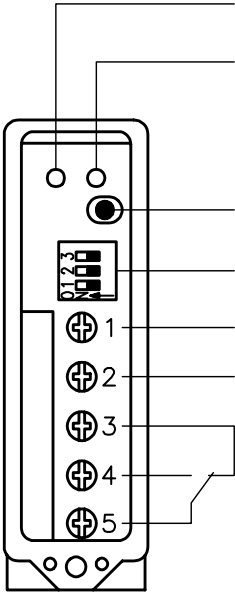
Upper position ON (Mode 1)

Lower position OFF (Mode 0)

PMT 20R.M



Connection Diagram



Time adjustment (optional)

Sensitivity adjustment

LED

DIP switches

24 VDC

24 VAC

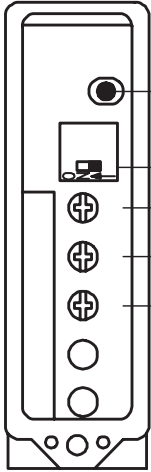
50/60 Hz

30 VDC

250 VAC

Max. 3 A

PMT20 Emitter



LED

Mute input MAKE/BREAKE

L

N

M

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

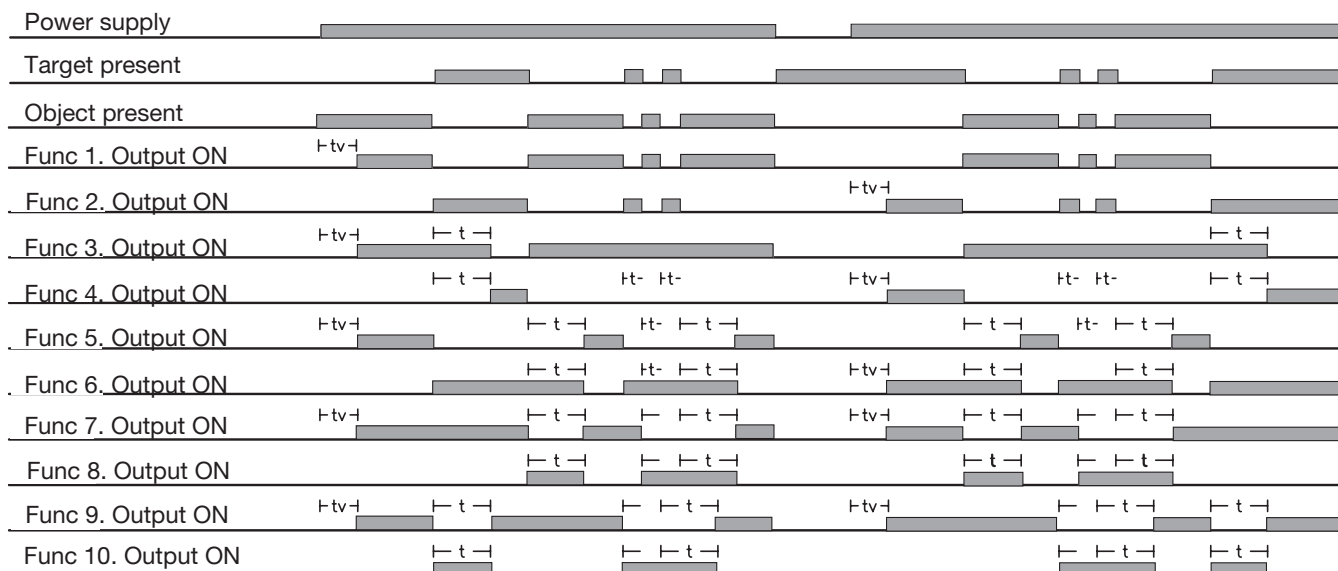
Mute input voltage: 24 VDC or 24 AC, 50/60 Hz

 Break

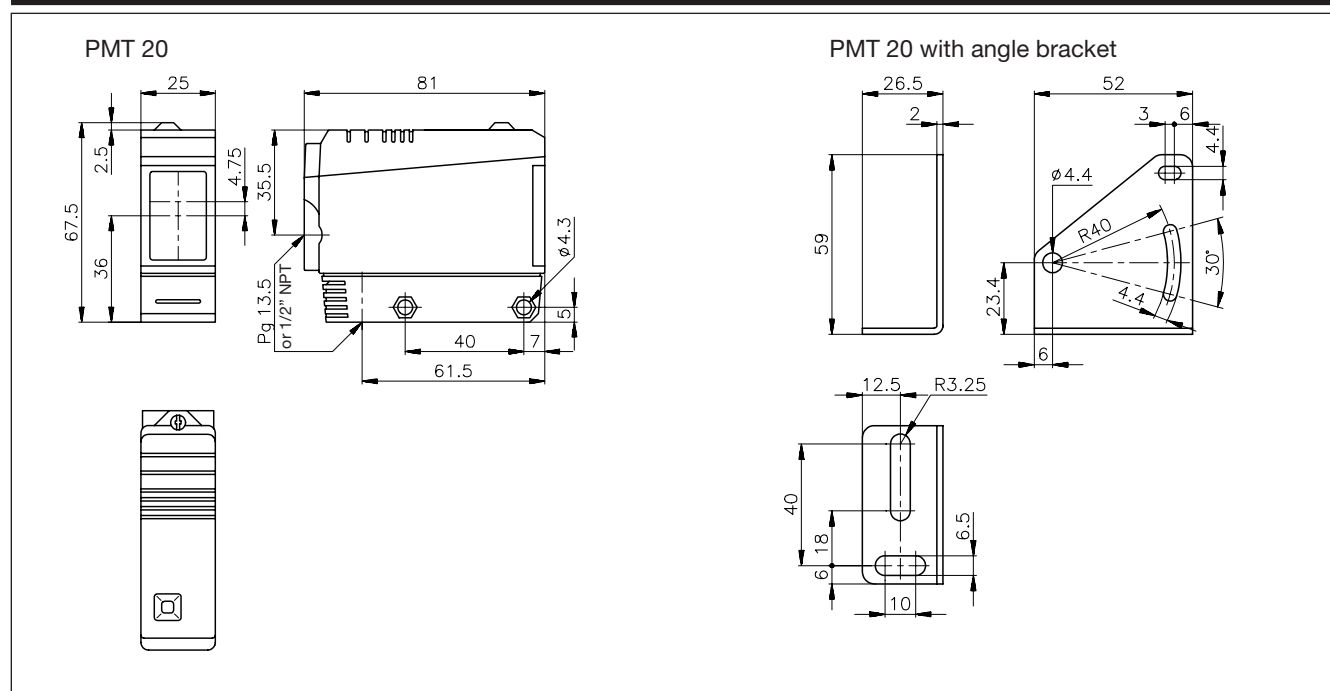
 Make

Operation Diagram

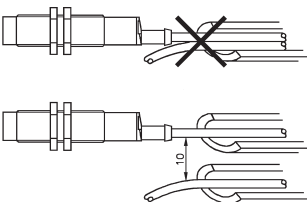
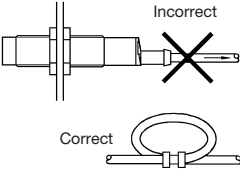
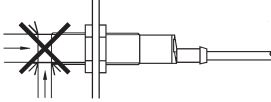
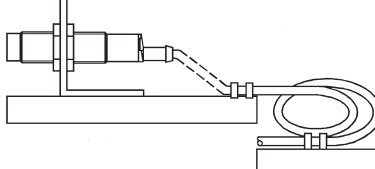
t = Time delay
tv = Power ON delay



Dimensions



Installation Hints

<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> 	<i>Relief of cable strain</i>  The cable should not be pulled	<i>Protection of the sensing face</i>  A proximity switch should not serve as mechanical stop	<i>Switch mounted on mobile carrier</i>  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)