# 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

Туре ——		
Receiver —		
Cable gland		
Mute Input		

#### **Type Selection**

Housing	Ordering no.	Ordering no.	
W x H x D	Receiver without timer	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**

specifications Emilier			
Rated operational volt. (U <sub>B</sub> ) 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**

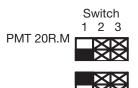
Rated operational volt. (U <sub>B</sub> ) AC: 45 to 65 Hz	24 VDC ± 20% 24 VAC ± 20%		
Rated operational power (Relay ON)	≤ 2 W (2.5 VA)		
Output			
Small inductive loads AC 15			
DC 13 Mechanical life	3 A/30 VDC ≥ 40 x 10 <sup>6</sup> operations		
Electrical life	≥ 5 x 10 <sup>5</sup> operations at 220 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 <sub>n</sub> ) (0 to 5,000 lux)	20 m		
Operating frequency (f)	20 Hz		
	≤ 20 ms ≤ 20 ms		
Power ON delay ( t <sub>v</sub> )	≤ 300 ms (typ. 100 ms)		
Output function	Mute function		



# **General Specifications**

Environment	III (IEC 60664/60664A		
Overvoltage category  Pollution degree	III (IEC 60664/60664A, 60947-1) 3 (IEC 60664/60664A, 60947-1)		
Degree of protection	IP 67 (IEC 60529, 60947-1)		
Temperature	05° to . 55°C / 10° to . 101°C\		
Operating Storage	-25° to +55°C (-13° to +131°F) -30° to +80°C (-22° to +176°F)		
	, ,		
Vibration Shock	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 <sup>2</sup>		
Cable gland	PG 13.5 or 1/2" NPT for cable 6 to 10 mm		
Weight			
Emitter	110 g		
Receiver	115 g		
UL-Approval c Nus	UL325, CSA-C22.2 No.247		
c UL us	UL508		
CE-marking	Yes		

#### **Selection of Function**

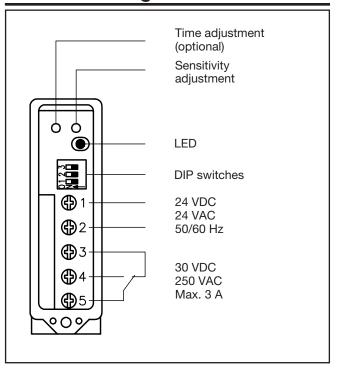


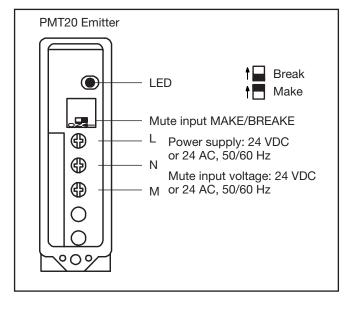
- 1 Break switching
- 2 Make switching

Don't care

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

#### **Connection Diagram**





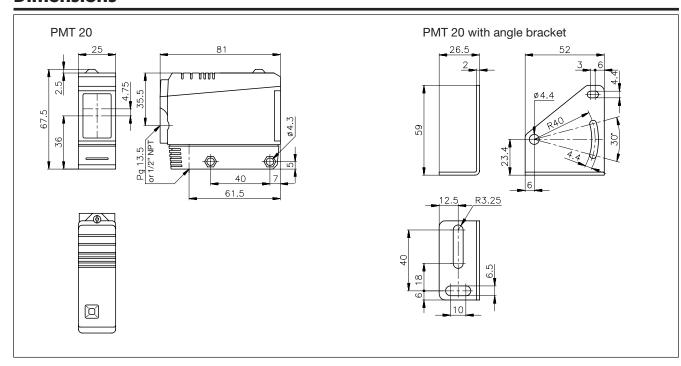


# **Operation Diagram**

t = Time delay tv = Power ON delay

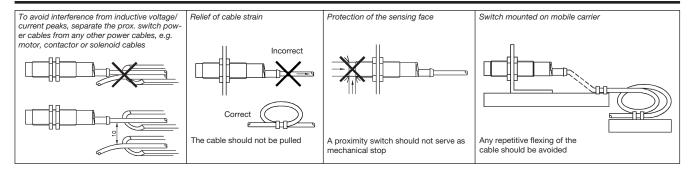
Power supply						
Target present						
Object present				1		
Func 1. Output ON	⊢tv-			1		
Func 2. Output ON				⊢tv-l		
Func 3. Output ON	⊢tv-	⊢ t		1		⊢ t ⊣
Func 4. Output ON		⊢ t	⊦t- ⊦t-	⊢tv-	⊦t- ⊦t- L	⊢ t ⊣
Func 5. Output ON	⊢tv⊣		⊢ t →	1	⊢ t →	
Func 6. Output ON			⊢ t →	⊢tv-	<u>⊢t</u>	
Func 7. Output ON	⊢tv⊣		<u> </u>	⊢tv-l	⊢t	
Func 8. Output ON			<u> </u>		<u> </u>	
Func 9. Output ON	⊢tv⊣	⊢ t -	<u></u> ⊢ ⊢ t ⊣	⊢tv⊣	<u> </u>	⊢ t →
Func 10. Output ON		⊢ t	<u></u> ⊢ ⊢ t ⊣		<u> </u>	⊢ t

# **Dimensions**





#### **Installation Hints**



#### **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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