

Photoelectrics Through-beam, Transistor Output Type PB10CNT20..

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- Elevators, Escalators and Entrance control
- Range 20 m
- Modulated, infrared light
- Supply voltage: 10 to 30 VDC
- Output: 100 mA, NPN or PNP type
- Make or break switching
- LED for output indication or power supply
- Protection: reverse polarity, short circuit, transients
- Cable versions with or without connector
- Emitter mute and power adjustment
- CE, UL325 and UL508 approved



Product Description

The PB10CNT. is a through beam sensor set specially designed for Elevators, Escalators, Entrance control to meet the requirements in the door market. The housing is very robust and is

known for its high long term reliability mute. The emitter has a mute input to turn it off for evaluation of the sensor function. Available in 10-30 VDC version.

Ordering Key

PB10CNT20NO-C2

Type _____
Housing style _____
Housing size _____
Housing material _____
Sensor code _____
Detection principle _____
Sensing distance _____
Output type _____
Output configuration _____
Connection type _____
Cable connector _____

Type Selection

Housing diameter	Range S _n	Con-nec-tor	Ordering no. Receiver NPN, NO	Ordering no. Receiver NPN, NC	Ordering no. Receiver PNP, NO	Ordering no. Receiver PNP, NC	Ordering no. Emitter
Ø 10 mm	20 m	NO	PB10CNT20NO	PB10CNT20NC	PB10CNT20PO	PB10CNT20PC	PB10CNT20
Ø 10 mm	20 m	YES	PB10CNT20NO-C2	PB10CNT20NC-C2	PB10CNT20PO-C2	PB10CNT20PC-C2	PB10CNT20-C2

Note: Please order emitter and receiver separately

Specifications Emitter

Rated operational volt. (U_B)	10 to 30 VDC	Light source	LED, 880 nm
Ripple (U_{rp})	≤ 10%	Light type	Infrared, modulated
Supply current	≤ 20 mA	Optical angle	± 5°
Protection	Reverse polarity, transients	Indication function	Power supply ON Mute input ON
Control input		Power adjustment	50 - 100%, in 7 steps
Normal oper.	> 1.5 VDC		
Mute	< 1.2 VDC		



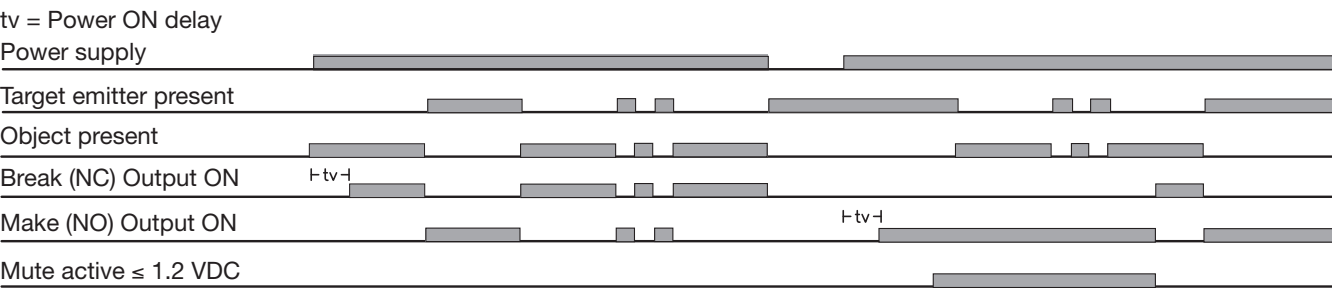
Specifications Receiver

Rated operating dist. (S _n)	20 m	Optical angle	± 5°
Blind zone	None	OFF-state current (I _r)	≤100 µA
Temperature drift	≤ 0.4%/°C	Voltage drop (U _d)	≤ 1.6 VDC @ 100 mA
Hysteresis (H)	3 - 20%	Protection	Short-circuit, reverse polarity, transients
Rated operational volt. (U _B)	10 to 30 VDC (ripple included)	Operating frequency (f)	100 Hz
Ripple (U _{rrp})	≤ 10%	Response time	OFF-ON (t _{ON}) ≈ 3.5 ms ON-OFF (t _{OFF}) ≈ 6.5 ms
Output current		Power ON delay (t _v)	≤ 300 ms
Continuous (I _a)	≤ 100 mA	Output function	NPN or PNP Make or break (NO or NC)
Short-time (I)	≤ 100 mA, (max. load capacity 100 nF)	Indication function	Output ON LED, yellow
No load supply current (I _o)	≤ 13 mA		
Minimum operational current (I _m)	0.5 mA		
Ambient light	>20.000 LUX		

General Specifications

Environment		Rated insulation voltage	50 VDC
Overvoltage category	II (IEC 60664/60664A, 60947-1)	Housing material	PC black
Pollution degree	3 (IEC 60664/60664A, 60947-1)	Connection	
Degree of protection	IP 67 (IEC 60529, 60947-1)	Cable	PVC, TX: grey / RX: black, 5 m, 3 x 0.14 mm ² , Ø 2.9 mm
Temperature		Weight	
Operating	-20° to +50°C (-4° to +122°F)	Emitter	80 g
Storage	-25° to +80°C (-13° to +176°F)	Receiver	80 g
Vibration	10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6)	CE-marking	EN12445, EN12453, EN12978
Shock	2 x 1 m & 100 x 0.5 m (IEC 60068-2-32)	UL-Approval	UL325, CSA-C22.2 No.247 UL508

Operation Diagram



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

Incorrect

Correct

The cable should not be pulled

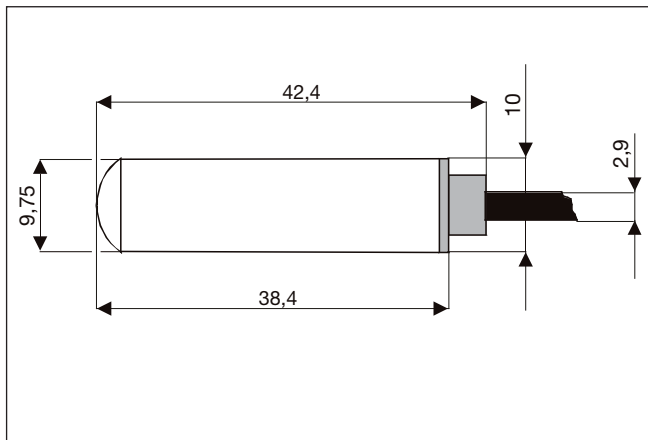
Protection of the sensing face

A proximity switch should not serve as mechanical stop

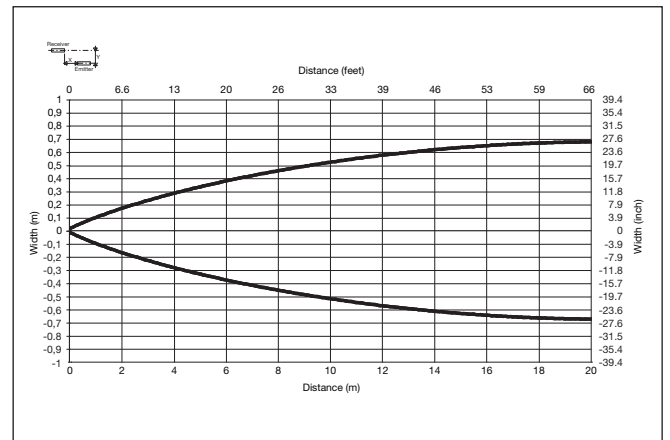
Switch mounted on mobile carrier

Any repetitive flexing of the cable should be avoided

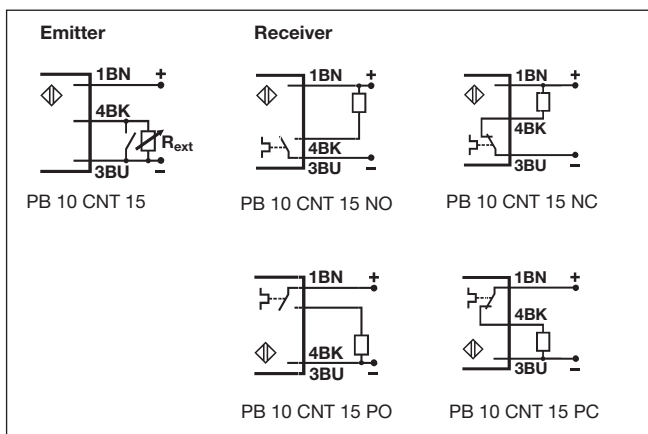
Dimensions



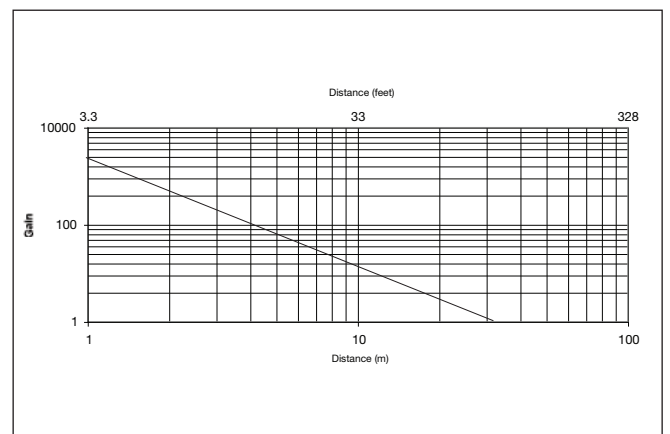
Detection Diagram



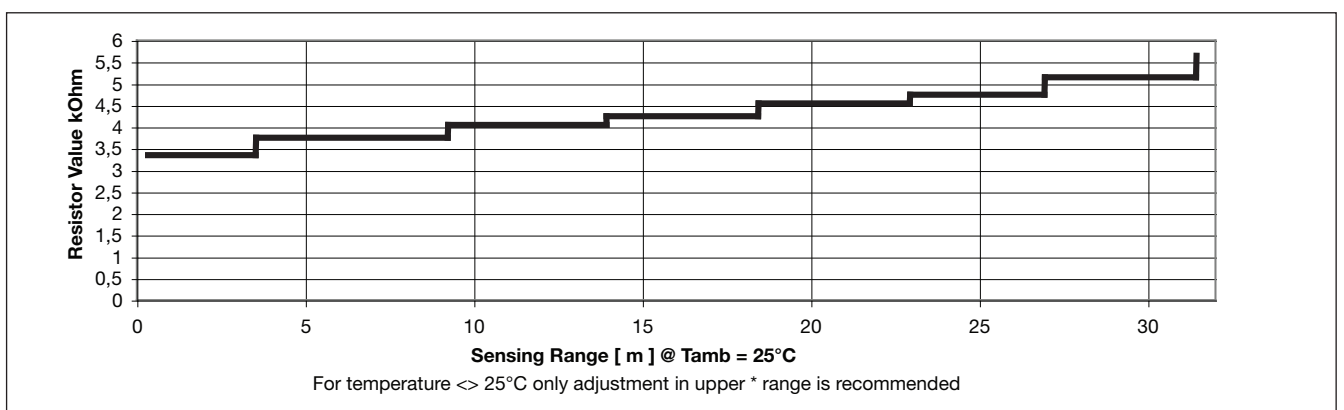
Wiring Diagram



Excess Gain



Mute Function



Delivery Contents

- PB10
- Installation instruction
- **Packaging:** plastic bag