

# Photoelectrics Through-beam, Transistor Output Type PE12CNT15..

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- Elevators, Escalators and Entrance control
- Range 15 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 PE12CNT. is a family of general purpose Photoelectric sensors. They are specially designed for Elevators, Escalators, Entrance control to meet the requirements in the door market. The "snap-on"

housing can be mounted with a wall thickness from 0.6 mm to 2.25 mm. The emitter has a mute input to turn it off for evaluation of the sensor function. Available in 10-30 VDC version.

## Ordering Key

**PE12CNT15NO-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 <sub>n</sub>	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 12 mm	15 m	NO	PE12CNT15NO	PE12CNT15NC	PE12CNT15PO	PE12CNT15PC	PE12CNT15
Ø 12 mm	15 m	YES	PE12CNT15NO-C2	PE12CNT15NC-C2	PE12CNT15PO-C2	PE12CNT15PC-C2	PE12CNT15-C2

Note: Please order emitter and receiver separately

## Specifications Emitter

Rated operational volt. (U <sub>B</sub> )	10 to 30 VDC	Light source	LED, 880 nm
Ripple (U <sub>rip</sub> )	≤ 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	R <sub>x</sub> ~ 3 kΩ -10 kΩ
Normal oper.	> 1.5 VDC		
Mute	< 1.2 VDC		0 - 100%, in 20 step

## Specifications Receiver

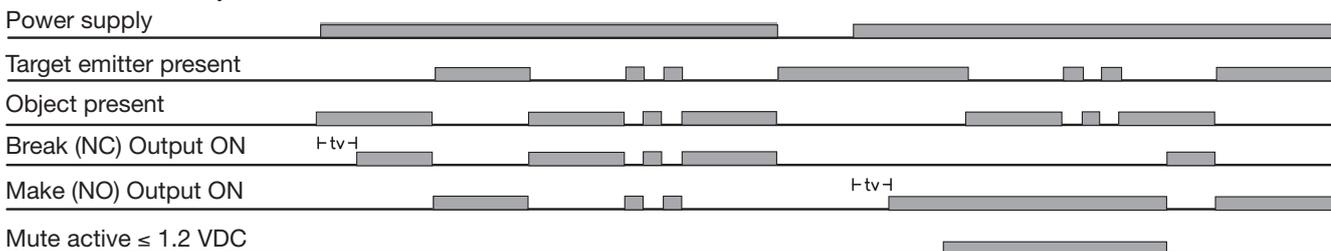
<b>Rated operating dist. (S<sub>n</sub>)</b>	15 m	<b>Optical angle</b>	± 5°
<b>Blind zone</b>	None	<b>OFF-state current (I<sub>r</sub>)</b>	≤ 100 µA
<b>Temperature drift</b>	≤ 0.4%/°C	<b>Voltage drop (U<sub>d</sub>)</b>	≤ 1.6 VDC @ 100 mA
<b>Hysteresis (H)</b>	3 - 20%	<b>Protection</b>	Short-circuit, reverse polarity, transients
<b>Rated operational volt. (U<sub>B</sub>)</b>	10 to 30 VDC (ripple included)	<b>Operating frequency (f)</b>	100 Hz
<b>Ripple (U<sub>rrp</sub>)</b>	≤ 10%	<b>Response time</b>	OFF-ON (t <sub>ON</sub> ) ≈ 3.5 ms ON-OFF (t <sub>OFF</sub> ) ≈ 6.5 ms
<b>Output current</b>		<b>Power ON delay (t<sub>v</sub>)</b>	≤ 300 ms
Continuous (I <sub>e</sub> )	≤ 100 mA	<b>Output function</b>	NPN or PNP
Short-time (I)	≤ 100 mA, (max. load capacity 100 nF)	<b>Indication function</b>	Output ON
<b>No load supply current (I<sub>o</sub>)</b>	≤ 16 mA		Make or break (NO or NC)
<b>Minimum operational current (I<sub>m</sub>)</b>	0.5 mA		LED, yellow
<b>Ambient light</b>	>20.000 LUX		

## General Specifications

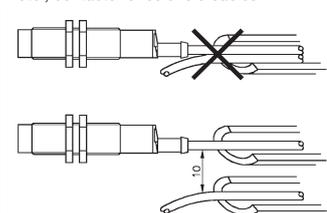
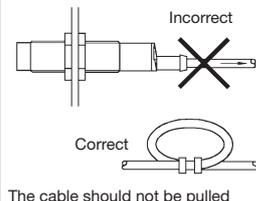
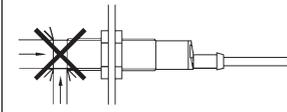
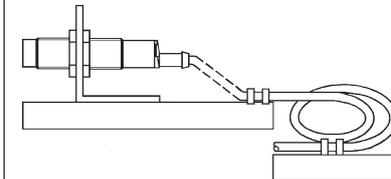
<b>Environment</b>		<b>Housing material</b>	
Overvoltage category	II (IEC 60664/60664A, 60947-1)	Body PE12	PC black
Pollution degree	3 (IEC 60664/60664A, 60947-1)	Front glass	PC black
Degree of protection	IP 67 (IEC 60529, 60947-1)	<b>Connection</b>	
<b>Temperature</b>		Cable	PVC, TX: grey / RX: black, 5 m, 3 x 0.14 mm <sup>2</sup> , Ø 2.9 mm
Operating	-20° to +50°C (-4° to +122°F)	<b>Weight</b>	
Storage	-25° to +80°C (-13° to +176°F)	Emitter	80 g
<b>Vibration</b>	10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6)	Receiver	80 g
<b>Shock</b>	2 x 1 m & 100 x 0.5 m (IEC 60068-2-32)	<b>CE-marking</b>	EN12445, EN12453, EN12978
<b>Rated insulation voltage</b>	50 VDC	<b>UL-Approval</b>	cULus UL325, CSA-C22.2 No.247 cULus UL508

## Operation Diagram

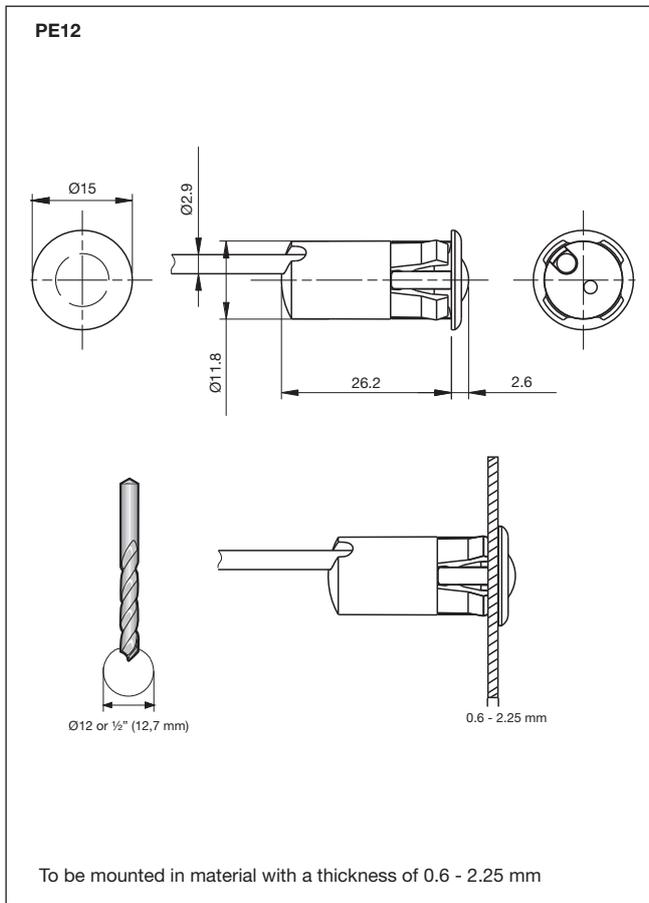
t<sub>v</sub> = Power ON delay



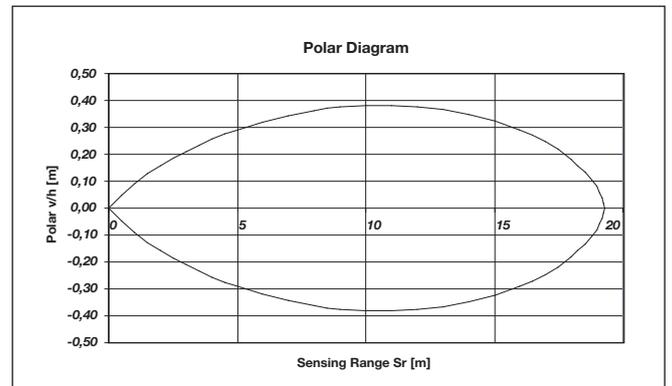
## Installation Hints

<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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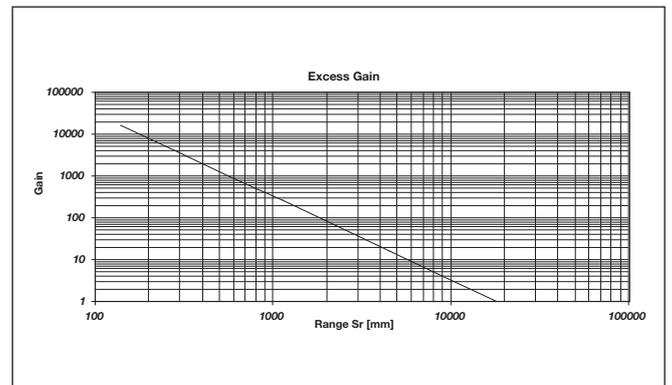
## Dimensions



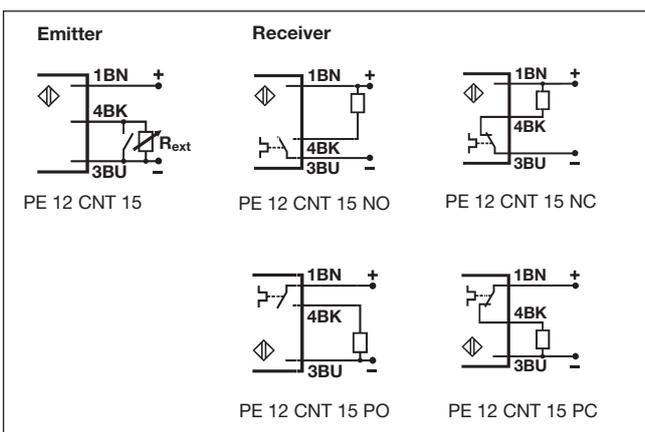
## Detection Diagram



## Excess Gain



## Wiring Diagram



## Delivery Contents

- PE12
- Installation instruction
- **Packaging:** plastic bag