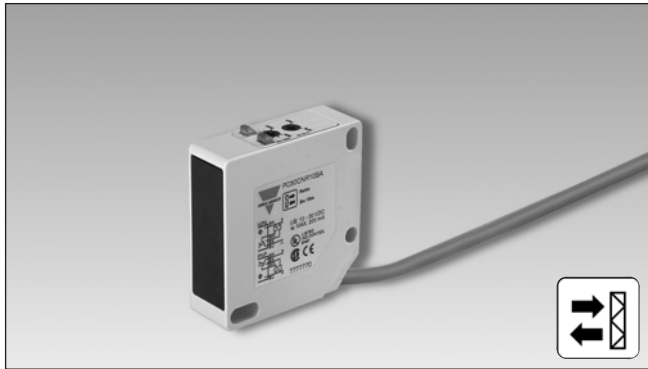


# Photoelectrics Retro-reflective, Relay Output Type PC50CNR10RP

CARLO GAVAZZI



- Range: 10 m
- Adjustable sensitivity
- Modulated, infrared light
- Supply voltage:  
12 to 240 VDC and 24 to 240 VAC, 50/60 Hz
- Output: Relay 3 A, 30 VDC, 240 VAC
- Make and break switching function
- LED-indication for output ON, signal stability and supply ON
- High EMC immunity



## Product Description

The PC50CNR. is a general purpose retro-reflective sensor in a compact squared 17 x 50 x 50 mm reinforced PC/ABS-housing. It is useful in applications where basic sensors provide adequate

sensing performance. The long sensing range in addition to sensitivity adjustment gives a very flexible sensor. Light and dark operation is switch selectable.

## Ordering Key

**PC50CNR10RP**

Type	_____
Housing style	_____
Housing size	_____
Housing material	_____
Housing length	_____
Detection principle	_____
Sensing distance	_____
Output type	_____
Output configuration	_____

## Type Selection

Housing W x H x D	Range (S <sub>n</sub> )	Ordering no. Make and break switching
17 x 50 x 50 mm	10 m	PC 50 CNR 10 RP

**Note:** Reflectors to be ordered separately

## Specifications

<b>Rated operating distance</b> (S <sub>n</sub> )	Up to 10 m, with reflector type ER 4, ref. target	<b>Response time</b> OFF-ON (t <sub>ON</sub> ) ON-OFF (t <sub>OFF</sub> )	≤ 25 ms ≤ 25 ms
<b>Blind zone</b>	Max. 10 cm	<b>Power ON delay</b> (t <sub>v</sub> )	≤ 300 ms
<b>Sensitivity</b>	Adj. by single-turn pot. meter	<b>Output function</b>	Light or dark operation is switch selectable
<b>Temperature drift</b>	≤ 0.5%/°C	<b>Indication function</b> Output ON Supply ON, signal stability	LED, yellow LED, green
<b>Hysteresis</b> (H) Differential travel	3-20%	<b>Environment</b> Overvoltage category Pollution degree Degree of protection	II (IEC 60664/60664A; 60947-1) 3 (IEC 60664/60664A; 60947-1) IP 67 (IEC 60529; 60947-1)
<b>Rated operational volt.</b> (U <sub>B</sub> )	12-240 VDC 24-240 VAC, 50 to 60 Hz	<b>Temperature</b> Operating Storage	-20° to +60°C (-4° to +140°F) -25° to +80°C (-13° to +176°F)
<b>Rated operational power</b>	≤ 2.0 VA (relay ON)	<b>Vibration</b>	10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6)
<b>Output</b> Contact ratings Resistive loads AC 1 DC 1	3 A/230 VAC 3 A/30 VDC (> 10 mA/5 VDC)	<b>Shock</b>	2 x 1 m & 100 x 0.5 m (IEC 60068-2-32)
Mechanical life (typical)	≥ 15 x 10 <sup>6</sup> operations	<b>Rated insulation voltage</b>	250 VAC (rms)
Electrical life (typical)	≥ 1 x 10 <sup>5</sup> operations at 3 A/240 VAC	<b>Housing material</b> Body Front glass Mounting bracket	PC/ABS, grey, reinforced PC black Steel, galvanized
<b>Protection</b>	Reverse polarity, transients		
<b>Light source</b>	GaAlAs, LED, 880 nm		
<b>Light type</b>	Infrared, modulated		
<b>Sensing angle</b>	± 2° at 1/2 range		
<b>Ambient light</b>	Max. 5'000 lux		
<b>Operating frequency</b>	20 Hz		

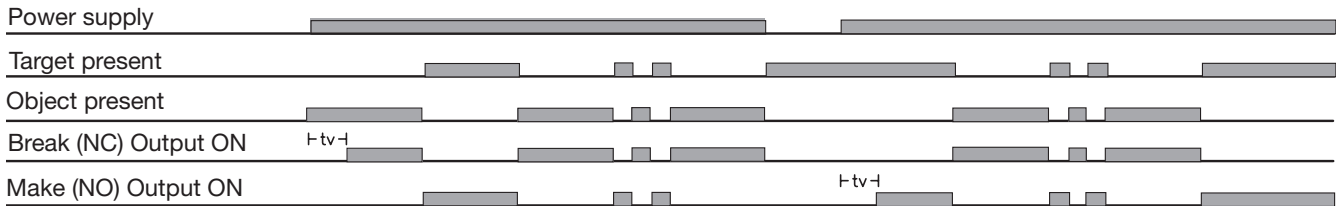


## Specifications (cont.)

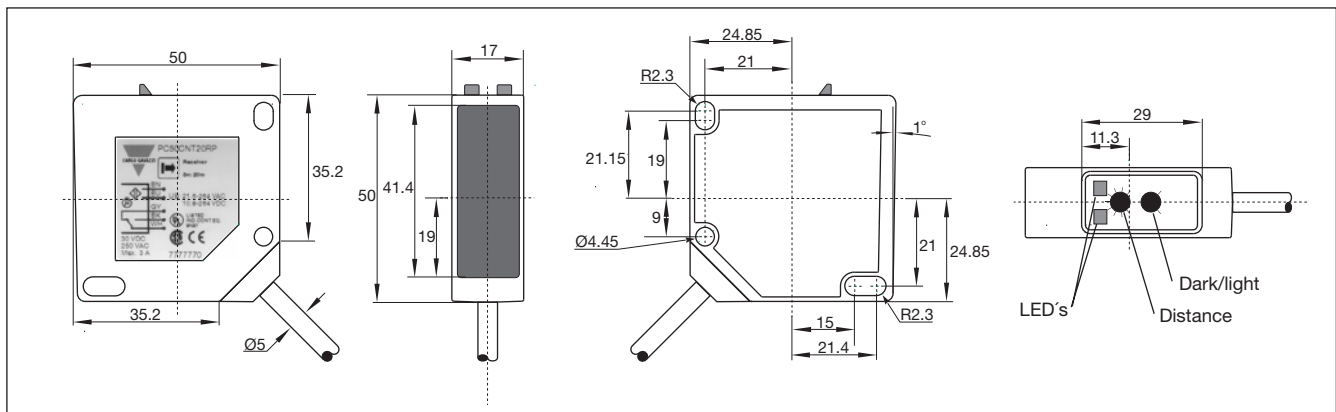
Connection Cable	PVC, grey, 2 m, 5 x 0.34 mm <sup>2</sup>	Approvals	UL, CSA
Weight	130 g	CE-marking	Yes

## Operation Diagram

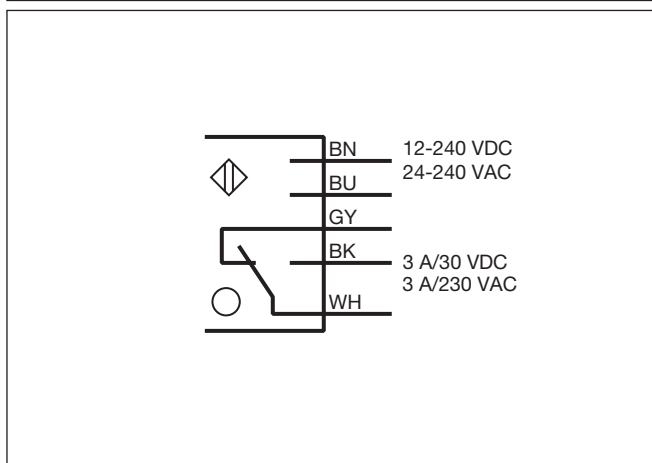
tv = Power ON delay



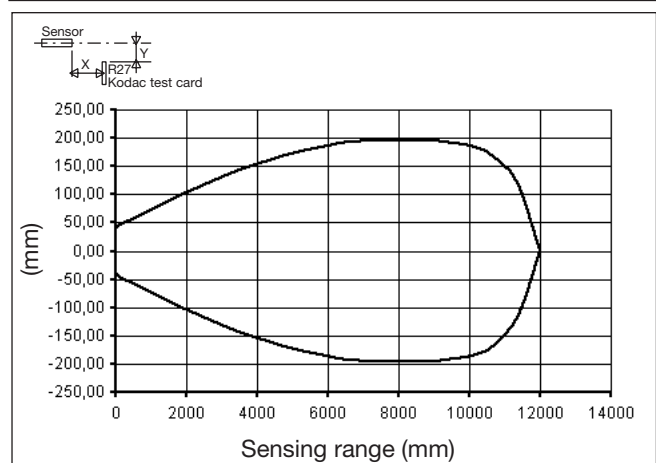
## Dimensions



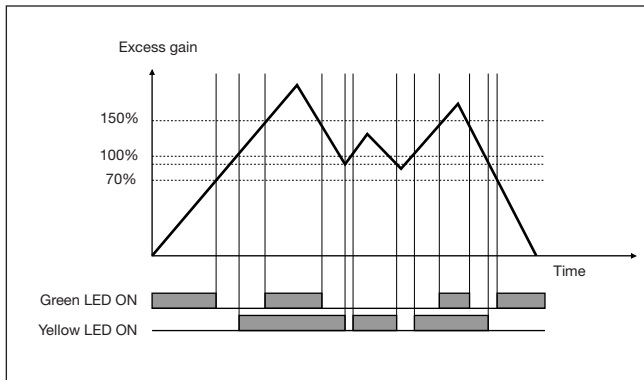
## Wiring Diagram



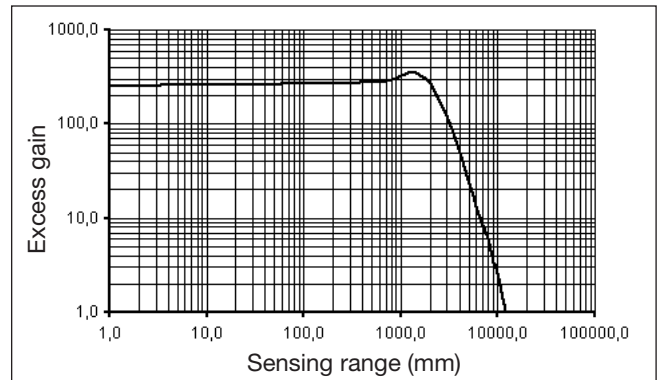
## Detection Diagram



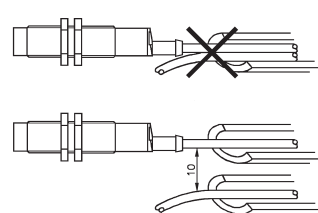
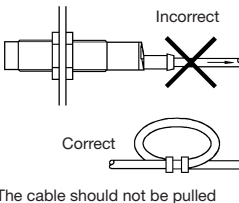
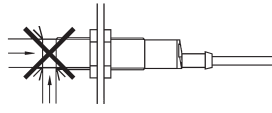
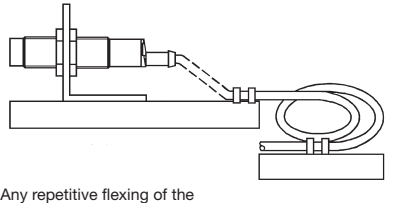
## Signal Stability



## Excess Gain



## Installation Hints

<p><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></p> 	<p><i>Relief of cable strain</i></p>  <p>Incorrect</p> <p>Correct</p> <p>The cable should not be pulled</p>	<p><i>Protection of the sensing face</i></p>  <p>A proximity switch should not serve as mechanical stop</p>	<p><i>Switch mounted on mobile carrier</i></p>  <p>Any repetitive flexing of the cable should be avoided</p>
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## Delivery Contents

- Photoelectric switch: PC50CNR..
- Installation instruction
- Mounting bracket APC50-1
- **Packaging:** Cardboard box

## Accessories

- Reflectors: ER-series
- Screwdriver for adjustment: 77-001

For further information refer to "Accessories"

