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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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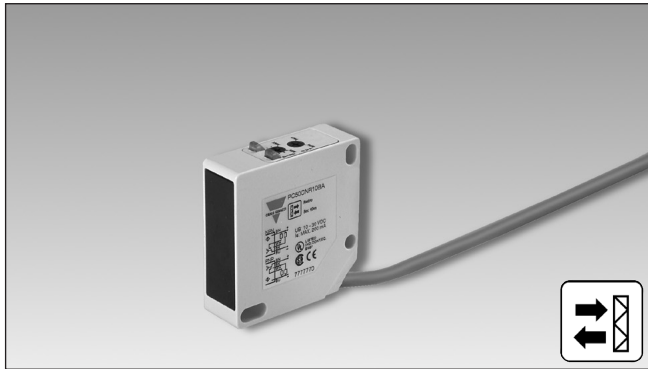


# Photoelectrics

## Retro-reflective, Polarized, Relay Output

### Type PC50CNP06RP

CARLO GAVAZZI



- Range: 6 m
- Adjustable sensitivity
- Modulated, visible red light, polarized
- High immunity to shiny surfaces
- Supply voltage: 12 to 240 VDC and 24 to 240 VAC, 50/60 Hz
- Output: Relay 3 A, 30 VDC, 250 VAC
- Make or break switching function
- LED-indication for output ON, signal stability and supply ON
- High degree of EMC



## Product Description

The PC50CNP. is a general purpose polarized 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 ade-

quate 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

**PC50CNP06RP**

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	6 m	PC 50 CNP 06 RP

**Note:** Reflectors to be ordered separately

## Specifications

<b>Rated operating distance (S<sub>n</sub>)</b>	Up to 6 m, with reflector type ER 4, ref. target	<b>Operating frequency</b>	20 Hz
<b>Blind zone</b>	Max. 20 cm	<b>Response time</b> OFF-ON (t <sub>ON</sub> ) ON-OFF (t <sub>OFF</sub> )	≤ 25 ms ≤ 25 ms
<b>Sensitivity</b>	Adj. by single-turn. pot.	<b>Power ON delay (t<sub>v</sub>)</b>	≤ 300 ms
<b>Temperature drift</b>	≤ 0.5%/°C	<b>Output function</b>	Light or dark operation is switch selectable
<b>Hysteresis (H)</b> Differential travel	3-20%	<b>Indication function</b> Output ON Supply ON, signal stability	LED, yellow LED, green
<b>Rated operational volt. (U<sub>B</sub>)</b>	12-240 VDC 24-240 VAC, 50 to 60 Hz	<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 power</b>	≤ 2.5 VA (relay ON)	<b>Temperature</b> Operating	-20° to +60°C (-4° to +140°F)
<b>Output</b> Contact ratings Resistive loads AC 1 DC 1	3 A/250 VAC 3 A/30 VDC (>10 mA/5 VDC)	Storage	-25° to +70°C (-13° to +158°F)
Mechanical life (typical)	≥ 15 x 10 <sup>6</sup> operations	<b>Vibration</b>	10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6)
Electrical life (typical)	≥ 1 x 10 <sup>5</sup> operations at 3 A/240 VAC	<b>Shock</b>	2 x 1 m & 100 x 0.5 m (IEC 60068-2-32)
<b>Protection</b>	Reverse polarity, transients		
<b>Light source</b>	GaAlAs, LED, 660 nm		
<b>Light type</b>	Visible red, modulated		
<b>Sensing angle</b>	± 2° at 1/2 range		
<b>Ambient light</b>	Max. 10'000 lux		

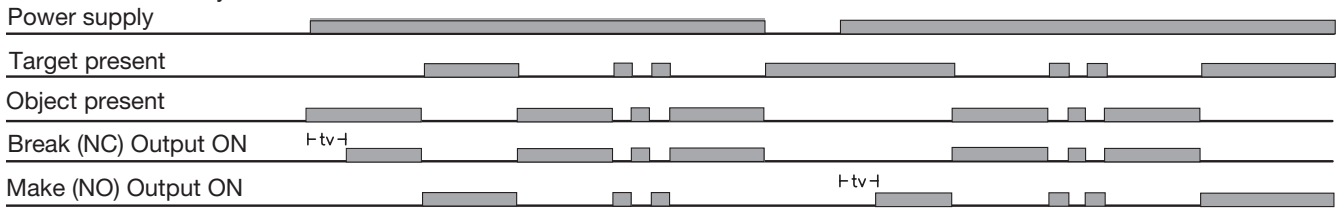


## Specifications (cont.)

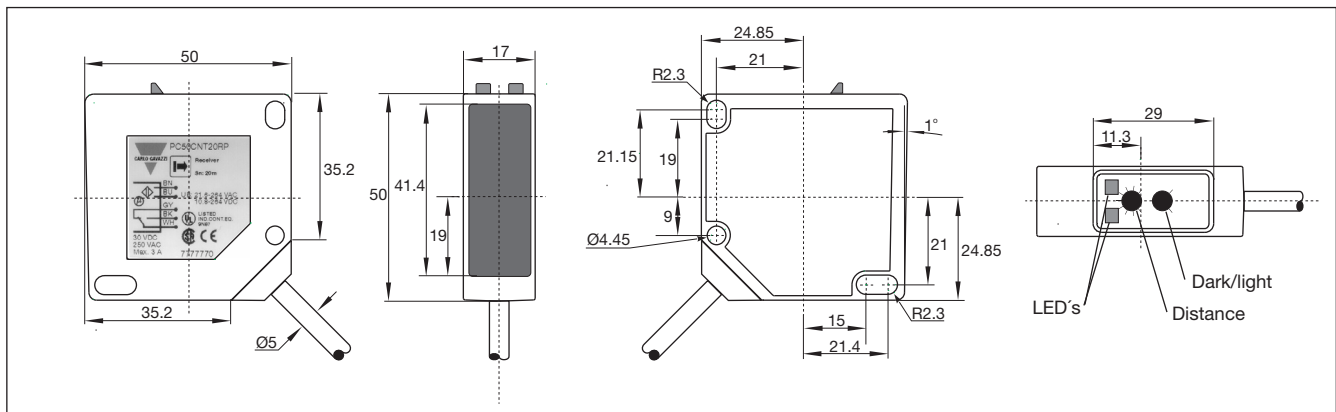
<b>Rated insulation voltage</b>	250 VAC (rms)	<b>Cable gland</b>	Nickel-plated brass
<b>Housing material</b>	PC/ABS, grey reinforced	<b>Weight</b>	130 g
Body	PC/ABS, grey reinforced	<b>Approvals</b>	UL, CSA
Front glass	Red PMMA	<b>CE-marking</b>	Yes
Mounting bracket	Steel, galvanized		
<b>Connection</b>			
Cable	Grey, 2 m, 4 x 0.25 mm <sup>2</sup>		

## Operation Diagram

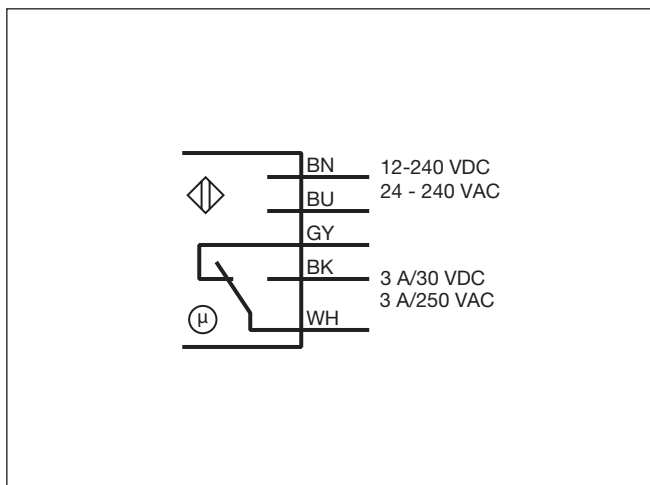
tv = Power ON delay



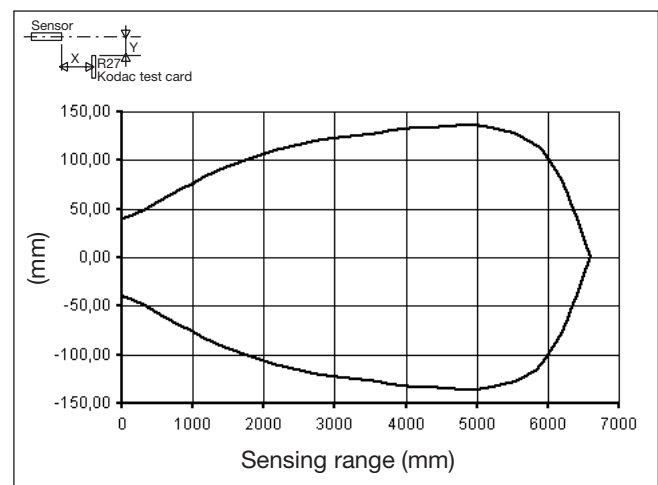
## Dimensions



## Wiring Diagram

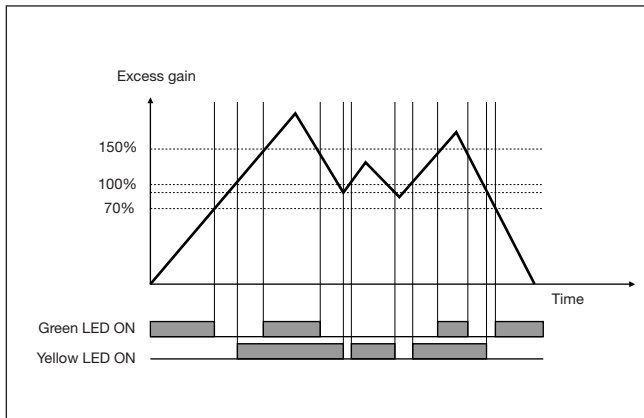


## Detection Diagram

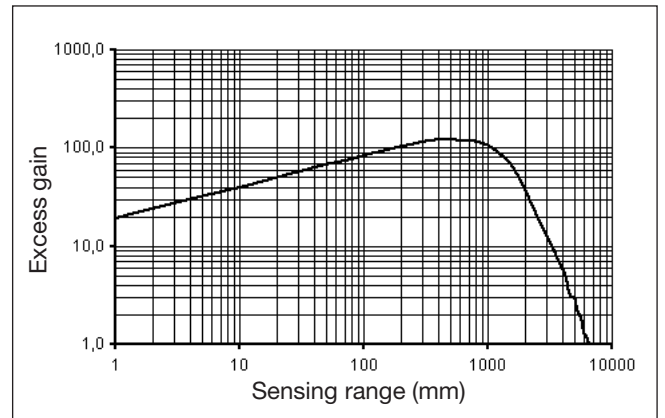




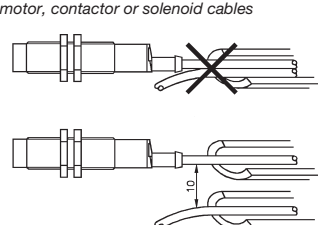
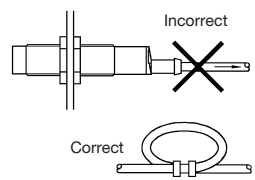
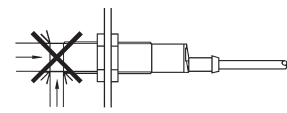
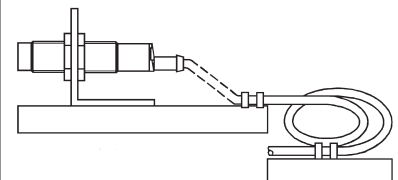
## Signal Stability



## Excess Gain



## 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>Incorrect</p> <p>Correct</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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## Delivery Contents

- Photoelectric switch: PC50CNP..
- Installation instruction
- Mounting bracket APC50-1
- **Packaging:** Cardboard box

## Accessories

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

