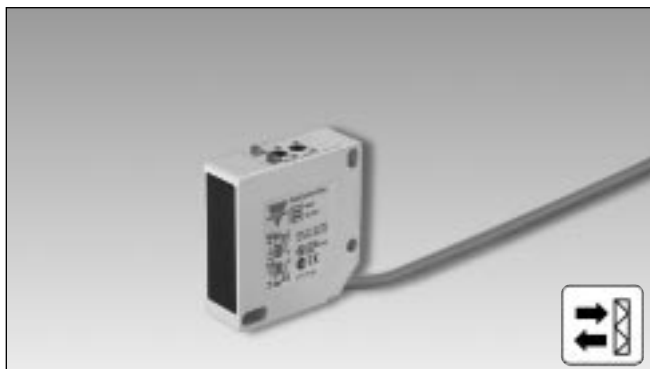


# Photoelectrics

## 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, 240 VAC
- Make or break switching function
- LED-indication for output ON, signal stability and supply ON
- High EMC immunity

## 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>	≤ 2.0 VA (relay ON)	<b>Temperature</b> Operating Storage	-20° to +60°C (-4° to +140°F) -25° to +70°C (-13° to +158°F)
<b>Output</b> Contact ratings Resistive loads AC 1 DC 1	3 A/230 VAC 3 A/30 VDC (>10 mA/5 VDC)	<b>Vibration</b>	10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6)
Mechanical life (typical) Electrical life (typical)	≥ 1 x 10 <sup>6</sup> operations ≥ 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>Rated insulation voltage</b>	250 VAC (rms)
<b>Light source</b> <b>Light type</b> <b>Sensing angle</b> <b>Ambient light</b>	GaAlAs, LED, 660 nm Visible red, modulated ± 2° at 1/2 range Max. 5'000 lux		

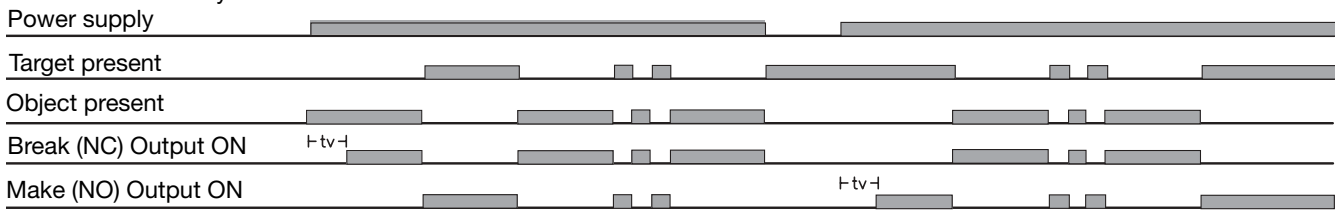


## Specifications (cont.)

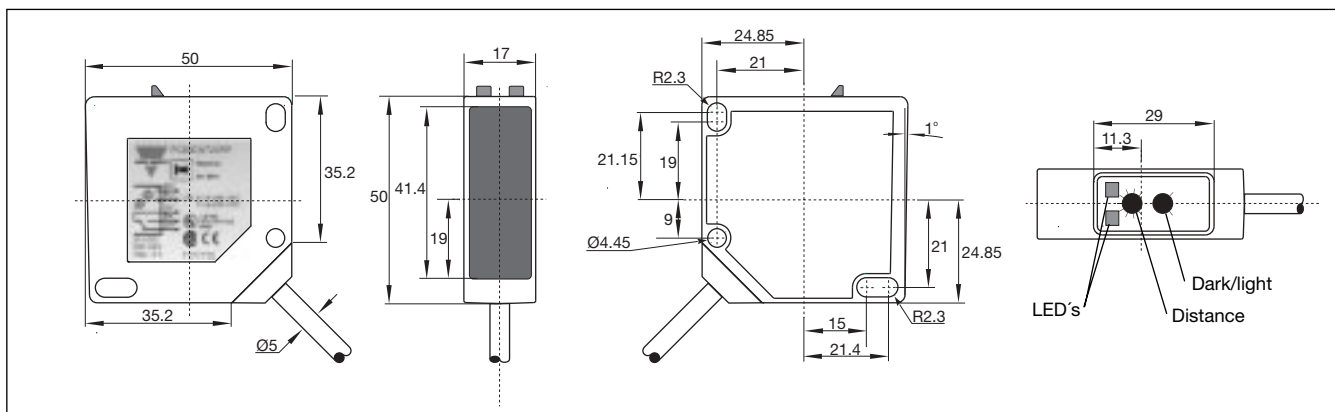
<b>Housing material</b>	PC/ABS, grey reinforced Front glass Red PMMA Mounting bracket	<b>Weight</b>	130 g
<b>Connection</b>	Cable Cable gland	<b>Approvals</b>	UL, CSA
	Grey, 2 m, 5 x 0.25 mm <sup>2</sup> Nickel-plated brass	<b>CE-marking</b>	Yes

## Operation Diagram

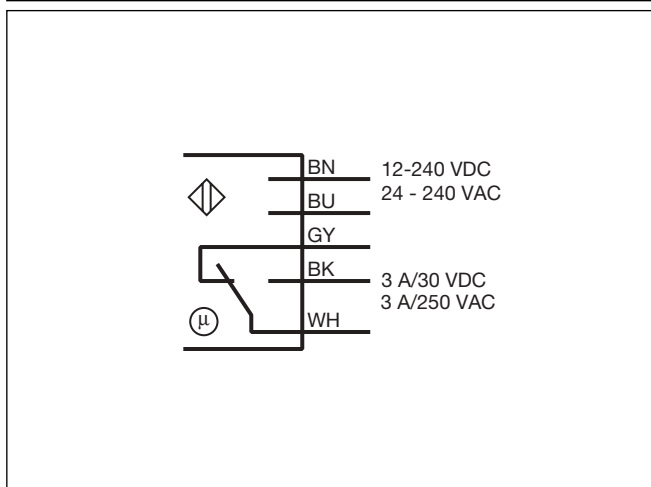
tv = Power ON delay



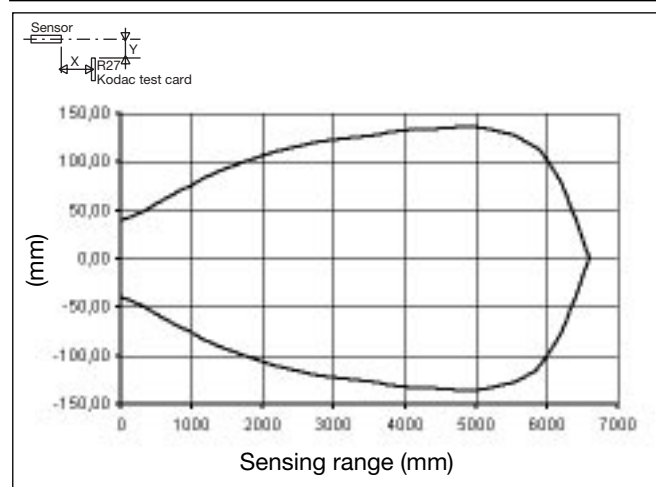
## Dimensions



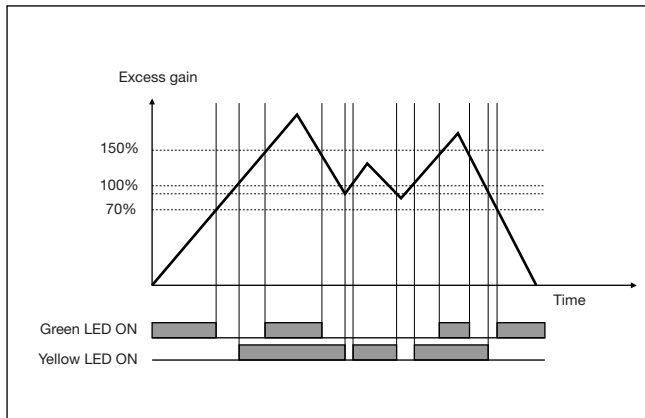
## Wiring Diagram



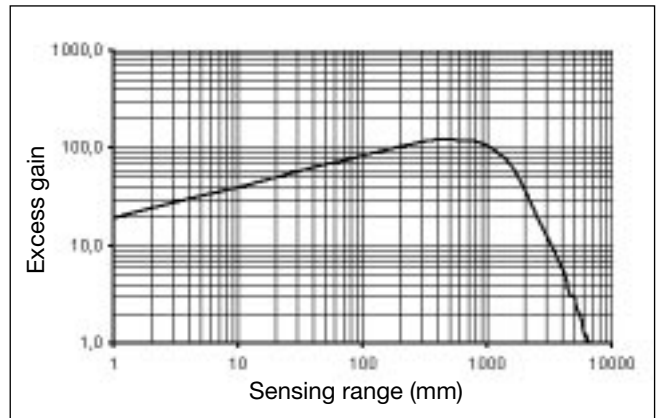
## Detection Diagram



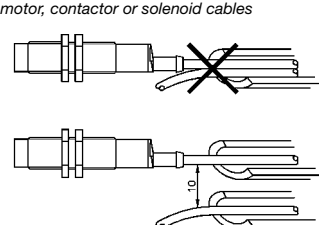
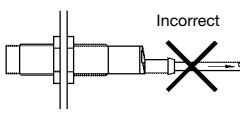
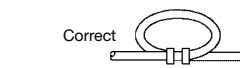
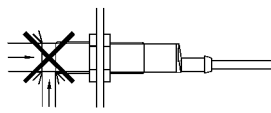
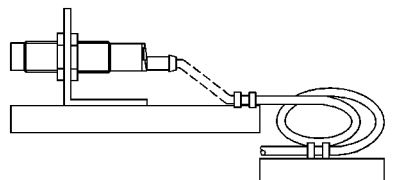
## Signal Stability



## 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

For further information refer to "Accessories"

