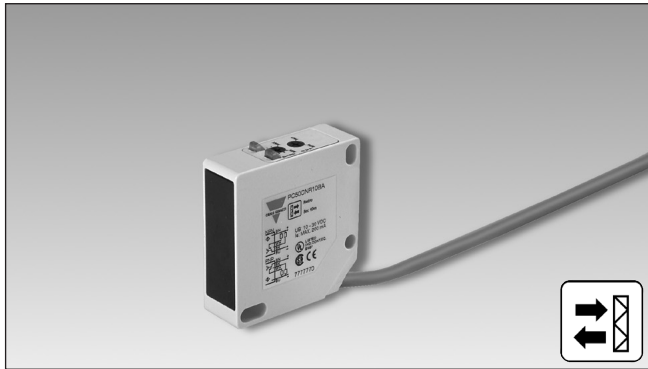


Photoelectrics

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 _n) | 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

| | | | |
|---|--|---------------------------------------|--|
| Rated operating distance (S_n) | Up to 6 m, with reflector type ER 4, ref. target | Ambient light | Max. 10'000 lux |
| Blind zone | Max. 20 cm | Operating frequency | 20 Hz |
| Sensitivity | Adj. by single-turn. pot. | Response time | |
| Temperature drift | ≤ 0.5%/°C | OFF-ON (t _{ON}) | ≤ 25 ms |
| Hysteresis (H) | | ON-OFF (t _{OFF}) | ≤ 25 ms |
| Differential travel | 3-20% | Power ON delay (t_v) | ≤ 300 ms |
| Rated operational volt. (U_B) | 12-240 VDC 24-240 VAC, 50 to 60 Hz | Output function | Light or dark operation is switch selectable |
| Rated operational power | ≤ 2.5 VA (relay ON) | Indication function | |
| Output | | Output ON | LED, yellow |
| Contact ratings | | Supply ON, signal stability | LED, green |
| Resistive loads | AC 1 3 A/250 VAC DC 1 3 A/30 VDC (>10 mA/5 VDC) | Environment | |
| Mechanical life (typical) | ≥ 15 x 10 ⁶ operations | Overvoltage category | II (IEC 60664/60664A; 60947-1) |
| Electrical life (typical) | ≥ 1 x 10 ⁵ operations at 3 A/240 VAC | Pollution degree | 3 (IEC 60664/60664A; 60947-1) |
| Protection | Reverse polarity, transients | Degree of protection | IP 67 (IEC 60529; 60947-1) |
| Light source | GaAlAs, LED, 660 nm | Temperature | |
| Light type | Visible red, modulated | Operating | -20° to +60°C (-4° to +140°F) |
| Sensing angle | ± 2° at 1/2 range | Storage | -25° to +70°C (-13° to +158°F) |
| | | Vibration | 10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6) |
| | | Shock | 2 x 1 m & 100 x 0.5 m (IEC 60068-2-32) |

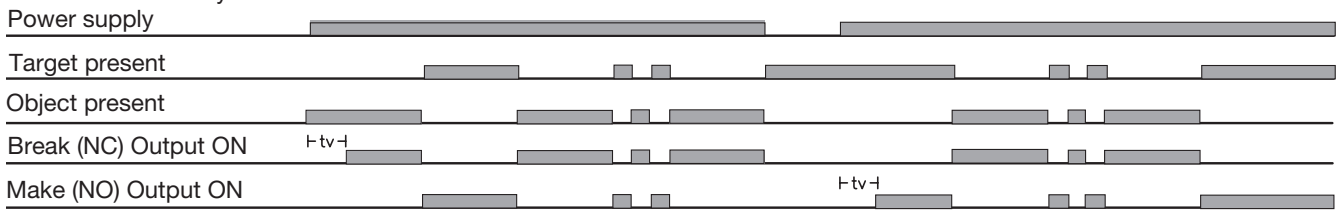


Specifications (cont.)

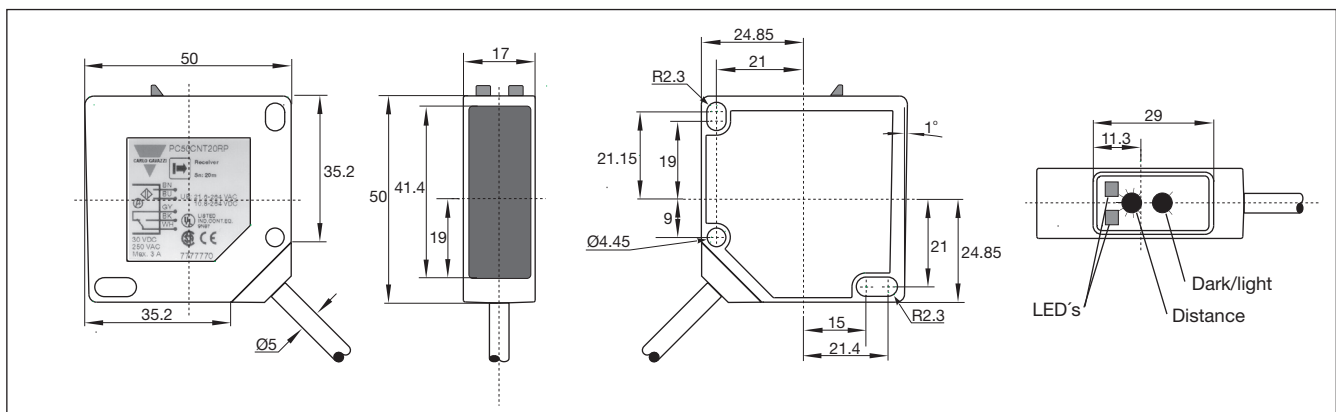
| | | | |
|---------------------------------|-------------------------|-------------------|-------------------------------------|
| Rated insulation voltage | 250 VAC (rms) | Connection | |
| Housing material | | Cable | Grey, 2 m, 5 x 0.34 mm ² |
| Body | PC/ABS, grey reinforced | Cable gland | Nickel-plated brass |
| Front glass | Red PMMA | Weight | 130 g |
| Mounting bracket | Steel, galvanized | Approvals | UL, CSA |
| | | CE-marking | Yes |

Operation Diagram

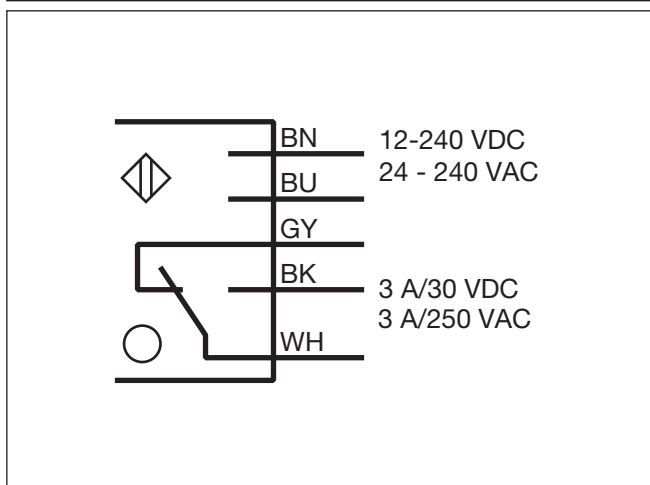
tv = Power ON delay



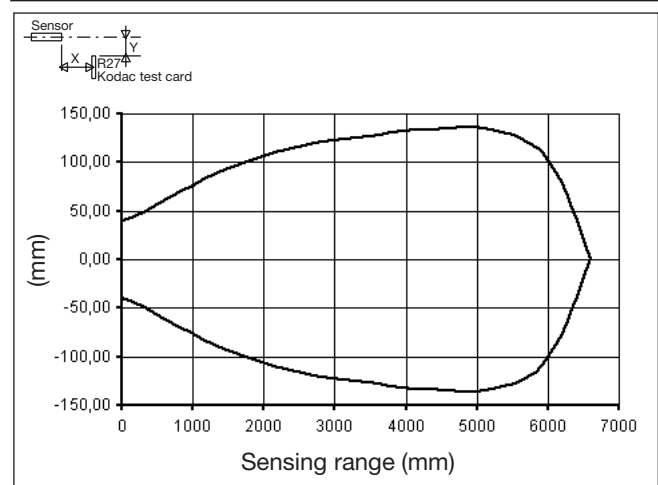
Dimensions



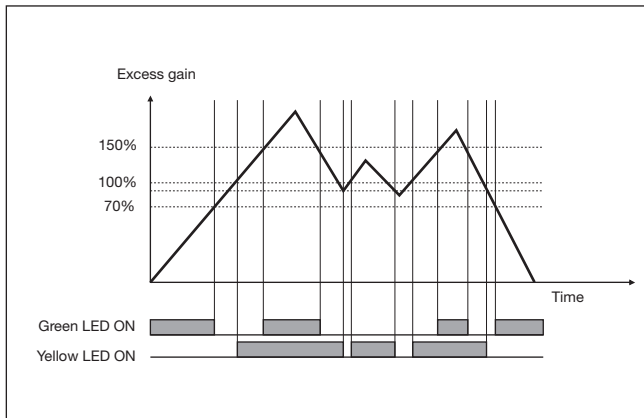
Wiring Diagram



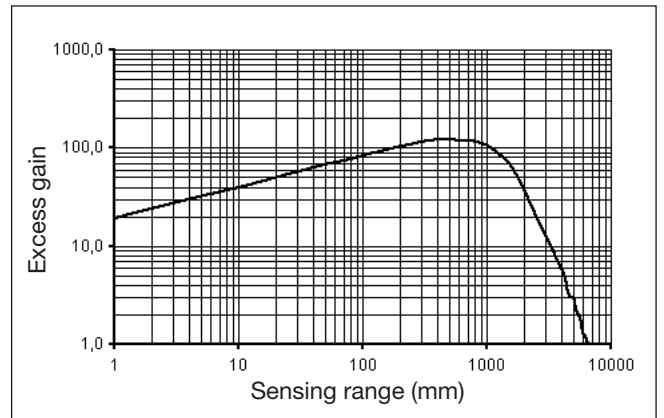
Detection Diagram



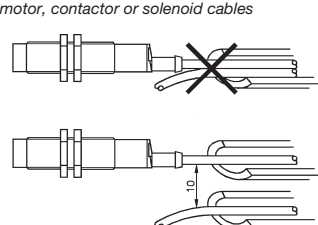
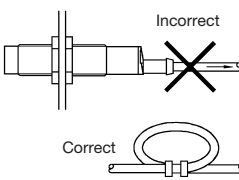
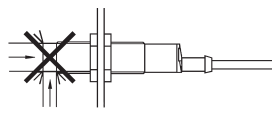
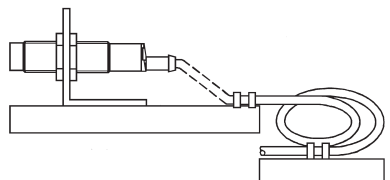
Signal Stability



Excess Gain



Installation Hints

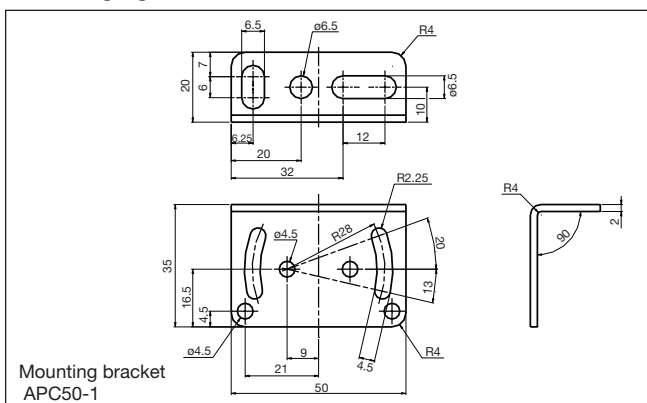
| | | | |
|--|--|---|---|
| <p>To avoid interference from inductive voltage/current peaks, separate the prox. switch power cables from any other power cables, e.g. motor, contactor or solenoid cables</p>  | <p>Relief of cable strain</p>  <p>Incorrect</p> <p>Correct</p> <p>The cable should not be pulled</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> |
|--|--|---|---|

Delivery Contents

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

Accessories

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



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