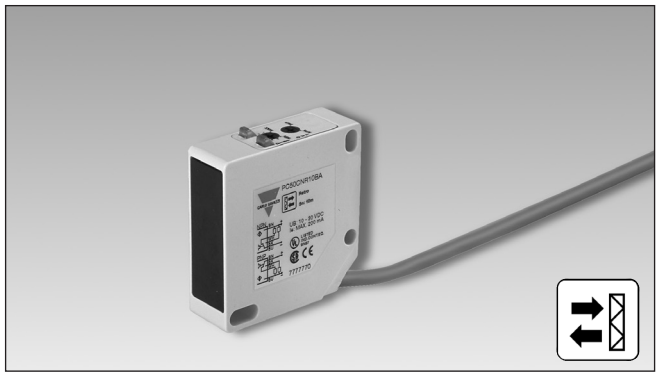
Photoelectrics
Retro-reflective, Relay Output
Type PC50CNR10RP

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_n)	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

Rated operating distance (S_n)	Up to 10 m, with reflector type ER 4, ref. target
Blind zone	Max. 10 cm
Sensitivity	Adj. by single-turn pot.meter
Temperature drift	≤ 0.5%/°C
Hysteresis (H)	
Differencial travel	3-20%
Rated operational volt. (U_B)	12-240 VDC 24-240 VAC, 50 to 60 Hz
Rated operational power	≤ 2.0 VA (relay ON)
Output	
Contact ratings	
Resistive loads AC 1	3 A/230 VAC
DC 1	3 A/30 VDC (> 10 mA/5 VDC)
Mechanical life (typical)	≥ 15 x 10^6 operations
Electrical life (typical)	≥ 1 x 10^5 operations at 3 A/240 VAC
Protection	Reverse polarity, transients
Light source	GaAlAs, LED, 880 nm
Light type	Infrared, modulated
Sensing angle	± 2° at 1/2 range
Ambient light	Max. 5'000 lux
Operating frequency	20 Hz

Response time	
OFF-ON (t_{ON})	≤ 25 ms
ON-OFF (t_{OFF})	≤ 25 ms
Power ON delay (t_v)	≤ 300 ms
Output function	Light or dark operation is switch selectable
Indication function	
Output ON	LED, yellow
Supply ON, signal stability	LED, green
Environment	
Overvoltage category	II (IEC 60664/60664A; 60947-1)
Pollution degree	3 (IEC 60664/60664A; 60947-1)
Degree of protection	IP 67 (IEC 60529; 60947-1)
Temperature	
Operating	-20° to +60°C (-4° to +140°F)
Storage	-25° to +80°C (-13° to +176°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)
Rated insulation voltage	250 VAC (rms)
Housing material	
Body	PC/ABS, grey, reinforced
Front glass	PC black
Mounting bracket	Steel, galvanized

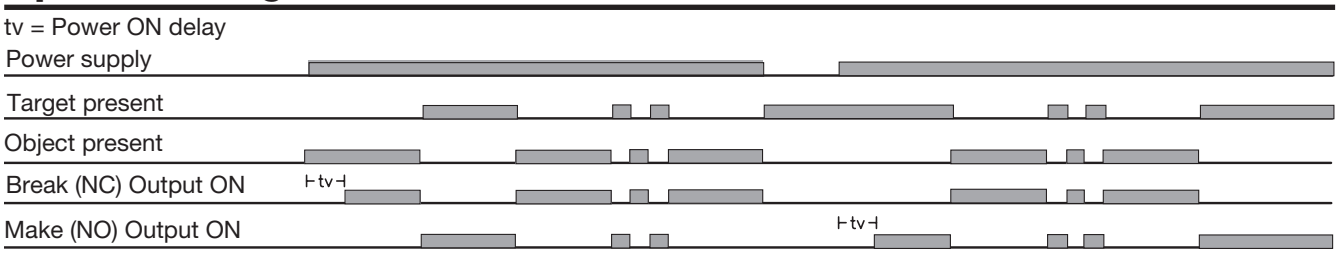
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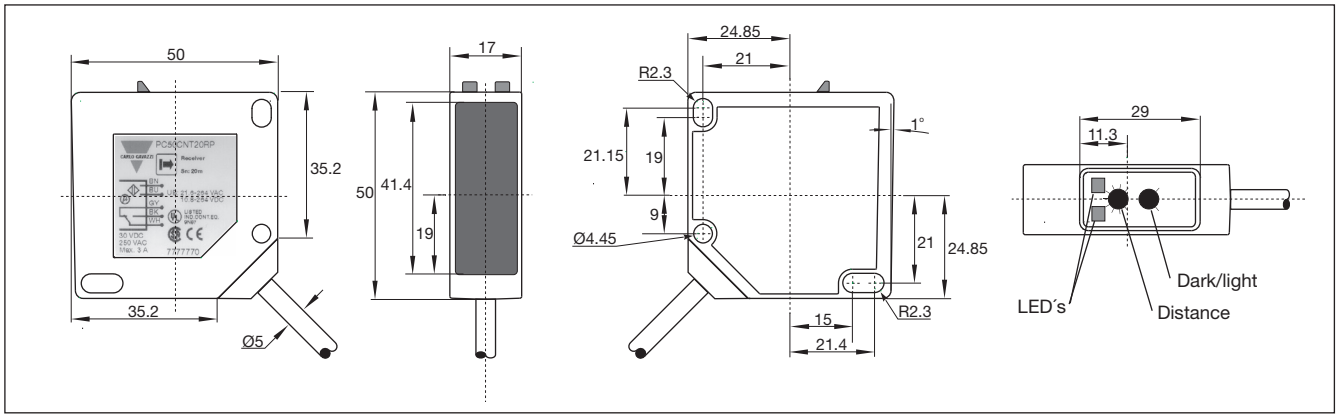
Specifications (cont.)

Connection		**Approvals**	UL, CSA
Cable	PVC, grey, 2 m, 5 x 0.34 mm²	**CE-marking**	Yes
Weight	130 g		

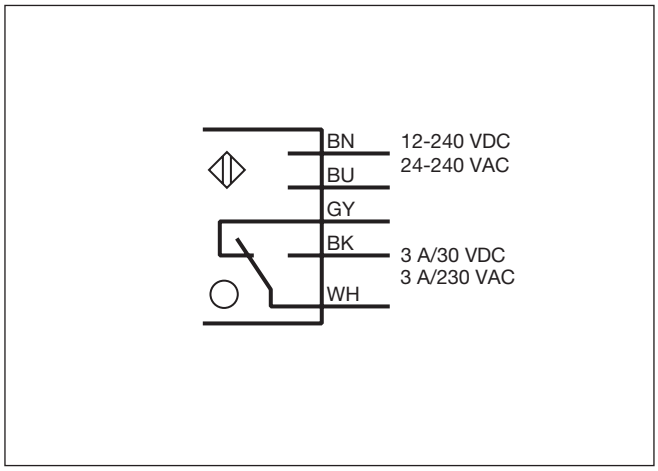
Operation Diagram



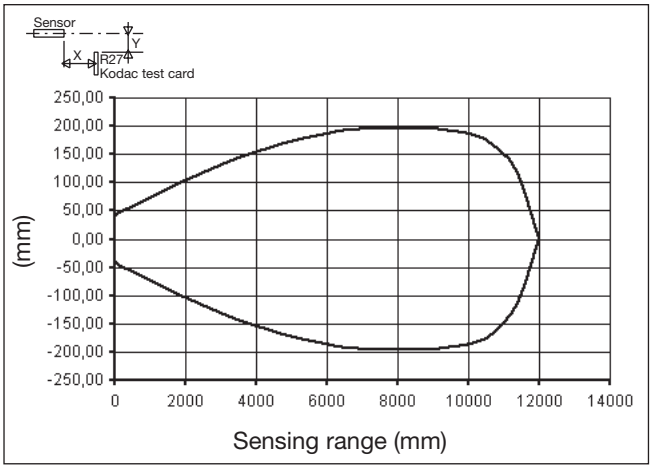
Dimensions



Wiring Diagram



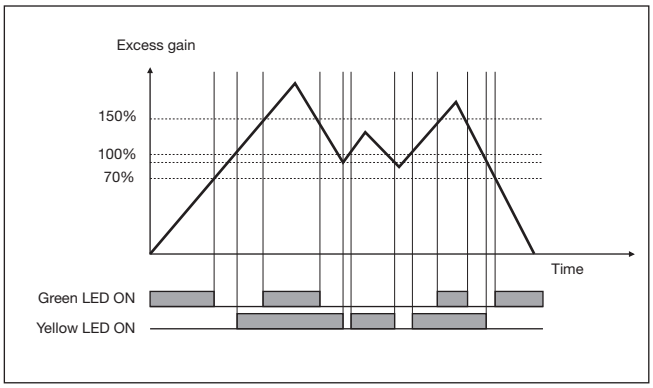
Detection Diagram



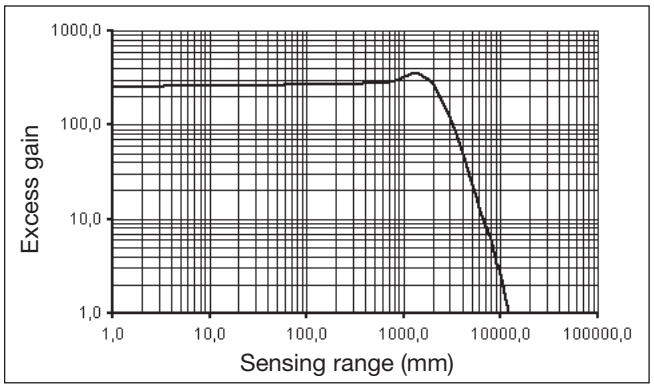
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Signal Stability

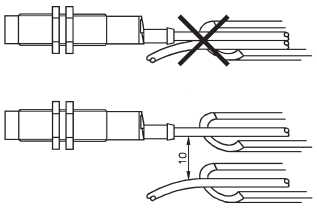


Excess Gain

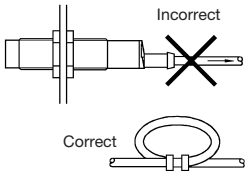


Installation Hints

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

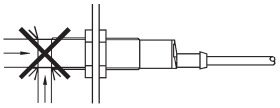


Relief of cable strain



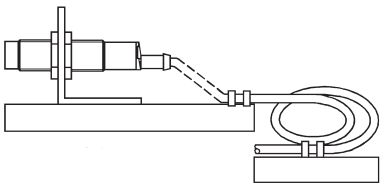
The cable should not be pulled

Protection of the sensing face



A proximity switch should not serve as mechanical stop

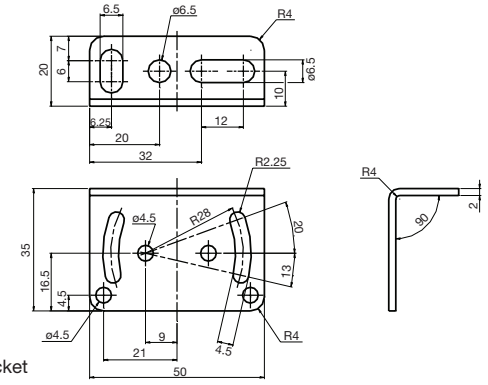
Switch mounted on mobile carrier



Any repetitive flexing of the cable should be avoided

Delivery Contents

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



Mounting bracket APC50-1

Accessories

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

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