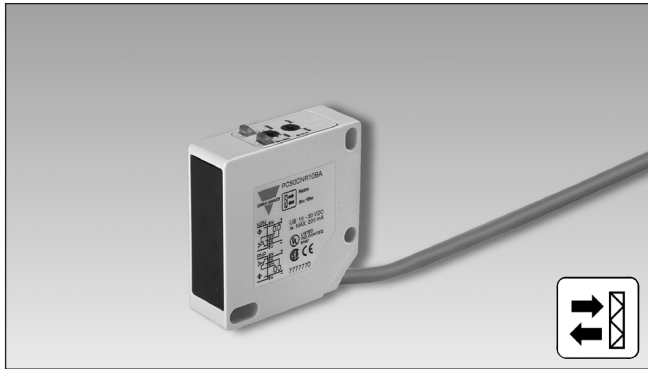


Photoelectrics Retro-reflective, Relay Output Type PC50CNR10RP

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

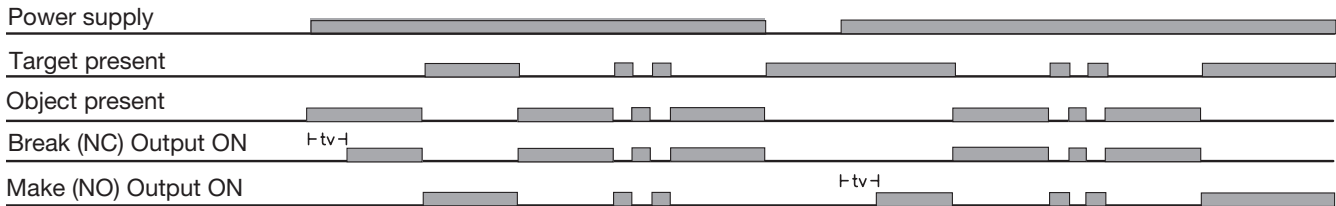


Specifications (cont.)

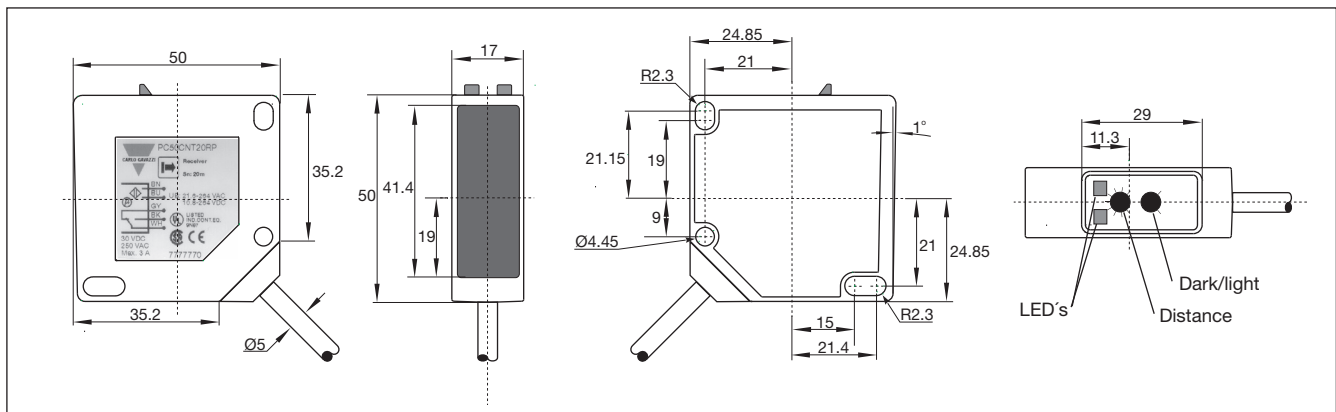
Connection Cable	PVC, grey, 2 m, 5 x 0.34 mm ²	Approvals	UL, CSA
Weight	130 g	CE-marking	Yes

Operation Diagram

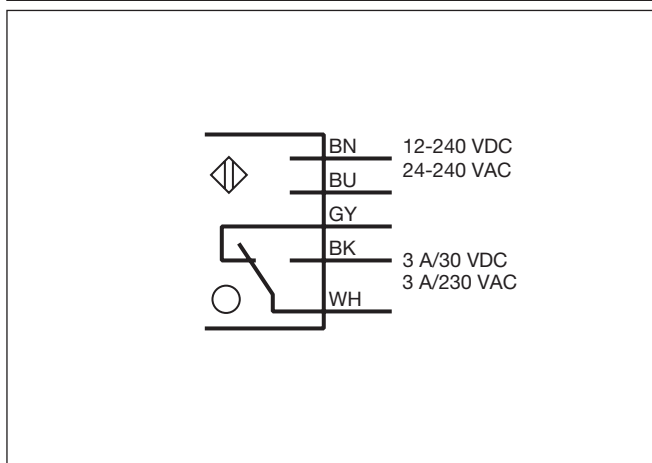
tv = Power ON delay



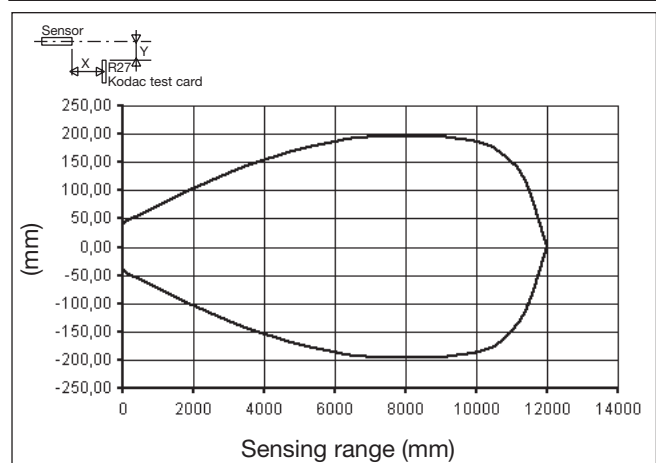
Dimensions



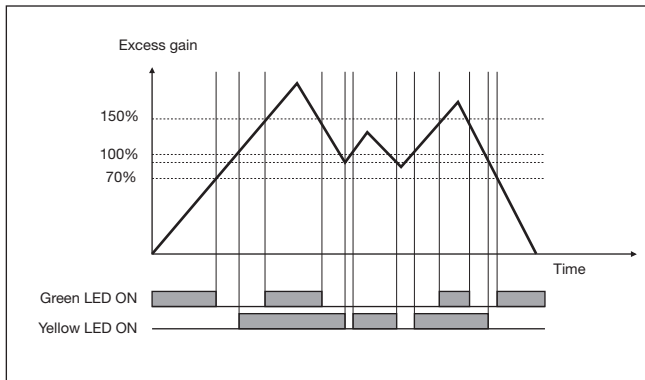
Wiring Diagram



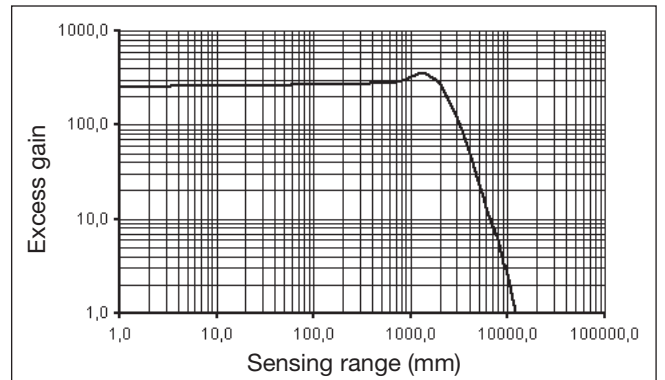
Detection Diagram



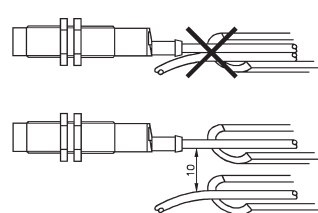
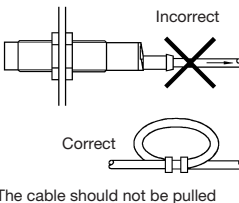
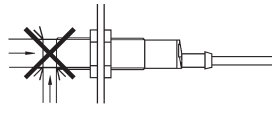
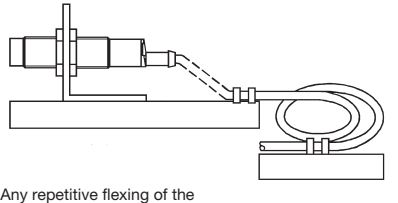
Signal Stability



Excess Gain



Installation Hints

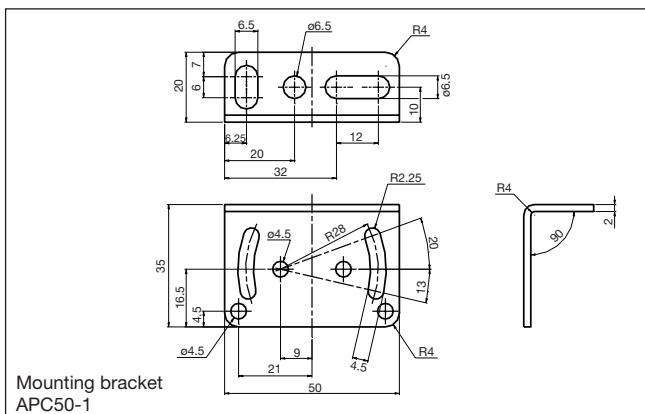
<p><i>To avoid interference from inductive voltage/current peaks, separate the prox. switch power cables from any other power cables, e.g. motor, contactor or solenoid cables</i></p> 	<p><i>Relief of cable strain</i></p>  <p>Incorrect</p> <p>Correct</p> <p>The cable should not be pulled</p>	<p><i>Protection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



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