

Photoelectrics Through-beam, Relay Output Type PC50CNT20R.

CARLO GAVAZZI



- Range: 20 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 PC50CNT. is a family of general purpose through-beam sensors in a compact square 17 x 50 x 50 mm reinforced RC/ABS-housing. They are useful in applications where basic sensors provide

adequate sensing performance. The long sensing range together with sensitivity adjustment gives a very flexible sensor. Light and dark operation is switch selectable.

Ordering Key

PC50CNT20RP

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. Receiver Make and break switching	Ordering no. Ermittler
17 x 50 x 50 mm	20 m	PC 50 CNT 20 RP	PC 50 CNT 20 R

Note: Please order emitter and receiver separately

Specifications Emitter

Rated operational volt. (U _B)	12-240 VDC 24-240 VAC, 50-60 Hz	Optical angle	± 2° at 1/2 range
Rated operational power	≤ 2.5 VA	Indication function	LED, green
Light source	GaAs LED, 880 nm	Power supply ON	
Light type	Infrared, modulated		

Specifications Receiver

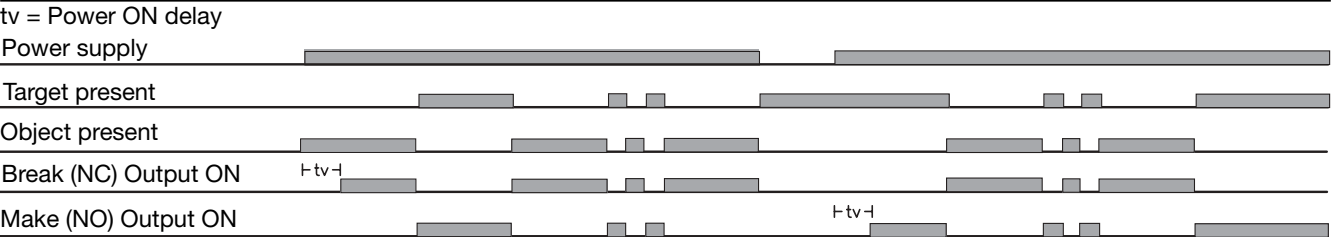
Rated operating dist. (S _n)	Up to 20 m	Protection	Reverse polarity, transients
Blind zone	None	Operating frequency (f)	20 Hz
Sensitivity	Adj. single-turn pot.meter	Response time	OFF-ON (t _{ON}) ≤ 25 ms ON-OFF (t _{OFF}) ≤ 25 ms
Temperature drift	≤ 0.5%/°C	Power ON delay (t _v)	≤ 300 ms
Hysteresis (H) (differential travel)	3-20%	Output function	Light or dark operation is switch selectable
Rated operational volt. (U _B)	12-240 VDC 24-240 VAC, 50-60 Hz	Indication function	LED, yellow LED, green
Rated operational power	≤ 2.0 VA (relay ON)	Output ON	
Output		Supply ON, signal stability	
Contact ratings			
Resistive loads	AC 1 DC 1		
Mechanical life (typ.)	3 A/230 VAC 3 A/30 VDC (>10 mA/5 VDC)		
Electrical life (typ.)	≥ 15 x 10 ⁶ operations ≥ 1 x 10 ⁵ operations at 3 A/240 VAC		



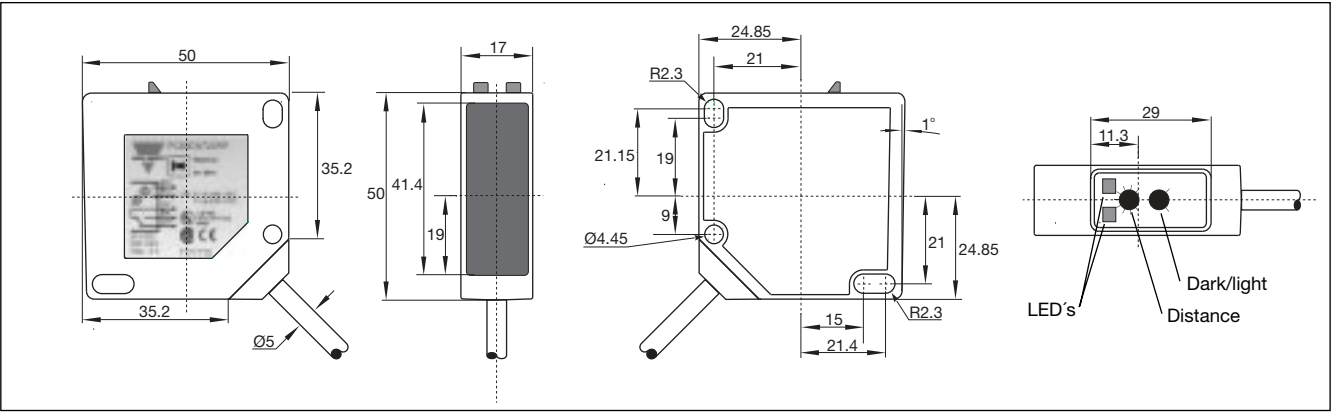
General Specifications

Environment 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)	Rated insulation voltage	250 VAC (rms)
		Housing material Body Front glass Mounting bracket	PC/ABS, grey, reinforced PC, black Steel, galvanized
		Connection Cable receiver Cable emitter	PVC, grey, 2 m, 5 x 0.50 mm ² PVC, grey, 2 m, 2 x 0.34 mm ²
Temperature Operating Storage	-20° to +60°C (-4° to +140°F) -25° to +80°C (-13° to +176°F) 10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6) 2 x 1 m & 100 x 0.5 m (IEC 60068-2-32)	Weight Emitter Receiver	130 g 130 g
Vibration		Approvals	UL, CSA
Shock		CE-marking	Yes

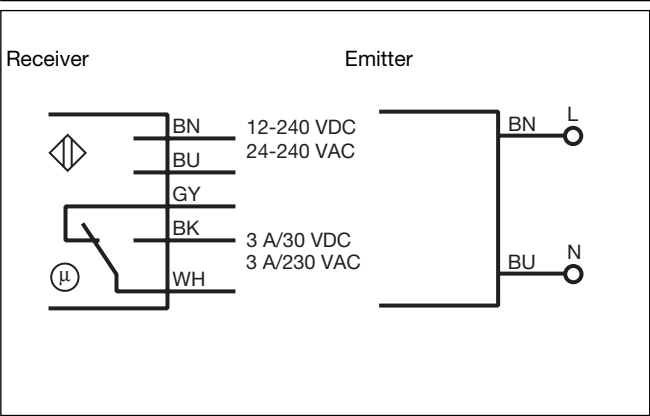
Operation Diagram



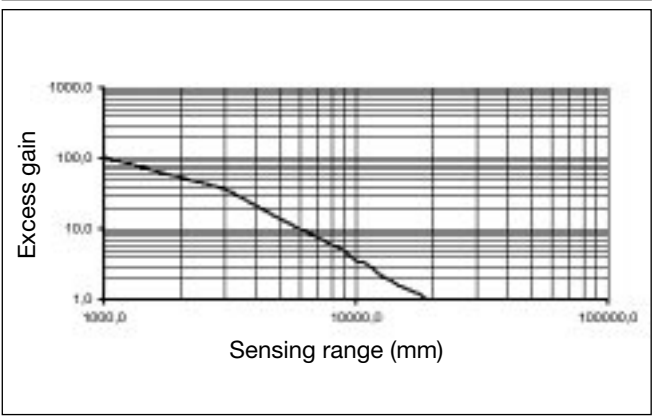
Dimensions



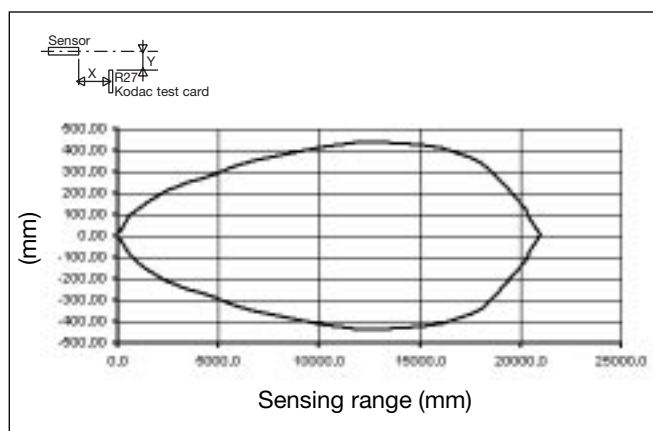
Wiring Diagrams



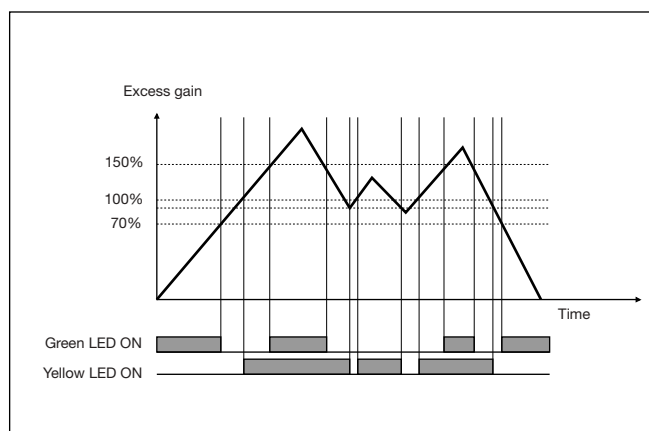
Excess Gain



Detection Diagram



Signal Stability



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: PC50CNT..
- Installation instruction
- Mounting bracket APC50-1
- **Packaging:** Cardboard box

Accessories

- Screwdriver for adjustment: 77-001
- Connector type: CON.1A..

For further information refer to "Accessories"

