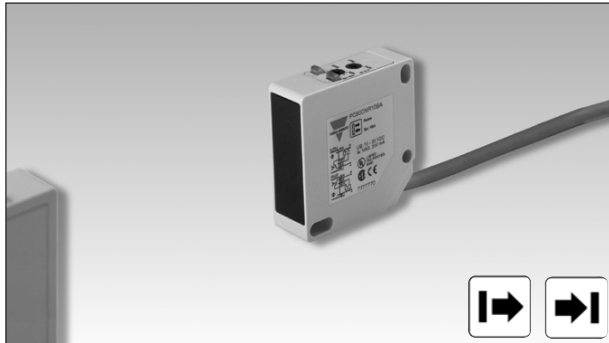


Photoelectrics Through-beam, Relay Output Type PC50CNT20R.

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
- Excellent EMC



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. Ermitter
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			
Contact ratings			
Resistive loads	AC 1 DC 1		
Mechanical life (typ.)	3 A/230 VAC 3 A/30 VDC (>10 mA/5 VDC) ≥ 15 x 10 ⁶ operations		
Electrical life (typ.)	≥ 1 x 10 ⁵ operations at 3 A/240 VAC		

General Specifications

Environment		Rated insulation voltage	250 VAC (rms)
Overvoltage category	II (IEC 60664/60664A, 60947-1)	Housing material	
Pollution degree	3 (IEC 60664/60664A, 60947-1)	Body	PC/ABS, grey, reinforced
Degree of protection	IP 67 (IEC 60529, 60947-1)	Front glass	PC, black
		Mounting bracket	Steel, galvanized
Temperature		Connection	
Operating	-20° to +60°C (-4° to +140°F)	Cable receiver	PVC, grey, 2 m, 5 x 0.50 mm ²
Storage	-25° to +80°C (-13° to +176°F)	Cable emitter	PVC, grey, 2 m, 2 x 0.34 mm ²
Vibration	10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6)	Weight	
Shock	2 x 1 m & 100 x 0.5 m (IEC 60068-2-32)	Emitter	130 g
		Receiver	130 g
		Approvals	UL, CSA
		CE-marking	Yes

Operation Diagram

tv = Power ON delay

Power supply

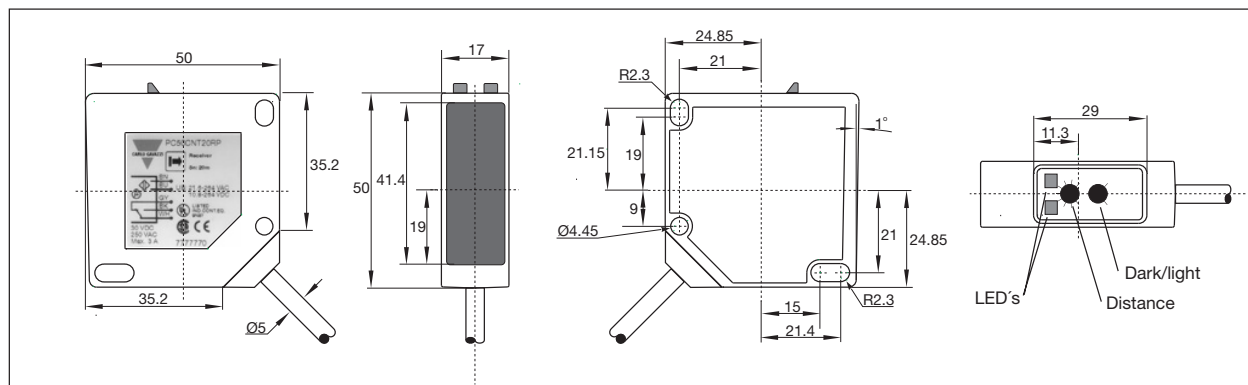
Target present

Object present

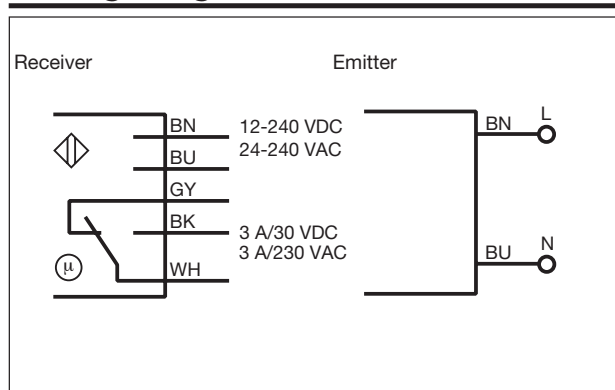
Break (NC) Output ON

Make (NO) Output ON

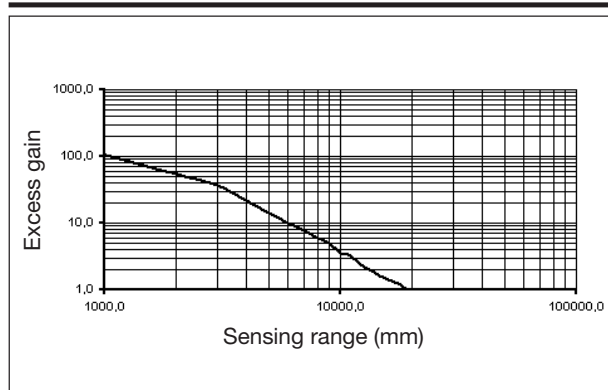
Dimensions



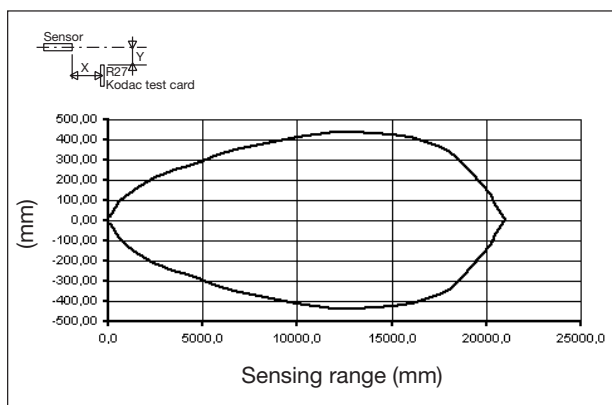
Wiring Diagrams



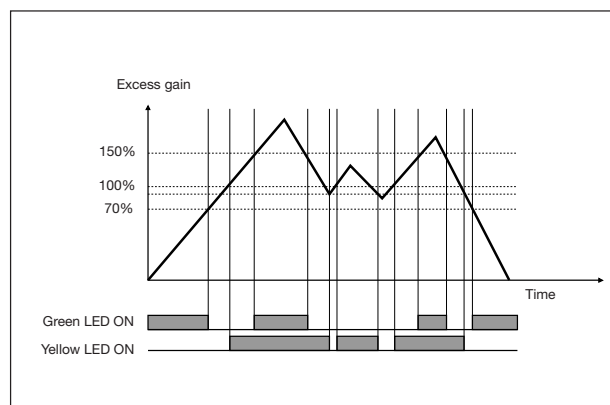
Excess Gain



Detection Diagram

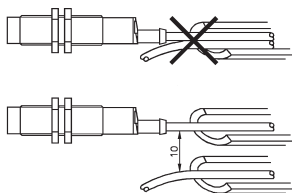


Signal Stability

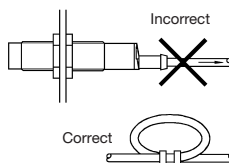


Installation Hints

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

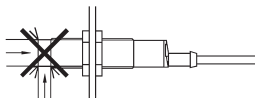


Relief of cable strain



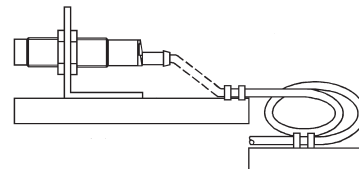
The cable should not be pulled

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: 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”

