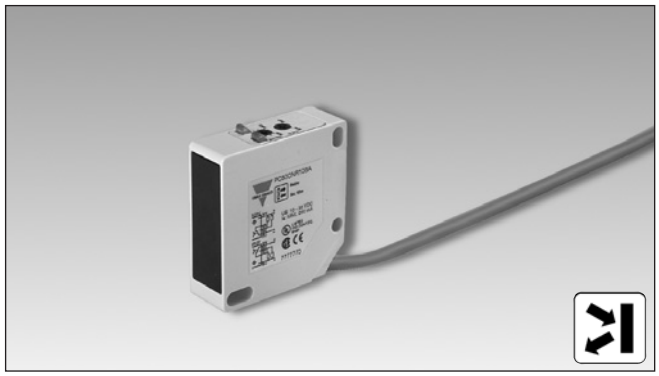
Photoelectrics

Type PC50CND10RP



- **Range: 1 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**
- **Protection: reverse polarity, transients**
- **High degree of EMC**

Product Description

The PC50CND. is a general purpose diffuse-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

PC50CND10RP

- **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	1 m	**PC 50 CND 10 RP**

Specifications

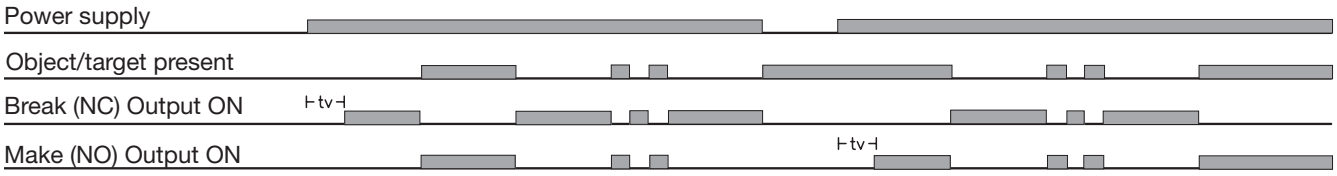
Rated operating distance (S_n)	Up to 1 m, reference target Kodak test card R 27, white, 90% reflectivity, 200 x 200 mm
Blind zone	Max. 10 cm
Sensitivity	Adj. by single-turn pot. meter
Temperature drift	≤ 0.5%/°C
Hysteresis (H)	
Differential travel	3-20%
Rated operational volt. (U_B)	12 to 240 VDC 24 to 240 VAC, 50 to 60 Hz
Rated operational power	≤ 2.0 VA (relay ON)
Output	
Contact ratings	
Resistive loads AC 1	3 A/250 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 and 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 68-2-6)
Shock	2 x 1 m & 100 x 0.5 m (IEC 68-2-32)
Rated insulation voltage	250 VAC (rms)
Housing material	
Body	PC/ABS, grey, reinforced
Front glass	PC black
Mounting bracket	Steel, galvanized
Connection	
Cable	PVC, grey, 2 m, 5 x 0.34 mm^2
Weight	130 g
Approvals	UL, CSA
CE-marking	Yes

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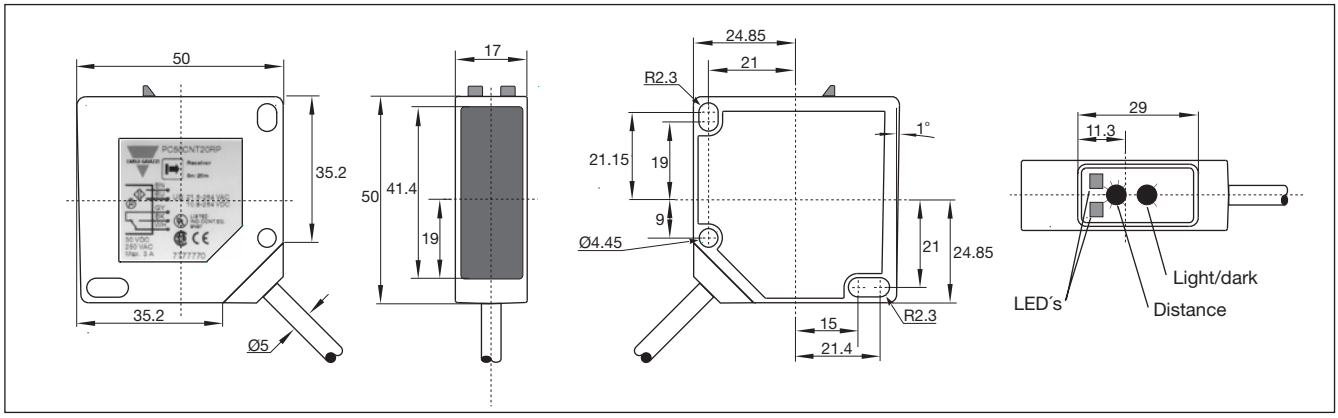
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Operation Diagram

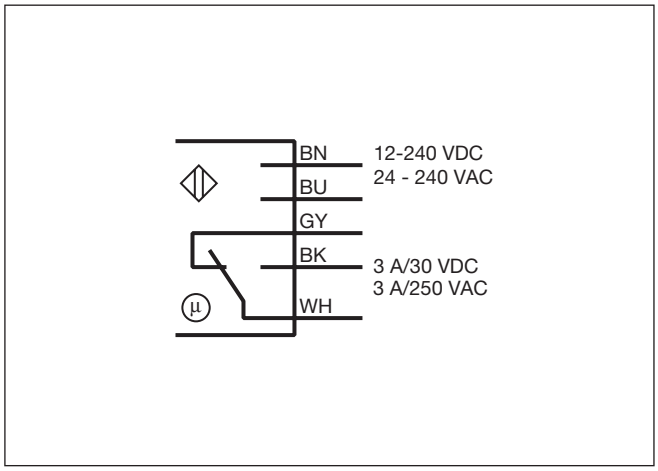
tv = Power ON delay



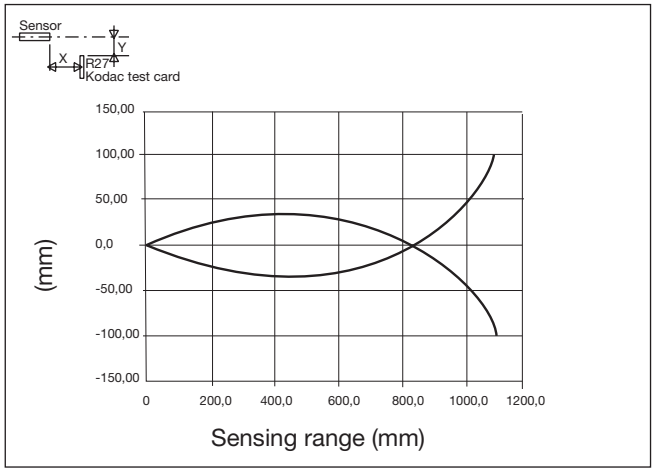
Dimensions



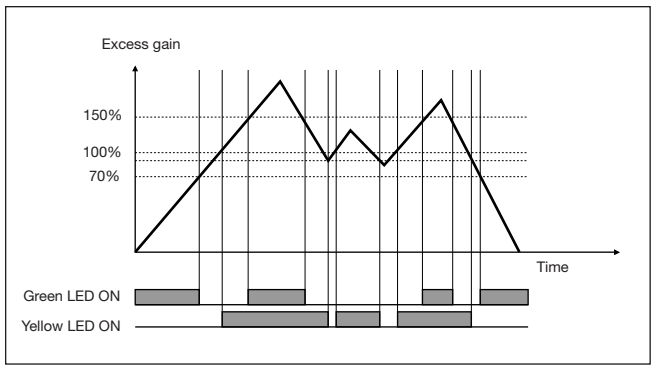
Wiring Diagram



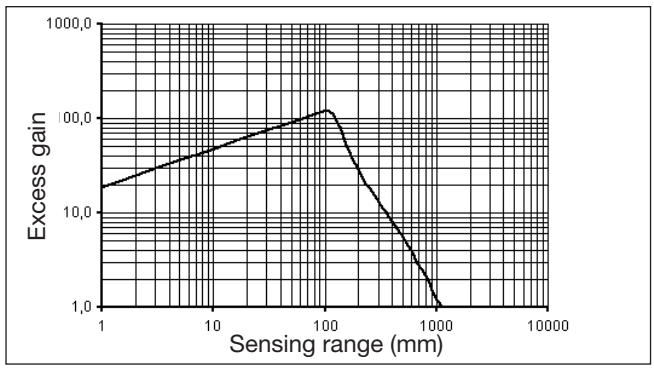
Detection Diagram



Signal Stability



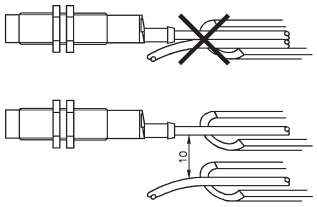
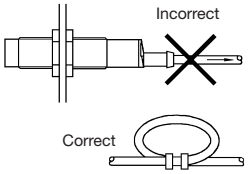
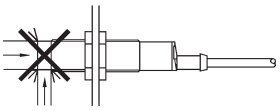
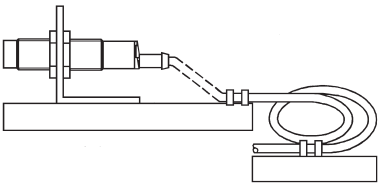
Excess Gain



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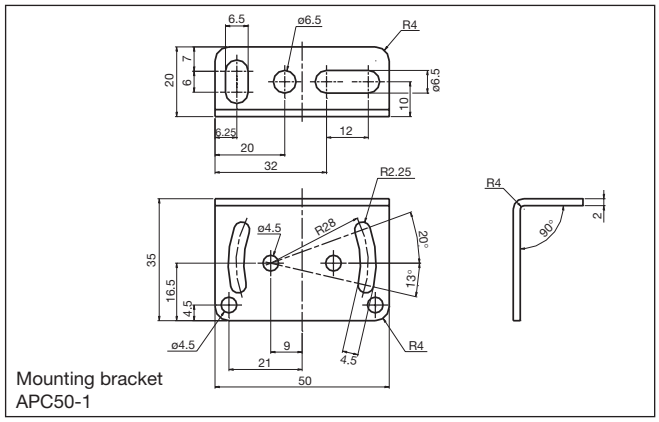
CARLO GAVAZZI

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*	*Protection of the sensing face*	*Switch mounted on mobile carrier*
	 The cable should not be pulled	 A proximity switch should not serve as mechanical stop	 Any repetitive flexing of the cable should be avoided

Delivery Contents

- Photoelectric switch: PC50CND..
- Installation instruction
- Mounting bracket APC50-1
- **Packaging:** Cardboard box



Mounting bracket APC50-1

Accessories

- Screwdriver for adjustment: 77-001

For further information refer to “Accessories”

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