

Photoelectrics

Diffuse-reflective, Relay Output

Type PC50CND10RP

CARLO GAVAZZI



- 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 EMC immunity

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

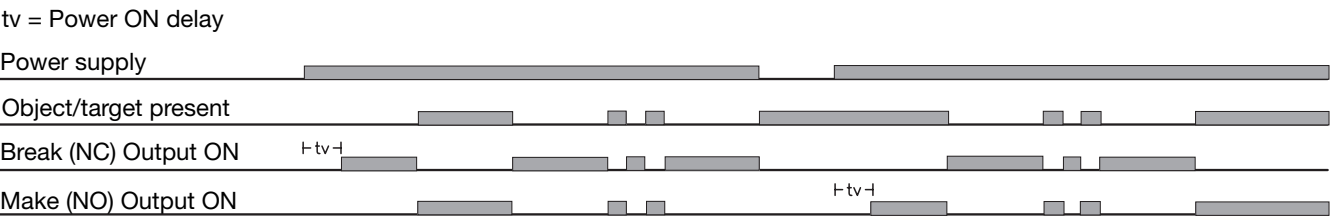
Specifications

Rated operating distance (S_n)	Up to 1 m, reference target Kodak test card R 27, white, 90% reflectivity, 200 x 200 mm	Power ON delay (t_v)	≤ 300 ms
Blind zone	Max. 10 cm	Output function	Light and dark operation is switch selectable
Sensitivity	Adj. by single-turn pot. meter	Indication function	
Temperature drift	≤ 0.5%/°C	Output ON	LED, yellow
Hysteresis (H)		Supply ON, signal stability	LED, green
Differential travel	3-20%	Environment	
Rated operational volt. (U_B)	12 to 240 VDC 24 to 240 VAC, 50 to 60 Hz	Overvoltage category	II (IEC 60664/60664A; 60947-1)
Rated operational power	≤ 2.0 VA (relay ON)	Pollution degree	3 (IEC 60664/60664A; 60947-1)
Output		Degree of protection	IP 67 (IEC 60529; 60947-1)
Contact ratings		Temperature	
Resistive loads AC 1	3 A/250 VAC	Operating	-20° to +60°C (-4° to +140°F)
DC 1	3 A/30 VDC (> 10 mA/5 VDC)	Storage	-25° to +80°C (-13° to +176°F)
Mechanical life (typical)	≥ 15 x 10 ⁶ operations	Vibration	10 to 150 Hz, 0.5 mm/7.5 g (IEC 68-2-6)
Electrical life (typical)	≥ 1 x 10 ⁵ operations at 3 A/240 VAC	Shock	2 x 1 m & 100 x 0.5 m (IEC 68-2-32)
Protection	Reverse polarity, transients	Rated insulation voltage	250 VAC (rms)
Light source	GaAlAs, LED, 880 nm	Housing material	
Light type	Infrared, modulated	Body	PC/ABS, grey, reinforced
Sensing angle	± 2° at 1/2 range	Front glass	PC black
Ambient light	Max. 5'000 lux	Mounting bracket	Steel, galvanized
Operating frequency	20 Hz	Connection	
Response time		Cable	PVC, grey, 2 m, 5 x 0.34 mm ²
OFF-ON (t _{ON})	≤ 25 ms	Weight	130 g
ON-OFF (t _{OFF})	≤ 25 ms	Approvals	UL, CSA
		CE-marking	Yes

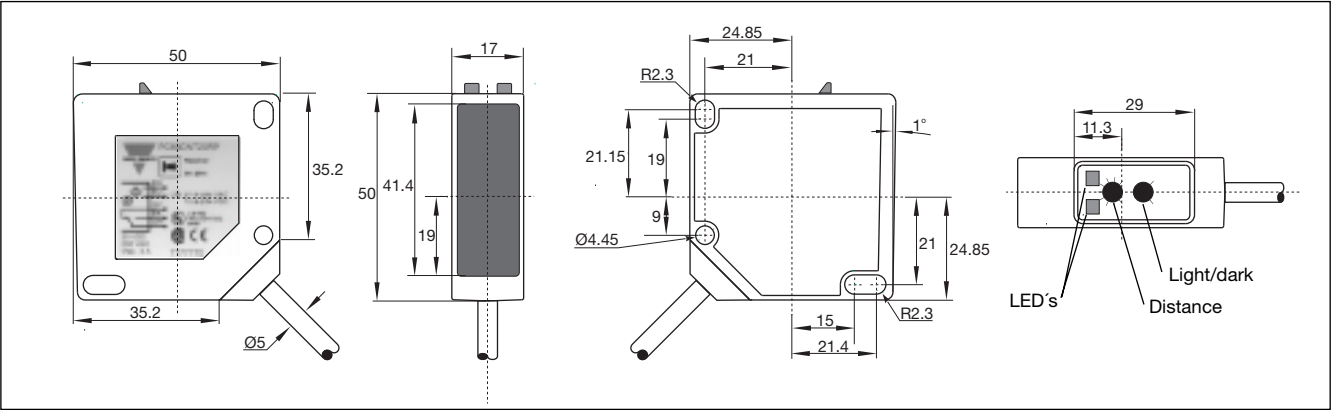
Specifications are subject to change without notice (20.08.01)



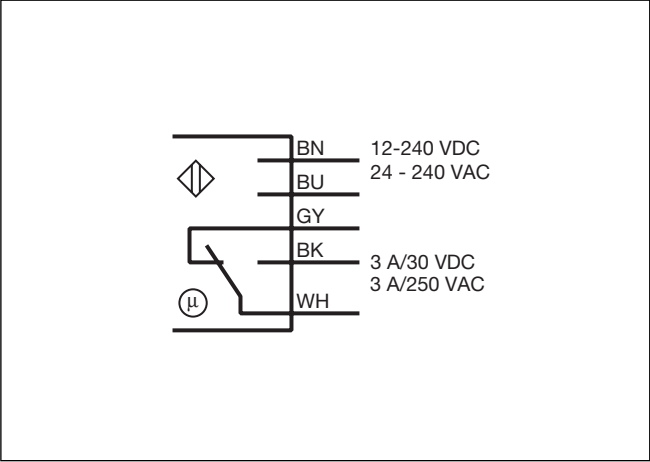
Operation Diagram



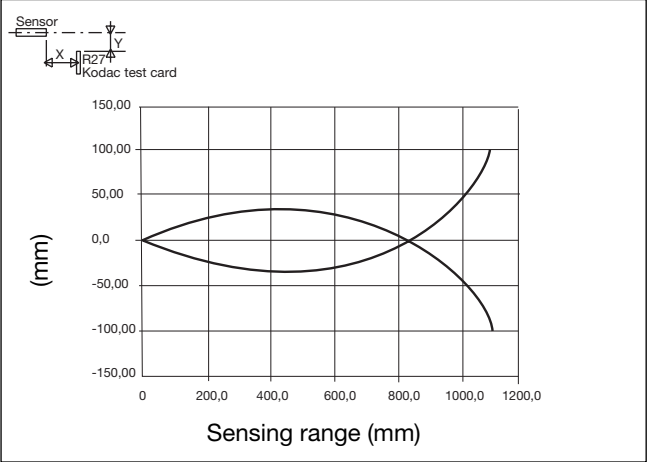
Dimensions



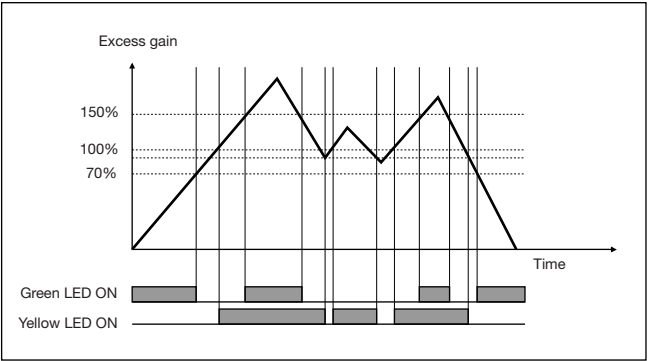
Wiring Diagram



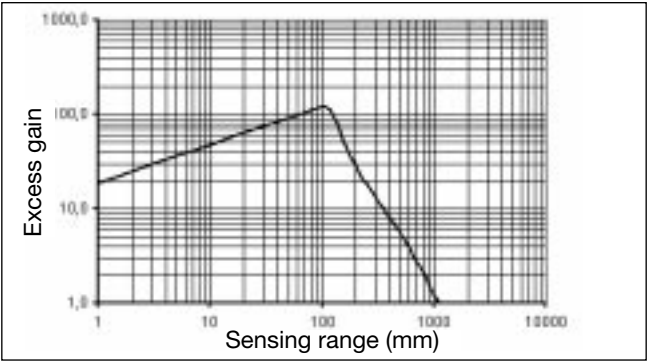
Detection Diagram



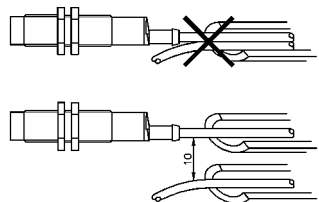
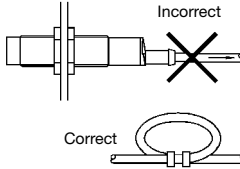
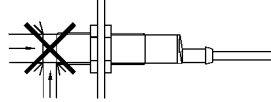
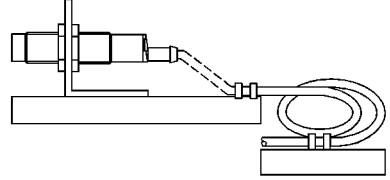
Signal Stability



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
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Delivery Contents

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

Accessories

- Screwdriver for adjustment: 77-001

For further information refer to "Accessories"

