

Photoelectrics

Diffuse-reflective, Transistor Output

Type PC50CND10BA



- Range: 1 m
- Adjustable sensitivity
- Modulated, infrared light
- Supply voltage: 10 to 30 VDC
- Output: 200 mA, NPN or PNP
- Make and break switching function selectable
- LED for output indication, signal stability and power ON
- Protection: reverse polarity, short circuit, transients
- Cable and plug version
- High EMC immunity

[Preliminary data sheet](#)

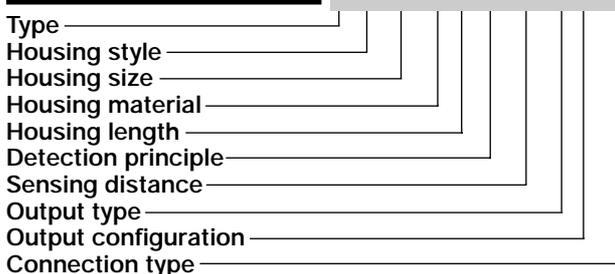
Product Description

The PC50CND is a family of general purpose diffuse-reflective sensors in a compact square 17 x 50 x 50 mm reinforced PC/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. The DC types are with a transistor output and the configuration is fully programmable (NPN, PNP, NO and NC).

Ordering Key

PC50CND10BAM1



Type Selection

Housing W x H x D	Range S _n	Ordering no. NPN & PNP cable Make & break switching	Ordering no. NPN & PNP plug Make & break switching
17 x 50 x 50 mm	1 m	PC 50 CND 10 BA	PC 50 CND 10 BAM1

Specifications

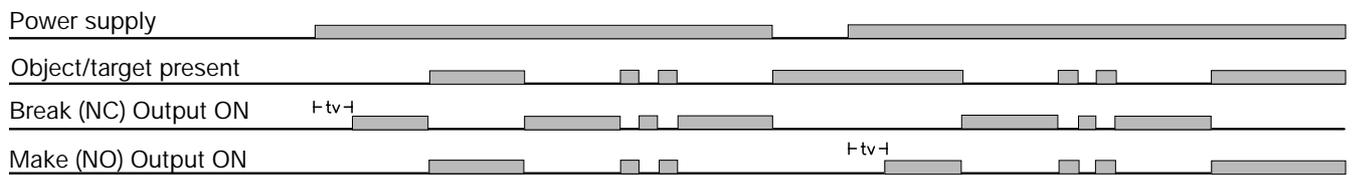
Rated operating distance (S_n)	Up to 1 m, reference target Kodak test card R 27, white, 90% reflectivity, 200 x 200 mm	Light source	GaAIAs, LED, 880 nm
Blind zone	Max. 10 cm	Light type	infrared, modulated
Sensitivity	Adjustable by single-turn potentiometer	Sensing angle	± 12°
Temperature drift	± 0.5%/°C	Ambient light	Max. 10'000 lux
Hysteresis (H)		Operating frequency	500 Hz
Differential travel	3 - 20%	Response time	
Rated operational volt. (U_B)	10 to 30 VDC (ripple included)	OFF-ON (t _{ON})	≤ 1 ms
Ripple (U_{ripple})	≤ 10%	ON-OFF (t _{OFF})	≤ 1 ms
Output current		Power ON delay (t_v)	< 300 ms
Continuous (I _e)	≤ 200 mA	Output function	
Short-time (I)	≤ 200 mA (max. load capacity 100 nF)	NPN and PNP	Switch selectable
No load supply current (I_o)	≤ 50 mA	Complementary switch	Make and break (NO + NC)
Minimum operational current (I_m)	0.5 mA	Indication function	
OFF-state current (I_r)	≤ 100 μA	Output ON	LED, yellow
Voltage drop (U_d)	≤ 2.5 VDC @ 200 mA	Signal stability ON and power ON	LED, green
Protection	Short-circuit, reverse polarity, transients	Environment	
		Installation 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)

Specifications (cont.)

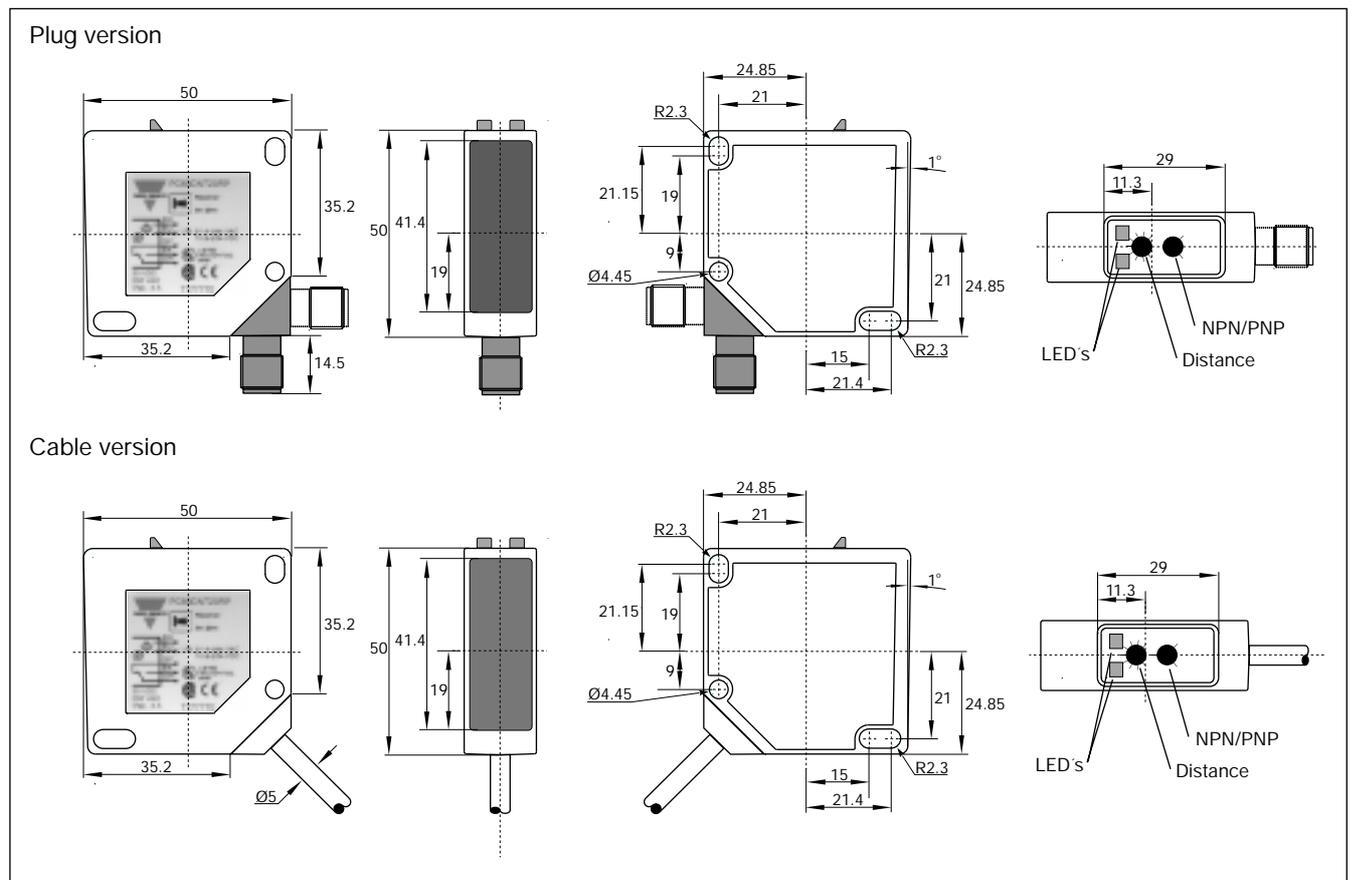
Vibration	10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6)	Connection	PVC, grey, 2 m, 4 x 0.34 mm ²
Shock	2 x 1 m & 100 x 0.5 m (IEC 60068-2-6, 60068-2-32)	Cable Plug Cables for plug (M1)	PBTP, M12 x 1 CON.1A-series
Rated insulation voltage	50 VAC (rms)	Weight	130 g
Housing material	Body Front glass Mounting bracket	CE-marking	Yes
	PC/ABS, grey PC black Steel, galvanized		

Operation Diagram

tv = Power ON delay

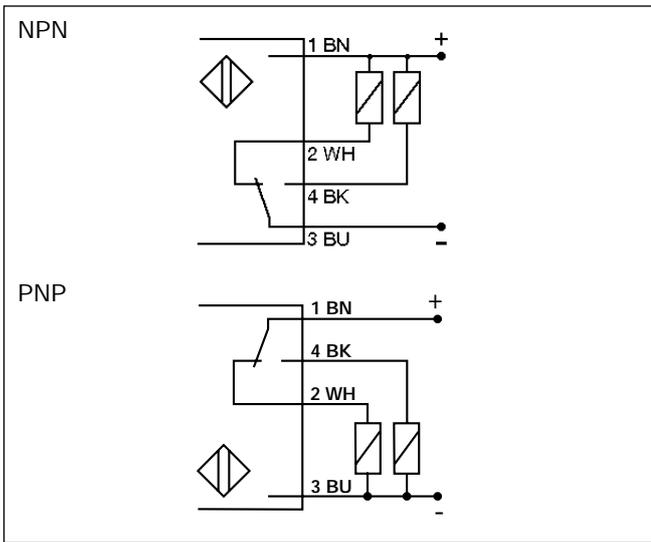


Dimensions

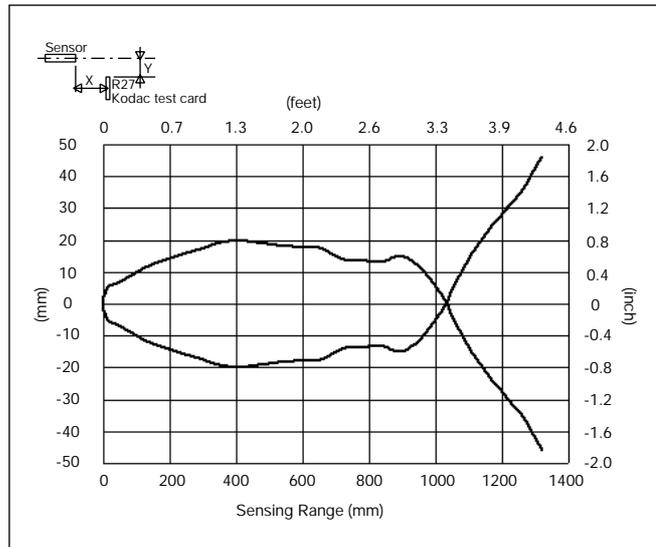




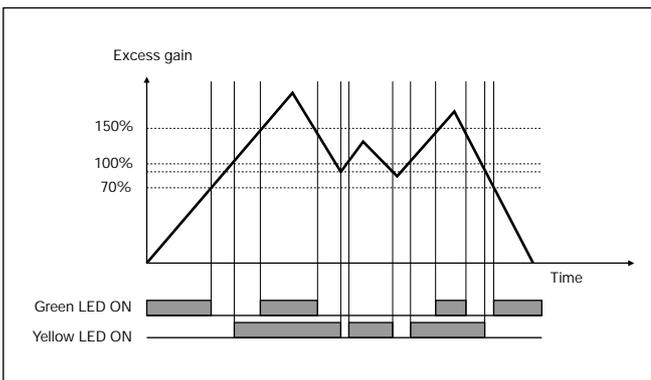
Wiring Diagrams



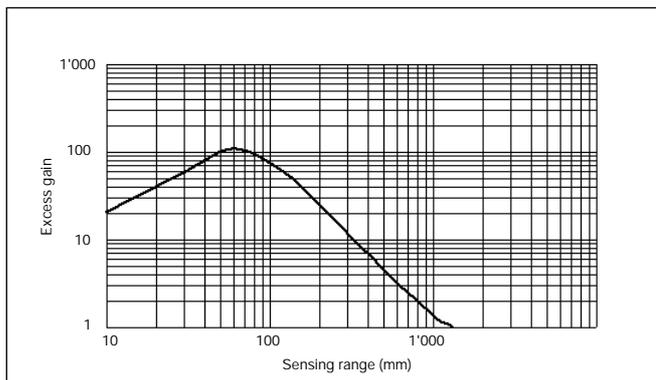
Detection Diagram



Signal Stability



Excess Gain



Delivery Contents

- Photoelectric switch: PC50 CND..
- Installation instruction
- Mounting bracket APC50-1
- **Packaging:** Cardboard box

Accessories

- Screwdriver for adjustment: 77-001

For further information refer to "Accessories"