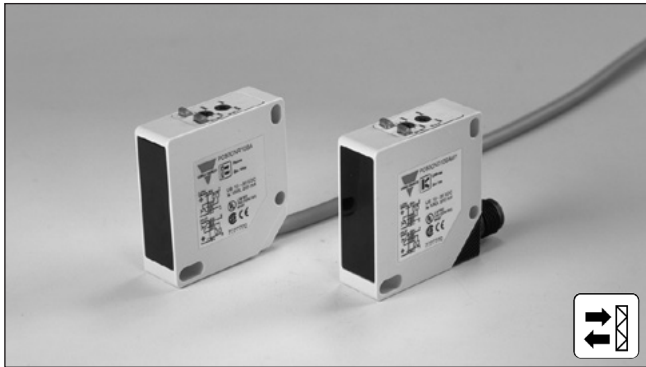


Photoelectrics Retro-reflective, Polarized, Transistor Output Type PC50CNP06BAM.

CARLO GAVAZZI



- Range: 6 m
- Adjustable sensitivity
- Modulated, visible red light, polarized
- 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 versions
- High degree of EMC
- Mute input

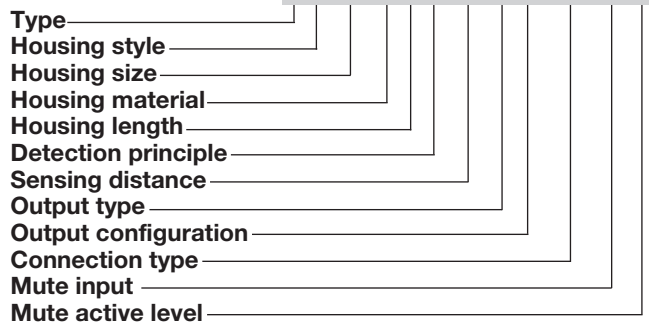


Product Description

The PC50CNP. is a family of general purpose polarized retro-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 **PC50CNP06BAM1MH**



Type Selection

Housing W x H x D	Range S _n	Mute	Ordering no. NPN & PNP cable Make & break switching	Ordering no. NPN & PNP plug Make & break switching
17 x 50 x 50 mm	6 m	High	PC 50 CNP 06 BAMH	PC 50 CNP 06 BAM1MH
17 x 50 x 50 mm	6 m	Low	PC 50 CNP 06 BAML	PC 50 CNP 06 BAM1ML

Note: Reflector to be ordered separately

Specifications

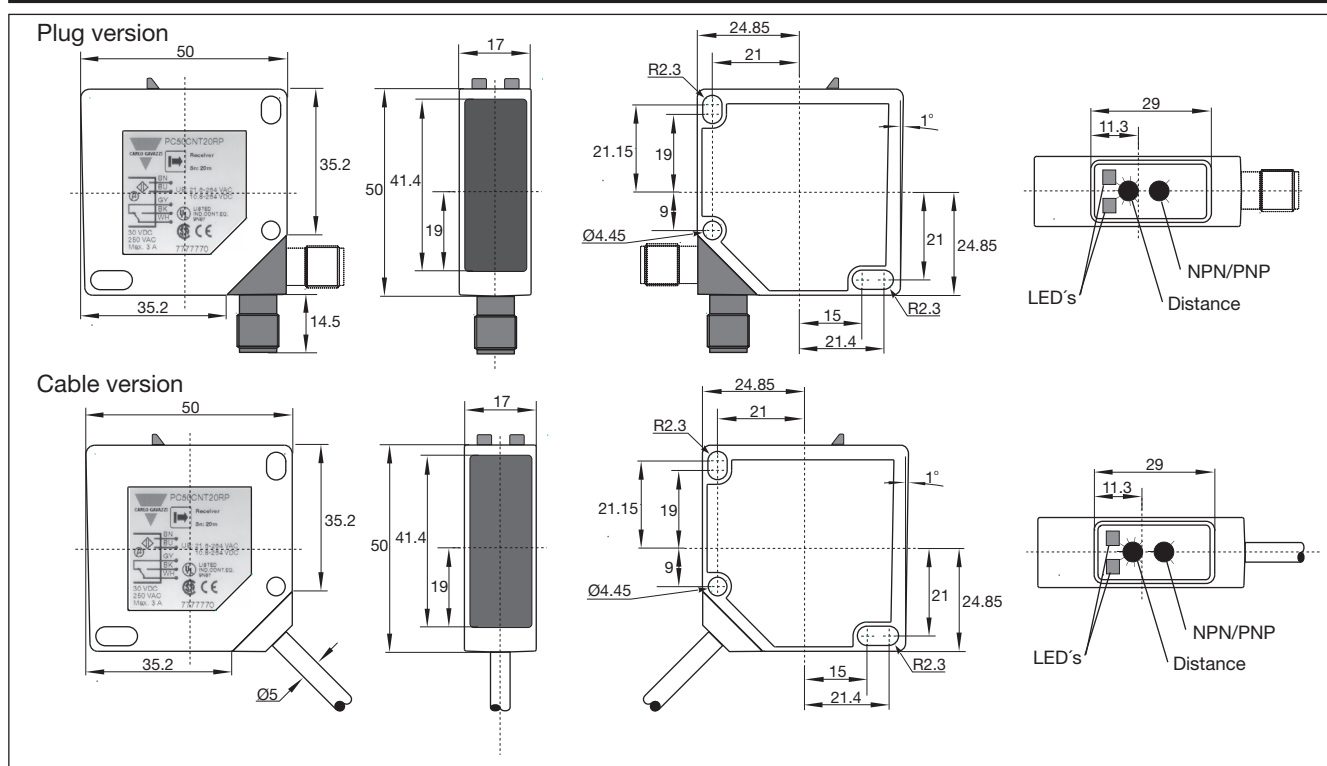
Rated operating distance (S_n)	Up to 6 m, with reflector type ER 4, ref. target	Voltage drop (U_d)	≤ 2.5 VDC @ 200 mA
Blind zone	Max. 20 cm	Test input	
Sensitivity	Adjustable by single-turn potentiometer	Impedance	10kΩ
Hysteresis (H)		Voltage	
Differential travel	3 - 20%	Active high	> 8.5 VDC
Temperature drift	≤ 0.5%/°C	Active low	< 3 VDC
Rated operational volt. (U_B)	10 to 30 VDC (ripple included)	Test input response time	
Ripple (U_{rpp})	≤ 10%	ON-OFF (t ₁)	≤ 200 ms
Output current		ON-OFF (t ₂)	≤ 200 ms
Continuous (I _a)	≤ 200 mA	Protection	Short-circuit, reverse polarity, transients
Short-time (I)	≤ 200 mA, (max. load capacity 100 nF)	Light source	GaAIAs, LED, 660 nm
No load supply current (I_o)	≤ 40 mA	Light type	visible red, modulated
Minimum operational current (I_m)	0.5 mA	Sensing angle	± 2° at 1/2 range
OFF-state current (I_r)	Max. 100 μA	Ambient light	Max. 5'000 lux
		Operating frequency	500 Hz
		Response time	
		OFF-ON (t _{ON})	≤ 1 ms
		ON-OFF (t _{OFF})	≤ 1 ms



Specifications (cont.)

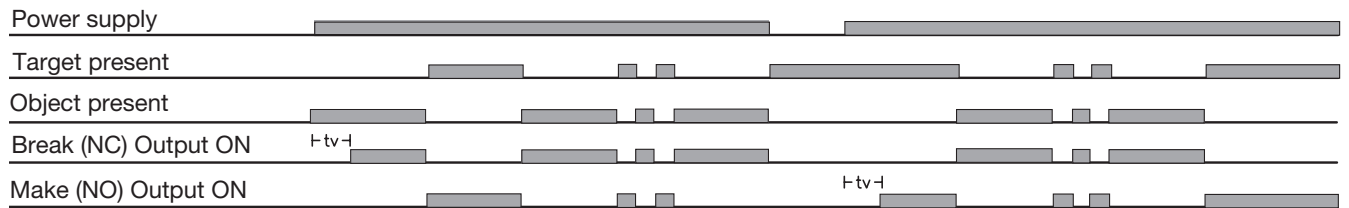
Power ON delay (t_v)	≤ 300 ms	Vibration	10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6)
Output function NPN and PNP Complementary function	Switch selectable Make and break (NO + NC)	Shock	2 x 1 m & 100 x 0.5 m (IEC 60068-2-32)
Indication function Output ON Signal stability ON and power ON	LED, yellow LED, green	Rated insulation voltage	50 VDC
Environment Installation category	II (IEC 60664/60664A; 60947-1)	Housing material Body Front glass Mounting bracket	PC/ABS, grey PMMA, red Steel, galvanized
Pollution degree	3 (IEC 60664/60664A; 60947-1)	Connection Cable Plug (M1) Cables for plug (M1)	PVC, grey, 2 m, 5 x 0.34 mm ² PBTP, M12 x 1 CON.1A-series
Degree of protection	IP 67 (IEC 60529; 60947-1)	Weight	110 g
Temperature Operating Storage	-20° to +60°C (-4° to +140°F) -25° to +80°C (-13° to +176°F)	Approvals	UL
		CE-marking	Yes

Dimensions

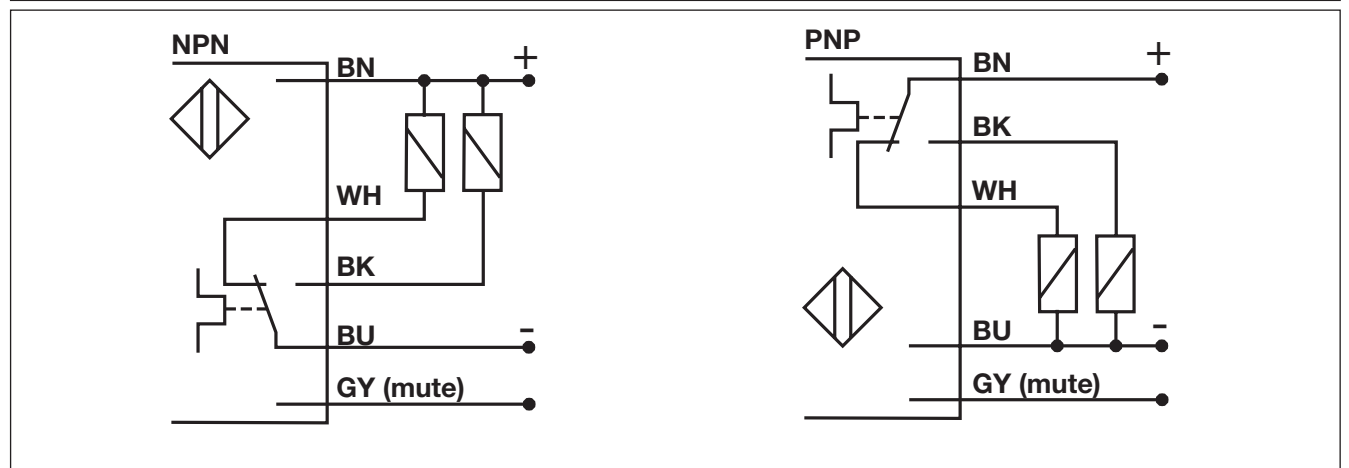


Operation Diagram

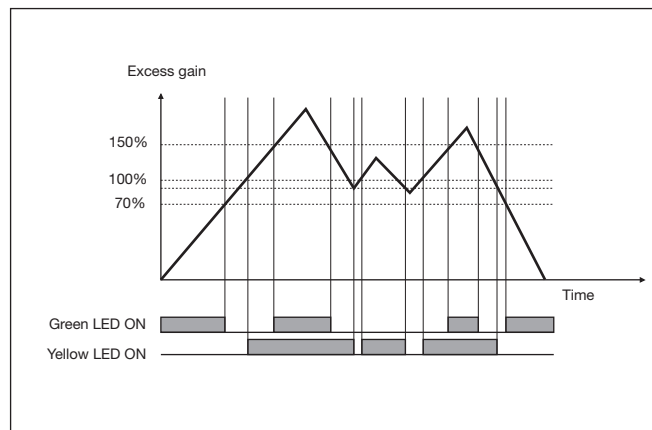
tv = Power ON delay



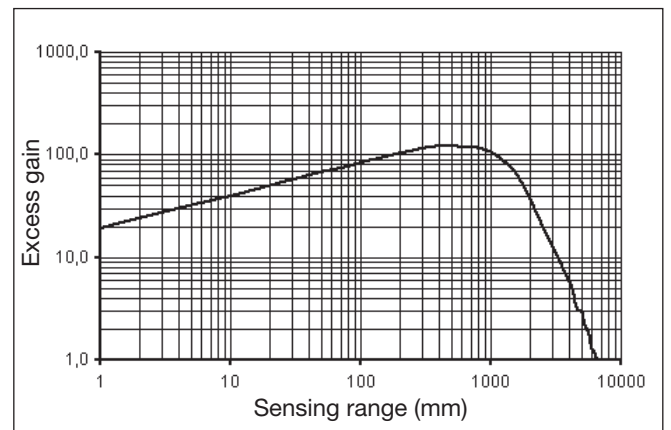
Wiring Diagrams



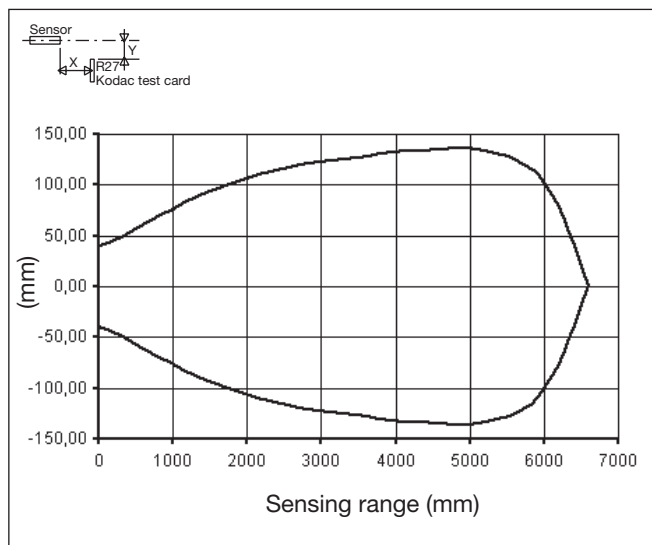
Signal Stability



Excess Gain

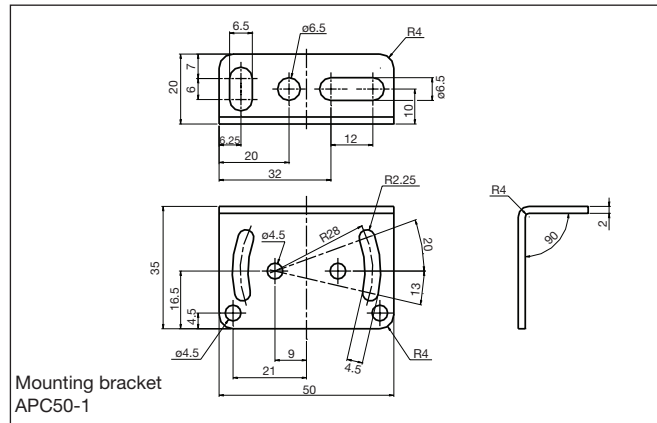


Detection Diagram



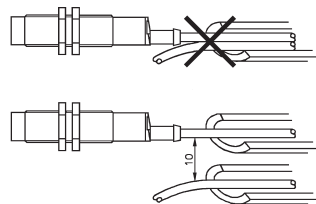
Delivery Contents

- Photoelectric switch: PC50CNP..
- Installation instruction
- Mounting bracket APC50-1
- **Packaging:** Cardboard box

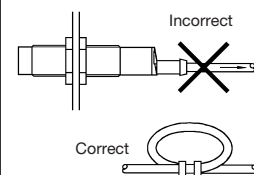


Installation Hints

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

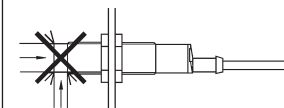


Relief of cable strain



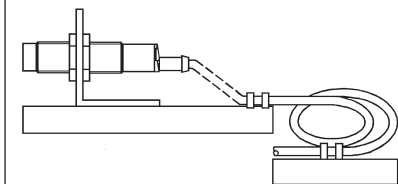
The cable should not be pulled

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

Accessories

- Reflectors: ER-series
- Screwdriver for adjustment: 77-001
- Connector type CON.1A.. serie.