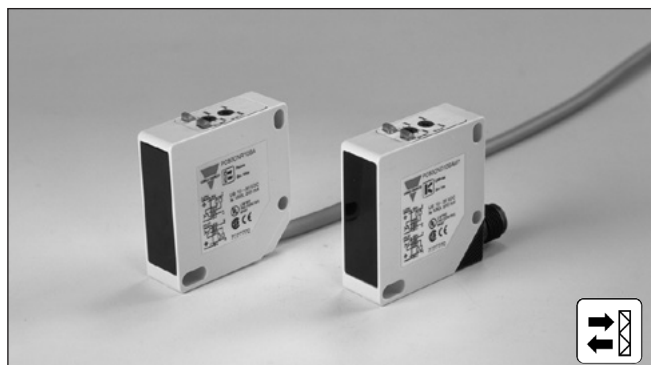


Photoelectrics Retro-reflective, Polarized, Transistor Output Type PC50CNP06BAM.

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	
Housing style	
Housing size	
Housing material	
Housing length	
Detection principle	
Sensing distance	
Output type	
Output configuration	
Connection type	
Mute input	
Mute active level	

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

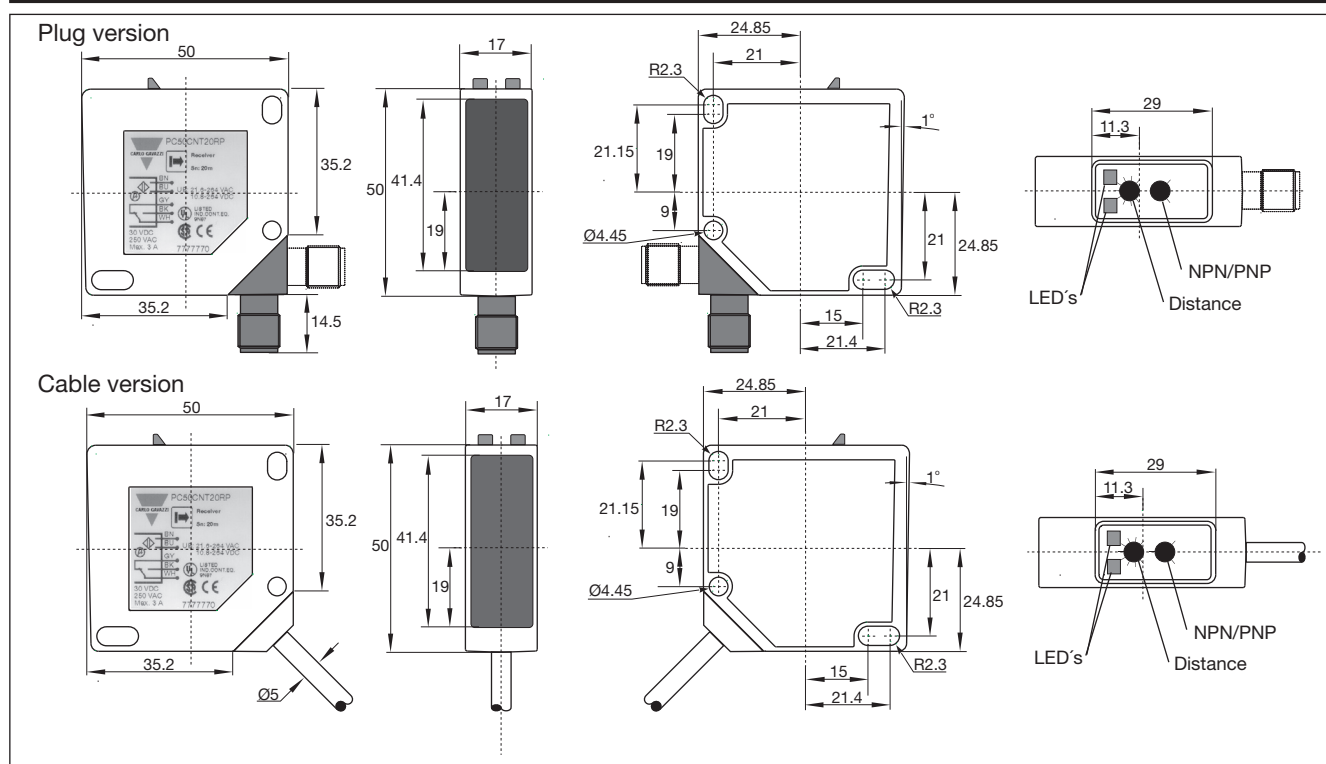
Specifications

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_{rip})	≤ 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	GaAlAs, 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.)

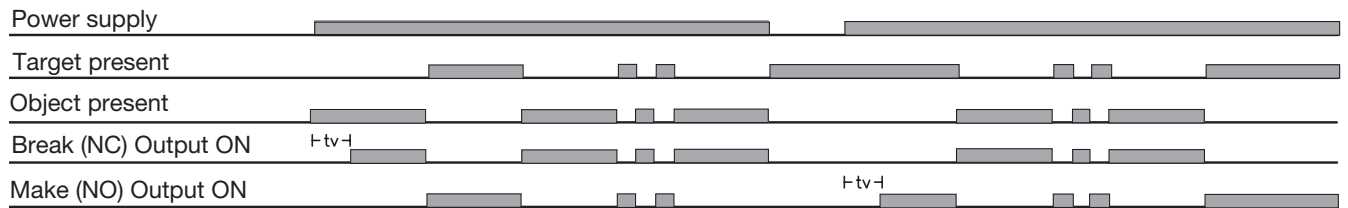
Power ON delay (t_v)	≤ 300 ms	Vibration	10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6)
Output function NPN and PNP Complementary function	Switch selectable Make and break (NO + NC)	Shock	2 x 1 m & 100 x 0.5 m (IEC 60068-2-32)
Indication function Output ON Signal stability ON and power ON	LED, yellow LED, 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

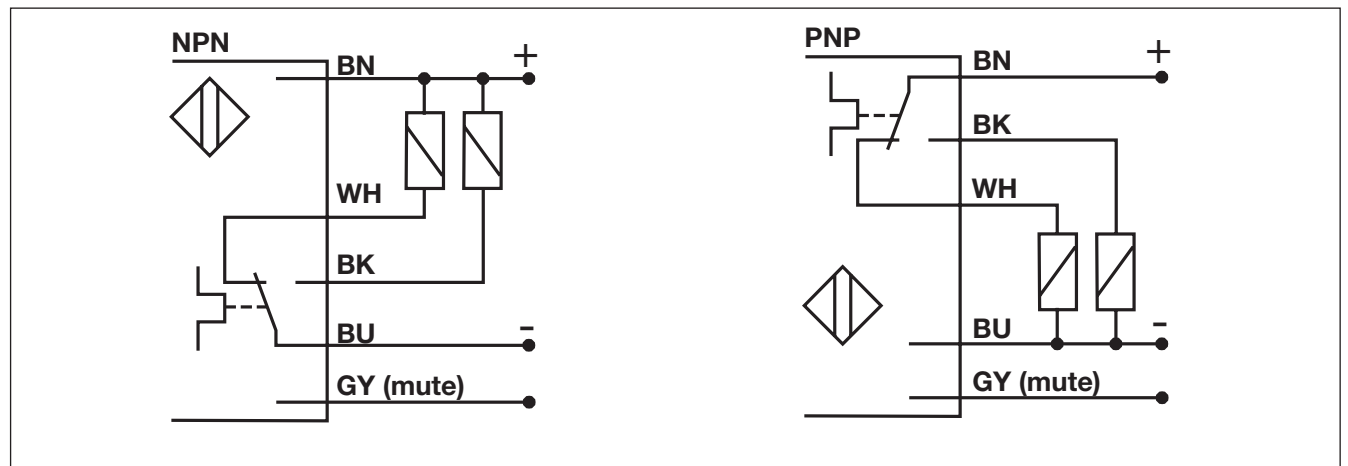


Operation Diagram

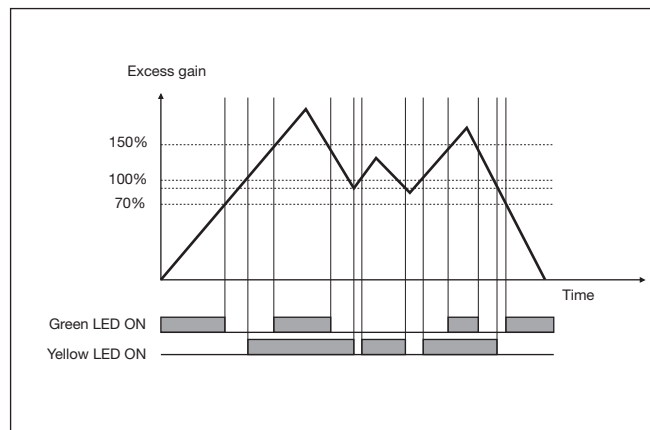
tv = Power ON delay



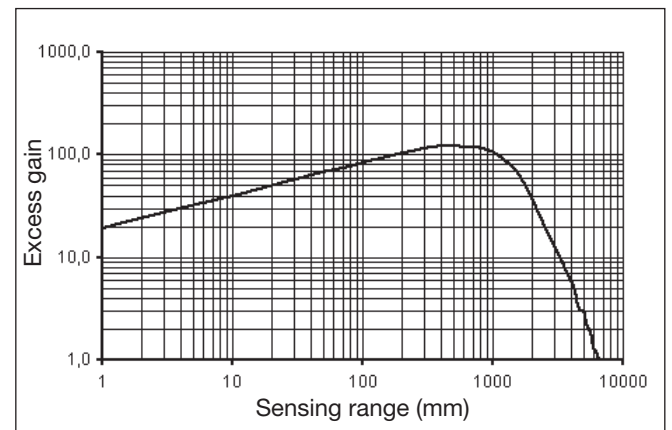
Wiring Diagrams



Signal Stability

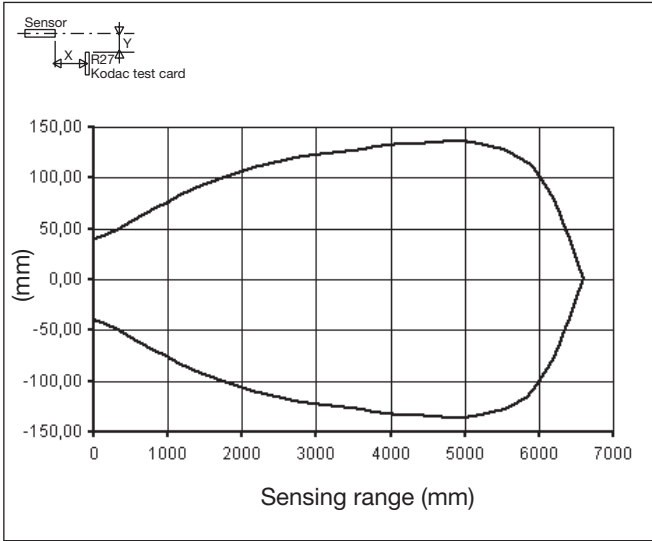


Excess Gain



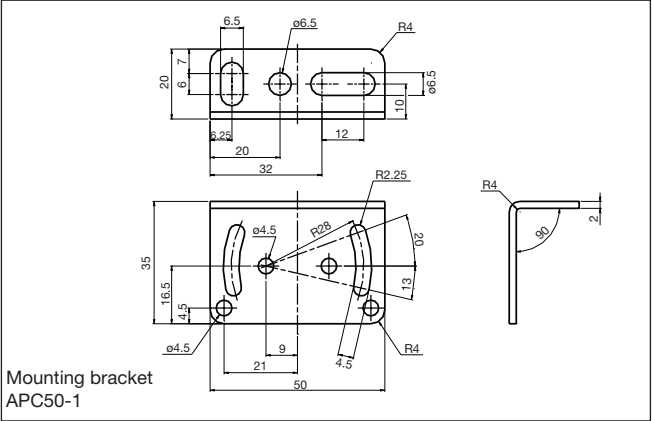


Detection Diagram



Delivery Contents

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



Installation Hints

<p>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</p>	<p>Relief of cable strain</p> <p>Incorrect</p> <p>Correct</p> <p>The cable should not be pulled</p>	<p>Protection of the sensing face</p> <p>A proximity switch should not serve as mechanical stop</p>	<p>Switch mounted on mobile carrier</p> <p>Any repetitive flexing of the cable should be avoided</p>
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Accessories

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

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

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