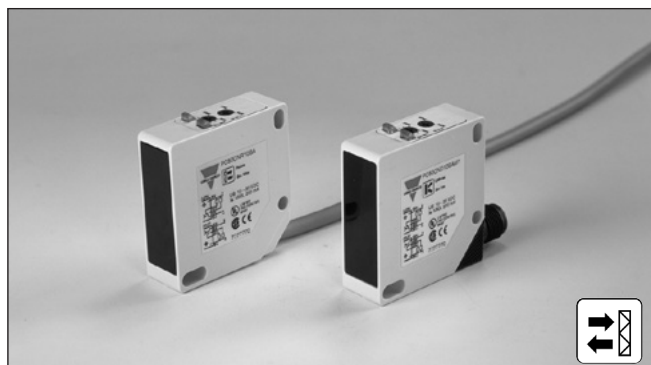


Photoelectrics Retro-reflective, Polarized, Transistor Output Type PC50CNP06BAM.

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

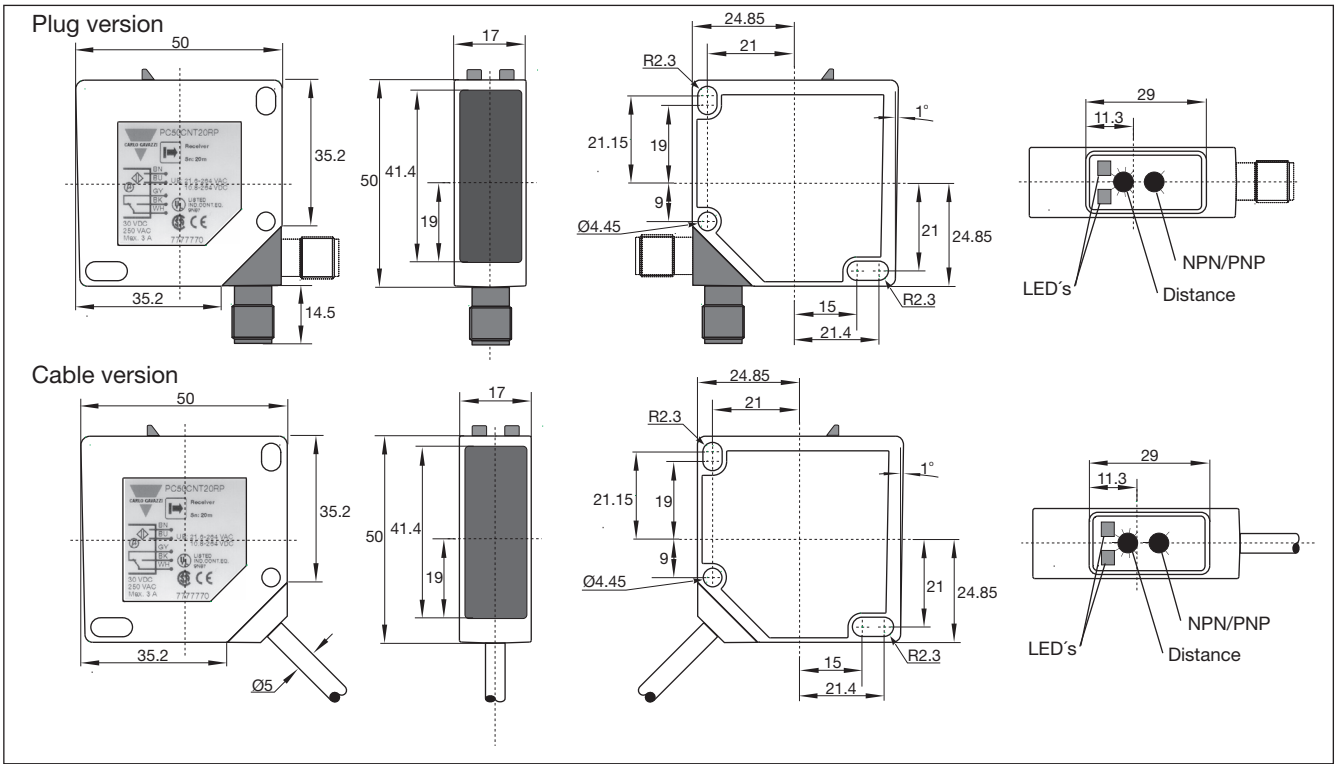
Rated operating distance (S_n)	Up to 6 m, with reflector type ER 4, ref. target	Voltage drop (U_d)	≤ 2.5 VDC @ 200 mA
Blind zone	Max. 20 cm	Test input	
Sensitivity	Adjustable by single-turn potentiometer	Impedance	10kΩ
Hysteresis (H)		Voltage	
Differential travel	3 - 20%	Active high	> 8.5 VDC
Temperature 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.)

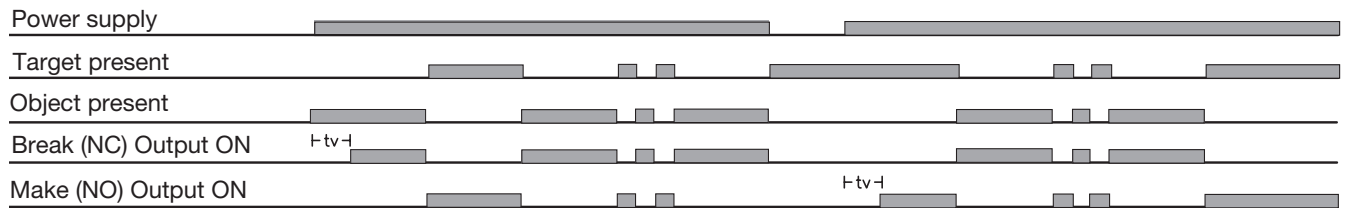
Power ON delay (t _v)	≤ 300 ms	Vibration	10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6)
Output function	Switch selectable	Shock	2 x 1 m & 100 x 0.5 m (IEC 60068-2-32)
NPN and PNP	Make and break (NO + NC)	Rated insulation voltage	50 VDC
Complementary function		Housing material	
Indication function		Body	PC/ABS,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

Dimensions

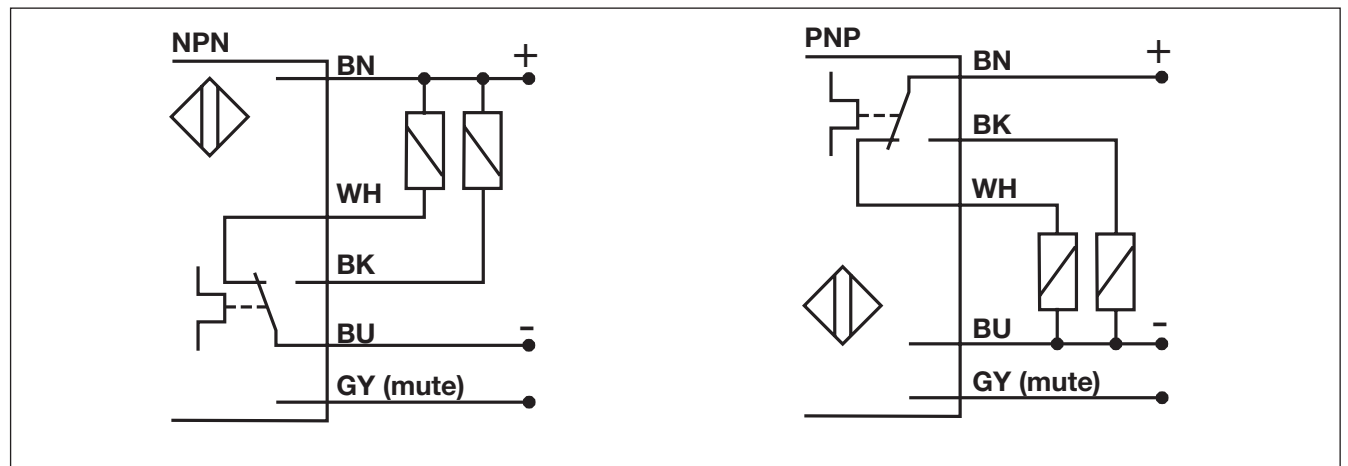


Operation Diagram

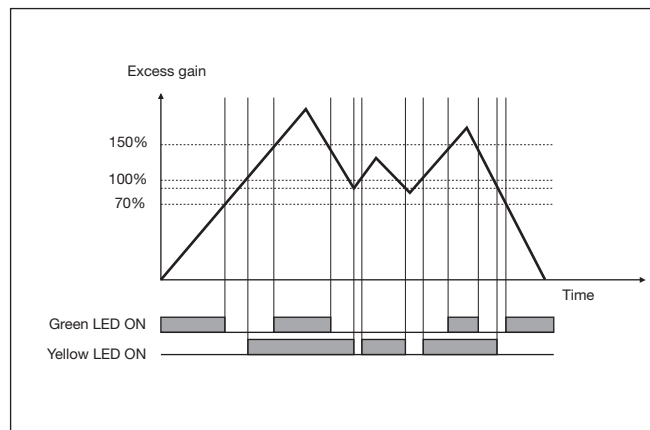
tv = Power ON delay



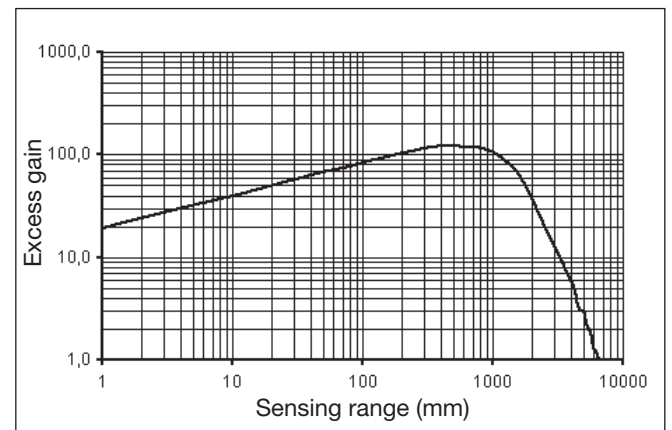
Wiring Diagrams



Signal Stability

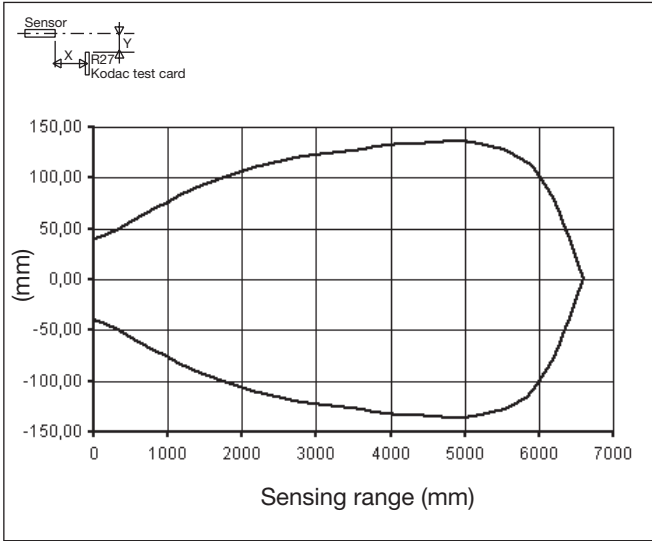


Excess Gain



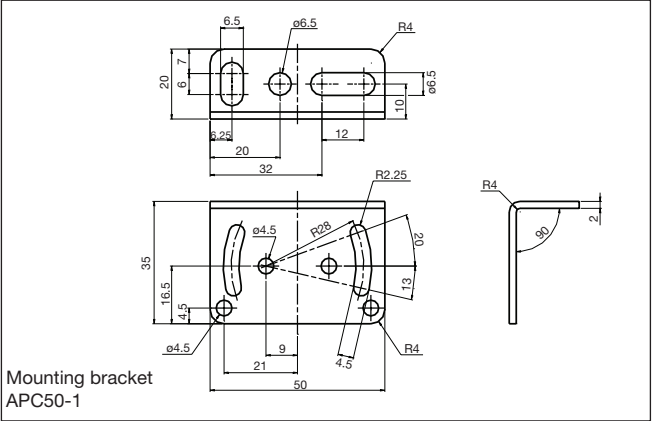


Detection Diagram



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 Incorrect Correct 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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Accessories

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