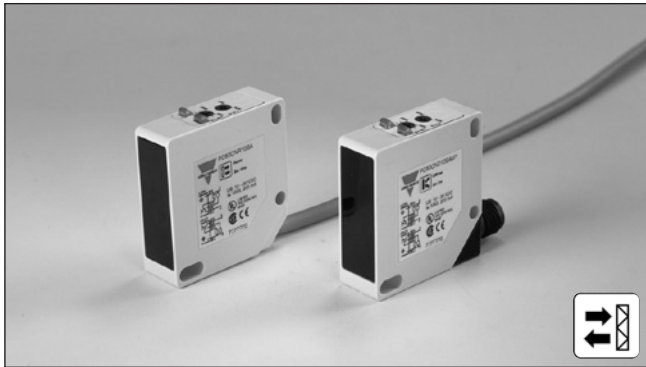


Photoelectrics

Retro-reflective, Polarized, Transistor Output

Type PC50CNP06BA

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



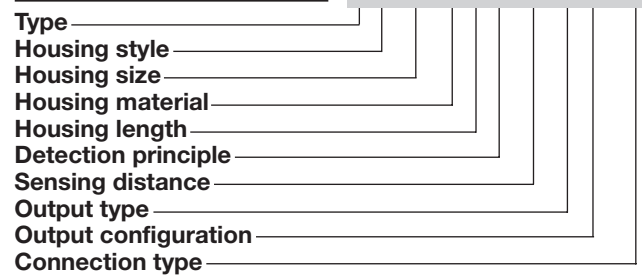
Product Description

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

PC50CNP06BAM1



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	6 m	PC 50 CNP 06 BA	PC 50 CNP 06 BAM1

Note: Reflector to be ordered separately

Specifications

Rated operating distance (S_n)	Up to 6 m, with reflector type ER 4, ref. target	Light source	GaAIAs, LED, 660 nm
Blind zone	Max. 20 cm	Light type	visible red, modulated
Sensitivity	Adjustable by single-turn potentiometer	Sensing angle	± 2° at 1/2 range
Hysteresis (H)		Ambient light	Max. 5'000 lux
Differential travel	3 - 20%	Operating frequency	500 Hz
Temperature drift	≤ 0.5%/°C	Response time	
Rated operational volt. (U_B)	10 to 30 VDC (ripple included)	OFF-ON (t _{ON})	≤ 1 ms
Ripple (U_{rpp})	≤ 10%	ON-OFF (t _{OFF})	≤ 1 ms
Output current		Power ON delay (t_v)	≤ 300 ms
Continuous (I _a)	≤ 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)	≤ 40 mA	Complementary function	Make and break (NO + NC)
Minimum operational current (I_m)	0.5 mA	Indication function	
OFF-state current (I_r)	Max. 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)

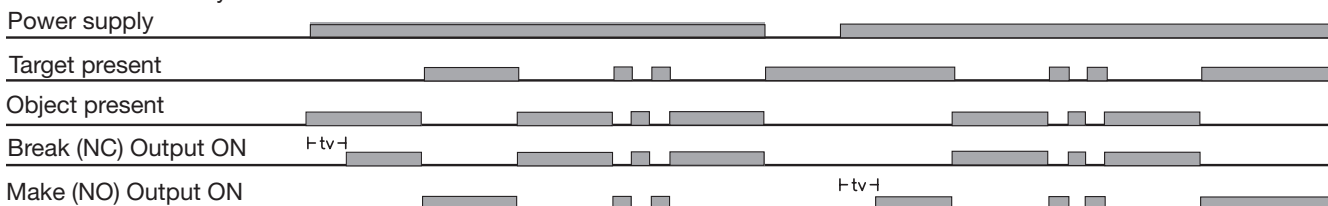


Specifications (cont.)

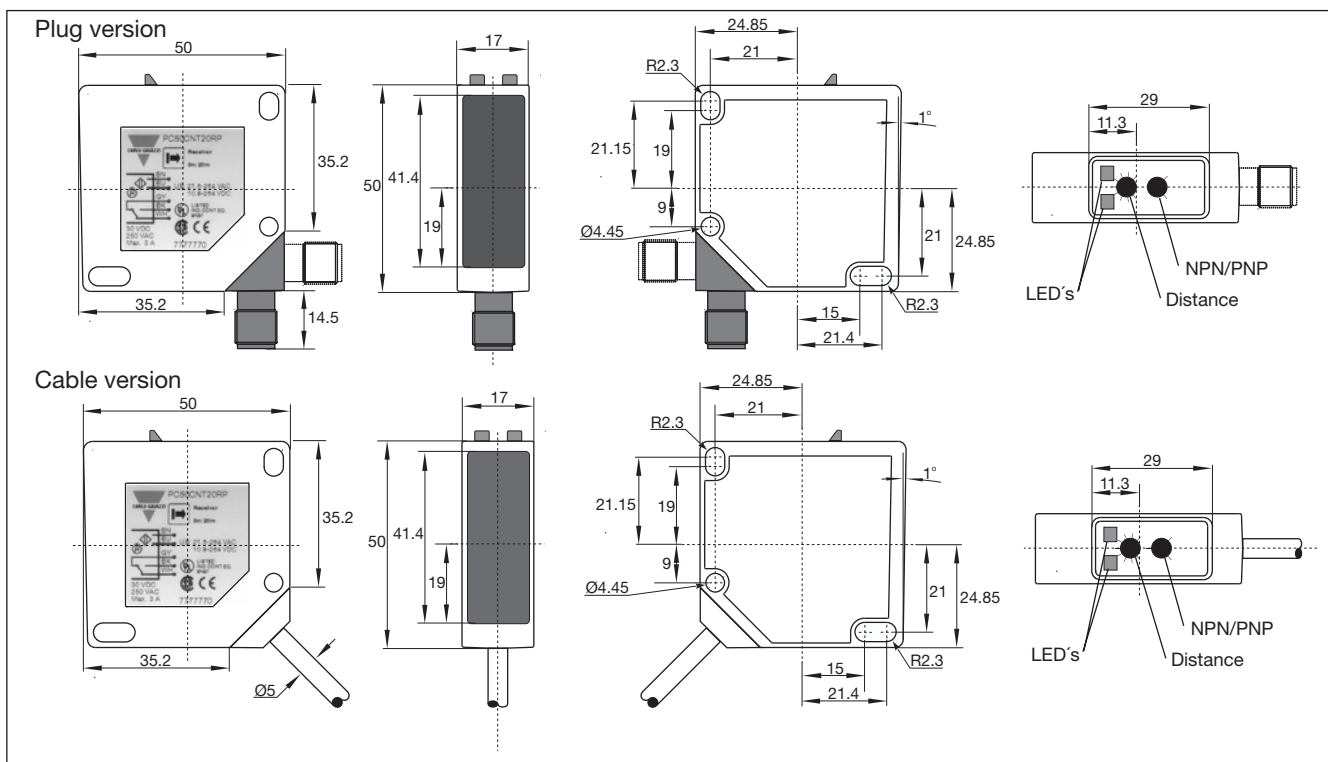
Vibration	10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6)	Connection	PVC, grey, 2 m, 4 x 0.34 mm ²
Shock	2 x 1 m & 100 x 0.5 m (IEC 60068-2-32)	Cable Plug (M1) Cables for plug (M1)	PBTP, M12 x 1 CON.1A-series
Rated insulation voltage	50 VDC	Weight	110 g
Housing material	Body Front glass Mounting bracket	Approvals	UL, CSA
	PC/ABS, grey PMMA, red Steel, galvanized	CE-marking	Yes

Operation Diagram

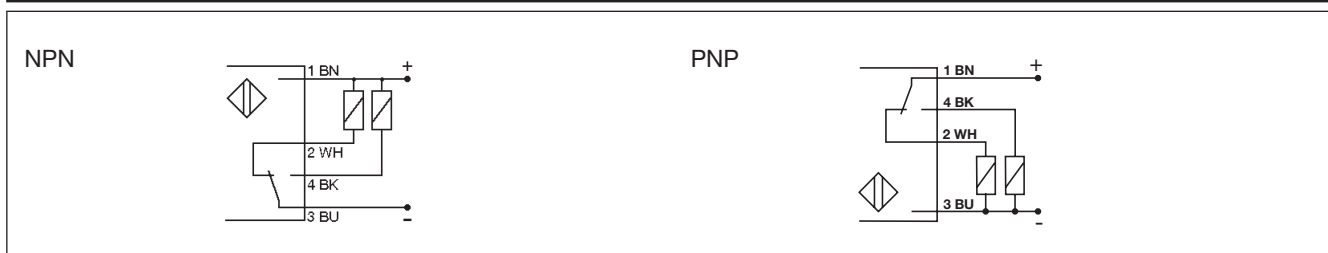
tv = Power ON delay



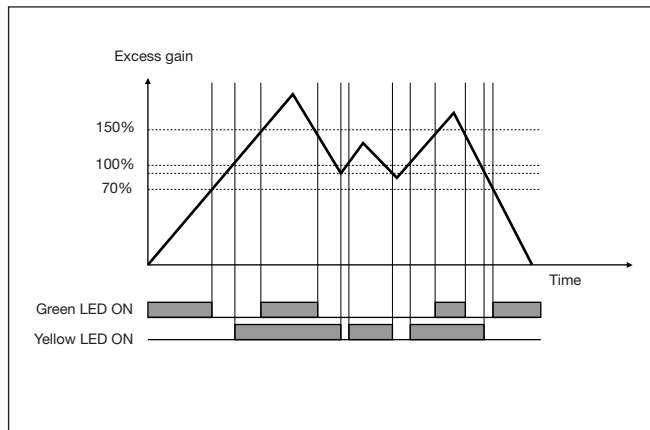
Dimensions



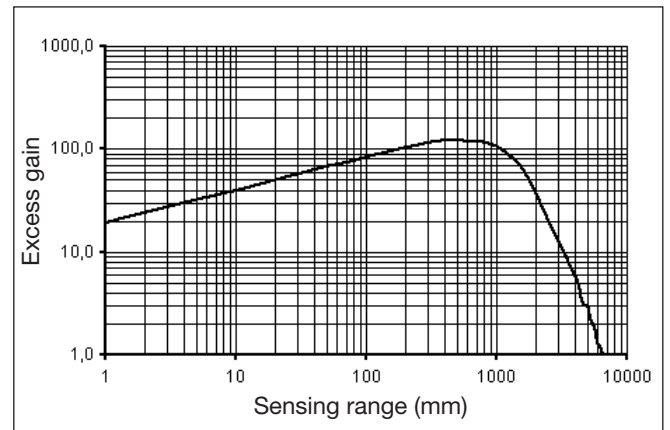
Wiring Diagrams



Signal Stability



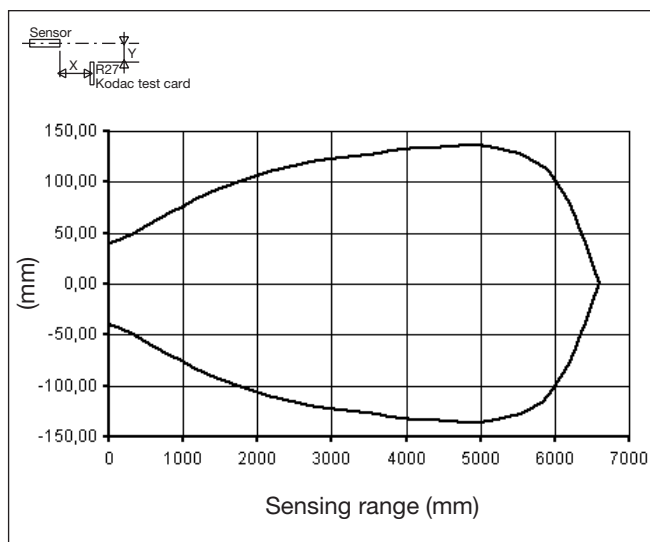
Excess Gain



Installation Hints

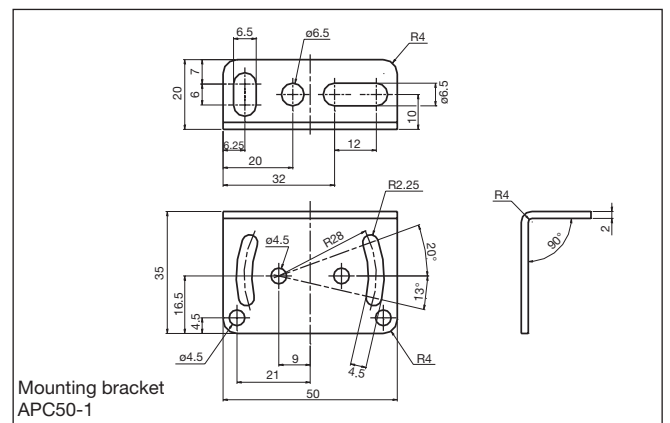
<p>To avoid interference from inductive voltage/current peaks, separate the prox. switch power cables from any other power cables, e.g. motor, contactor or solenoid cables</p>	<p>Relief of cable strain</p> <p>The cable should not be pulled</p>	<p>Protection of the sensing face</p> <p>A proximity switch 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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Detection Diagram



Delivery Contents

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



Accessories

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