

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 EMC immunity

Preliminary data sheet

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	_____
Housing style	_____
Housing size	_____
Housing material	_____
Housing length	_____
Detection principle	_____
Sensing distance	_____
Output type	_____
Output configuration	_____
Connection type	_____

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, Ø84, ref. target	Light source	GaAIAs, LED, 660 nm
Blind zone	Max. 15 cm	Light type	visible red, modulated
Sensitivity	Adjustable by single-turn potentiometer	Sensing angle	± 2°
Hysteresis (H)	3 - 20%	Ambient light	Max. 10'000 lux
Differential travel		Operating frequency	500 Hz
Temperature drift	± 0.5%/°C	Response time	≤ 1 ms
Rated operational volt. (U _B)	10 to 30 VDC (ripple included)	OFF-ON (t _{ON})	
Ripple (U _{ripp})	≤ 10%	ON-OFF (t _{OFF})	≤ 300 ms
Output current	≤ 200 mA, (max. load capacity 100 nF)	Power ON delay (t _v)	≤ 300 ms
Continuous (I _a)		Output function	Switch selectable Make and break (NO + NC)
Short-time (I)	≤ 200 mA	NPN and PNP	
No load supply current (I _o)	≤ 50 mA	Complementary switch	Indication function
Minimum operational current (I _m)	0.5 mA	Output ON	LED, yellow
OFF-state current (I _r)	Max. 100 µA	Signal stability ON and power ON	LED, green
Voltage drop (U _d)	≤ 2.5 VDC @ 200 mA	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)
Protection	Short-circuit, reverse polarity, transients	Temperature	
		Operating	
		Storage	-25° to +80°C (-13° to +176°F)

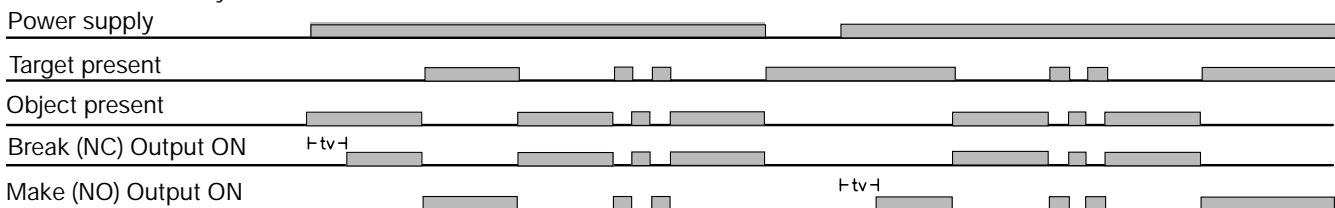


Specifications (cont.)

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	130 g
Housing material	PC/ABS, grey Body Front glass Mounting bracket	CE-marking	Yes
	PMMA, red		
	Steel, galvanized		

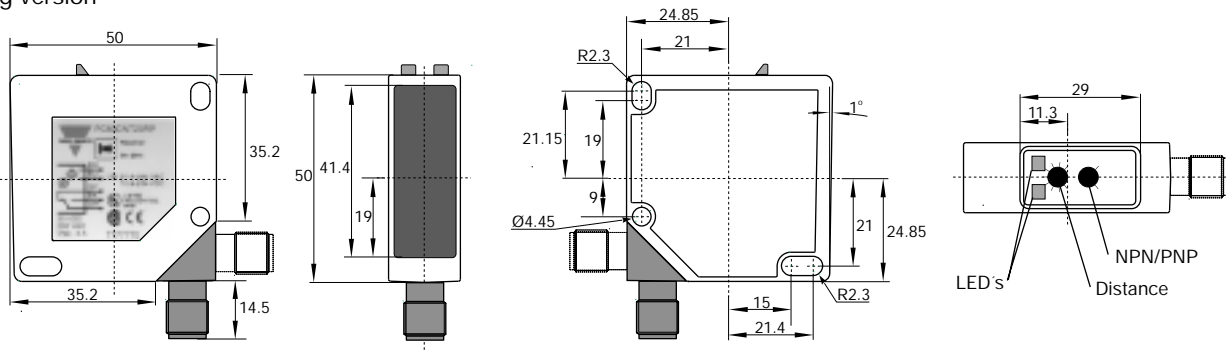
Operation Diagram

tv = Power ON delay

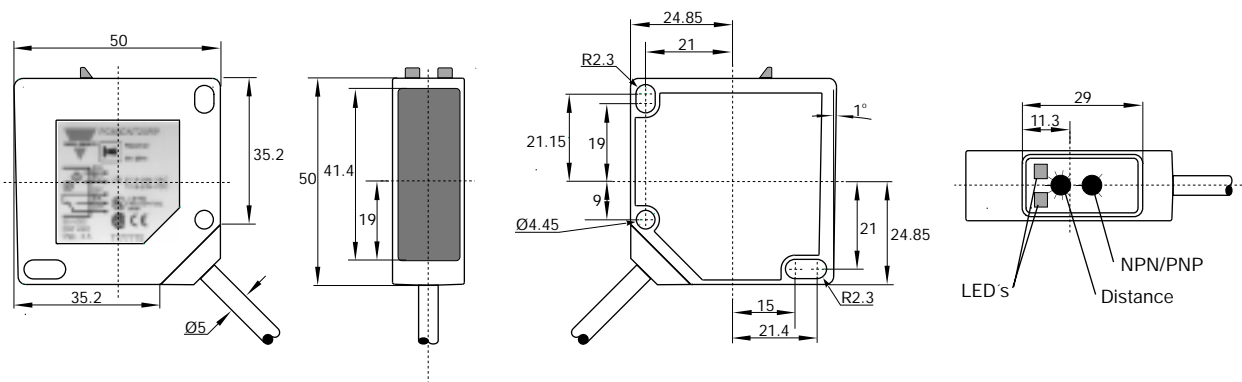


Dimensions

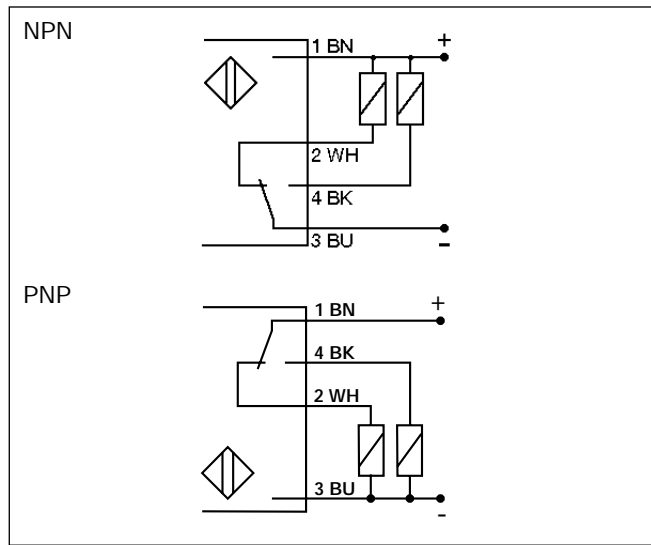
Plug version



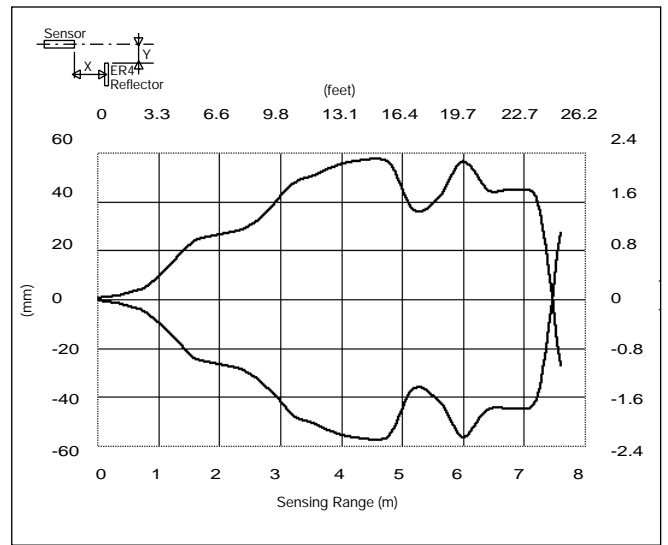
Cable version



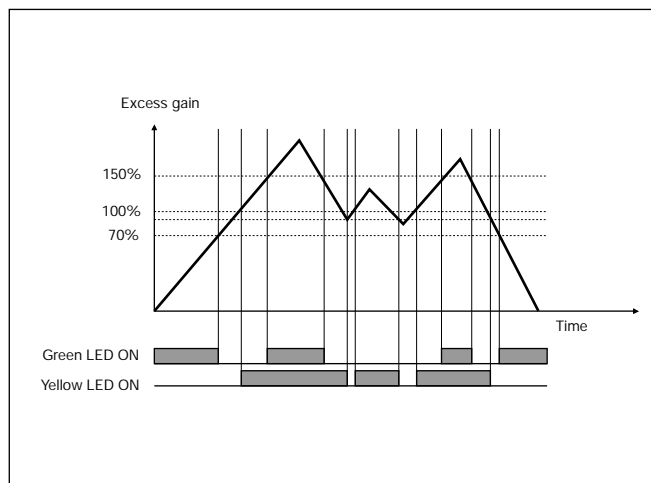
Wiring Diagrams



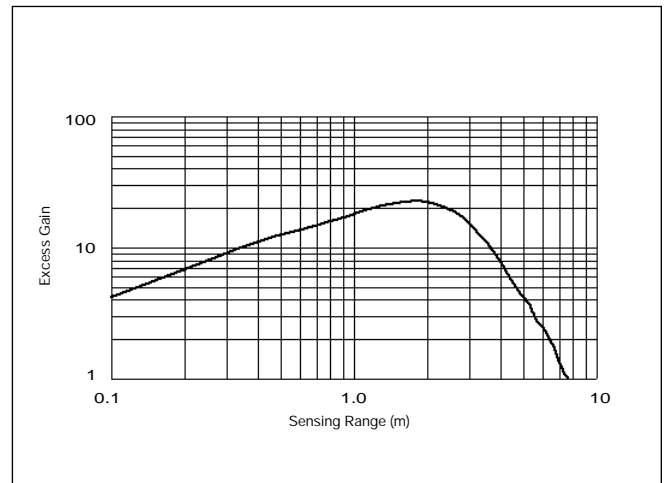
Detection Diagram



Signal Stability



Excess Gain



Delivery Contents

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

Accessories

- Reflectors: ER-series
- Screwdriver for adjustment: 77-001

For further information refer to "Accessories"