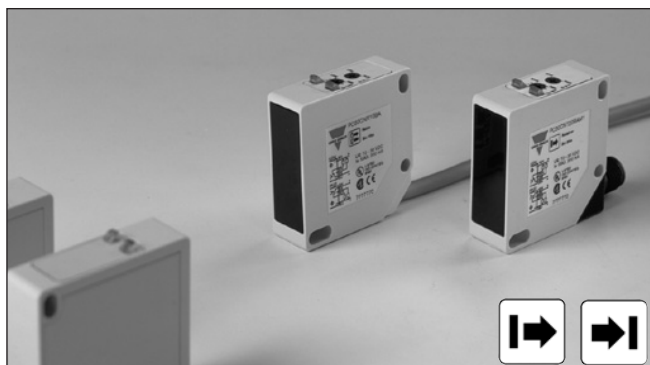


Photoelectrics Through-beam, Transistor Output Type PC50CNT20B.

CARLO GAVAZZI



- Range: 20 m
- Adjustable sensitivity
- Modulated, infrared light
- Supply voltage: 10 to 30 VDC
- Output: 200 mA, NPN or PNP selectable
- Make and break switching function
- LED for output indication, signal stability and power ON
- Protection: reverse polarity, short circuit, transients
- Cable and plug versions
- Excellent EMC



Product Description

The PC50CNT. is a family of general purpose through-beam 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

PC50CNT20BAM1

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	Connection	Ordering no. Receiver NPN & PNP Make & break switching	Ordering no. Emitter
17 x 50 x 50 mm	20 m	Cable	PC 50 CNT 20 BA	PC 50 CNT 20 B
17 x 50 x 50 mm	20 m	Plug	PC 50 CNT 20 BAM1	PC 50 CNT 20 BM1

Note: Please order emitter and receiver separately

Specifications Emitter

Rated operational volt. (U _B)	10 to 30 VDC	Light source	GaAs LED, 950 nm
Ripple (U _{rrp})	≤ 10%	Light type	Infrared, modulated
Supply current	≤ 50 mA	Optical angle	± 2° at 1/2 range
Protection	Reverse polarity, transients	Indication function	LED, green
		Power supply ON	

Specifications Receiver

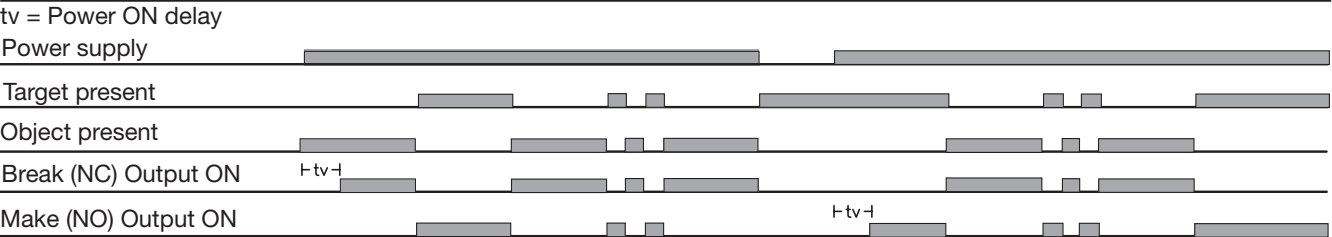
Rated operating dist. (S _n)	20 m	OFF-state current (I _r)	≤ 100 μA
Blind zone	None	Voltage drop (U _d)	≤ 2.5 VDC @ 200 mA
Sensitivity	Adj. by single-turn pot.meter	Protection	Short-circuit, reverse polarity, transients
Temperature drift	≤ 0.5%/°C	Operating frequency (f)	500 Hz
Hysteresis (H)	3 - 20%	Response time	OFF-ON (t _{ON}) ≤ 1 ms ON-OFF (t _{OFF}) ≤ 1 ms
Rated operational volt. (U _B)	10 to 30 VDC (ripple included)	Power ON delay (t _v)	≤ 300 ms
Ripple (U _{rrp})	≤ 10%	Output function	NPN and PNP Complementary function
Output current		Indication function	LED, yellow LED, green
Continuous (I _a)	≤ 200 mA		
Short-time (I)	≤ 200 mA, (max. load capacity 100 nF)		
No load supply current (I _o)	≤ 40 mA		
Minimum operational current (I _m)	0.5 mA		



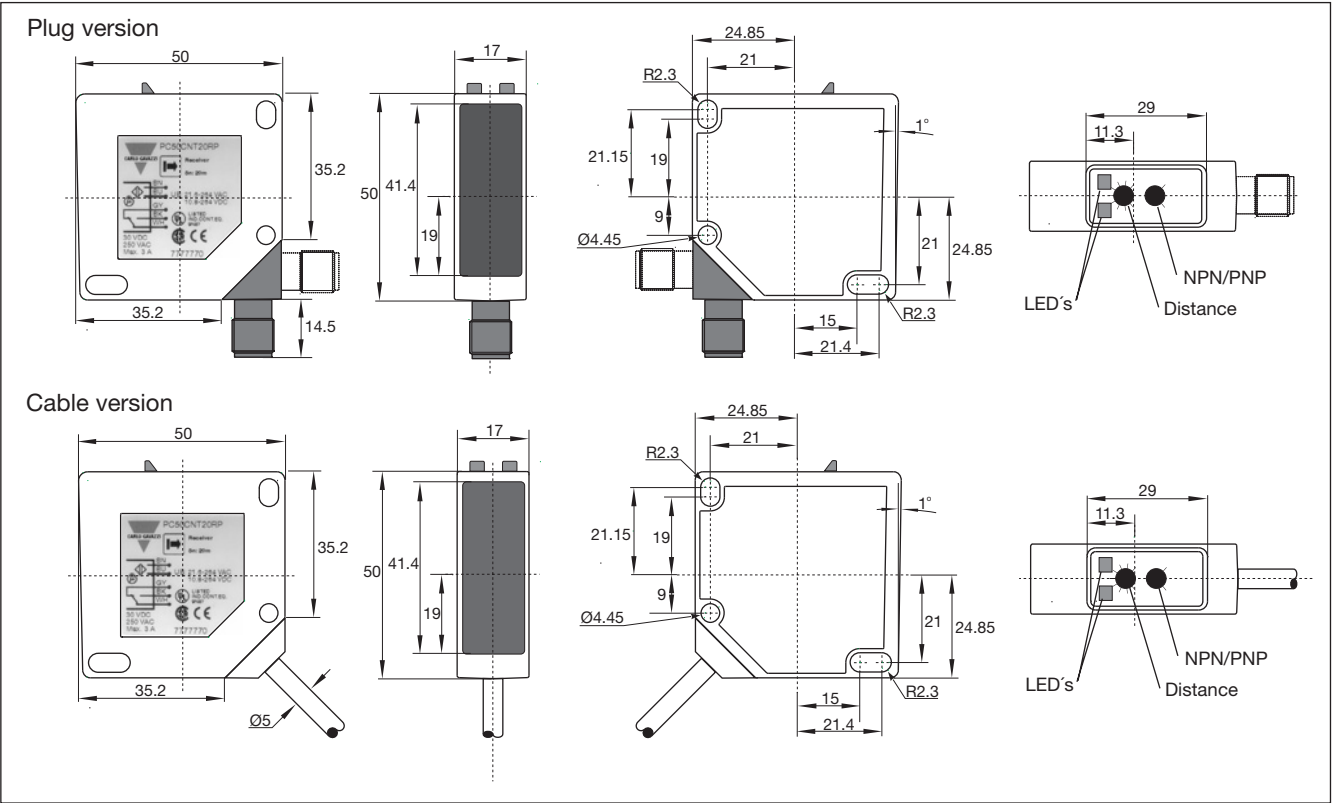
General Specifications

Environment		Housing material	
Overvoltage category	II (IEC 60664/60664A, 60947-1)	Body	PC/ABS, grey
Pollution degree	3 (IEC 60664/60664A, 60947-1)	Front glass	PC black
Degree of protection	IP 67 (IEC 60529, 60947-1)	Mounting bracket	Steel, galvanized
Temperature		Connection	
Operating	-20° to +60°C (-4° to +140°F)	Cable receiver	PVC, grey, 2 m, 4 x 0.25 mm ²
Storage	-25° to +80°C (-13° to +176°F)	Cable emitter	PVC, grey, 2 m, 2 x 0.25 mm ²
Vibration		Plug (M1)	PBTP, M12 x 1
Shock		Cables for plug (M1)	CON.1A-series
Rated insulation voltage		Weight	
50 VDC		Emitter	110 g
		Receiver	110 g
		Approvals	
		UL, CSA	
		CE-marking	
		Yes	

Operation Diagram



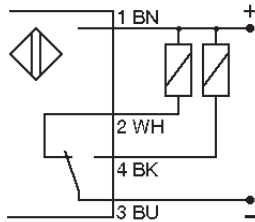
Dimensions



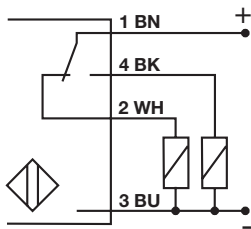
Wiring Diagrams

Receiver

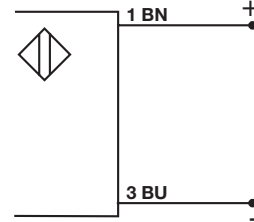
NPN



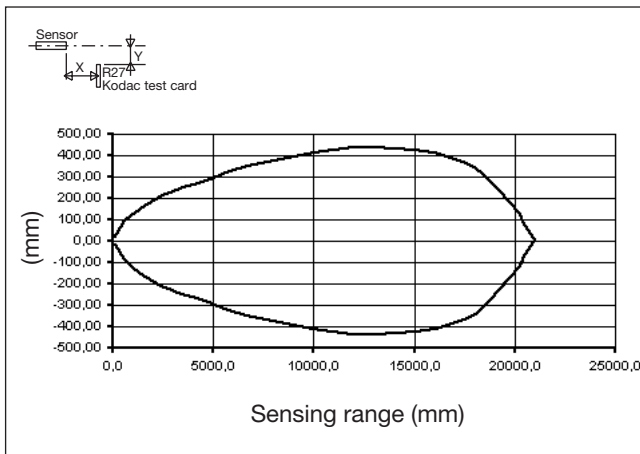
PNP



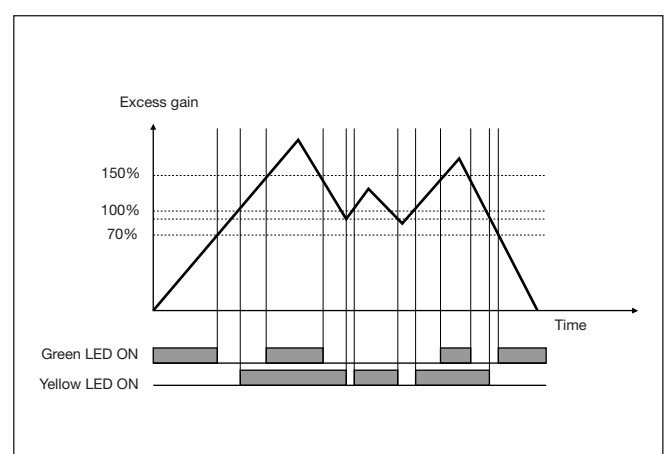
Emitter



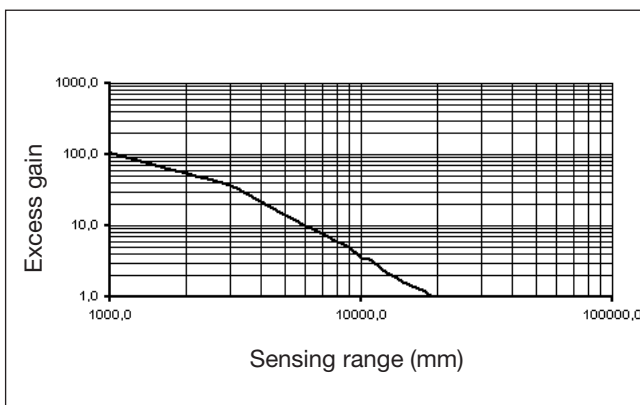
Detection Diagram



Signal Stability

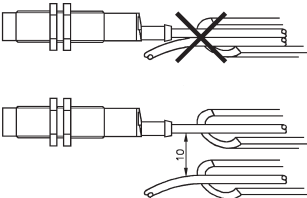
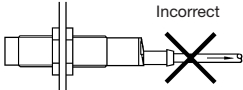
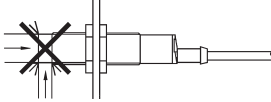
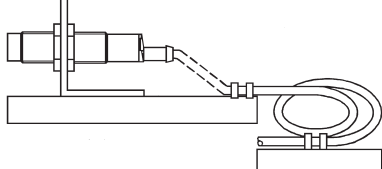


Excess Gain





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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Delivery Contents

- Photoelectric switch: PC50CNT..
- Installation instruction
- Mounting bracket APC50-1
- **Packaging:** Cardboard box

Accessories

- Screwdriver 77.001
- Connector type CON.1A.. serie

