

# РС

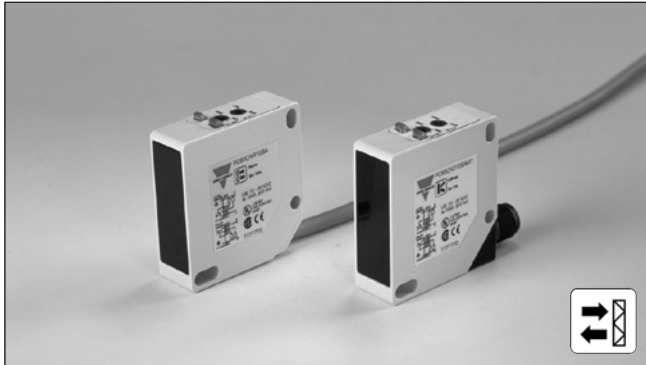
## Технические характеристики

### По вопросам продаж и поддержки обращайтесь:

Алматы (7273)495-231	Казань (843)206-01-48	Новокузнецк (3843)20-46-81	Смоленск (4812)29-41-54
Архангельск (8182)63-90-72	Калининград (4012)72-03-81	Новосибирск (383)227-86-73	Сочи (862)225-72-31
Астрахань (8512)99-46-04	Калуга (4842)92-23-67	Омск (3812)21-46-40	Ставрополь (8652)20-65-13
Барнаул (3852)73-04-60	Кемерово (3842)65-04-62	Орел (4862)44-53-42	Сургут (3462)77-98-35
Белгород (4722)40-23-64	Киров (8332)68-02-04	Оренбург (3532)37-68-04	Тверь (4822)63-31-35
Брянск (4832)59-03-52	Краснодар (861)203-40-90	Пенза (8412)22-31-16	Томск (3822)98-41-53
Владивосток (423)249-28-31	Красноярск (391)204-63-61	Пермь (342)205-81-47	Тула (4872)74-02-29
Волгоград (844)278-03-48	Курск (4712)77-13-04	Ростов-на-Дону (863)308-18-15	Тюмень (3452)66-21-18
Вологда (8172)26-41-59	Липецк (4742)52-20-81	Рязань (4912)46-61-64	Ульяновск (8422)24-23-59
Воронеж (473)204-51-73	Магнитогорск (3519)55-03-13	Самара (846)206-03-16	Уфа (347)229-48-12
Екатеринбург (343)384-55-89	Москва (495)268-04-70	Санкт-Петербург (812)309-46-40	Хабаровск (4212)92-98-04
Иваново (4932)77-34-06	Мурманск (8152)59-64-93	Саратов (845)249-38-78	Челябинск (351)202-03-61
Ижевск (3412)26-03-58	Набережные Челны (8552)20-53-41	Севастополь (8692)22-31-93	Череповец (8202)49-02-64
Иркутск (395)279-98-46	Нижний Новгород (831)429-08-12	Симферополь (3652)67-13-56	Ярославль (4852)69-52-93
Россия (495)268-04-70	Киргизия (996)312-96-26-47	Казахстан (7172)727-132	

# Photoelectrics Retro-reflective, Transistor Output Type PC50CNR10BAM.

CARLO GAVAZZI



- Range: 10 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
- High degree of EMC
- Mute input



## Product Description

The PC50CNR. is a family of general purpose 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 perfor-

mance. 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 **PC50CNR10BAM1MH**

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 <sub>n</sub>	Mute	Ordering no. NPN & PNP cable Make & break switching	Ordering no. NPN & PNP plug Make & break switching
17 x 50 x 50 mm	10 m	High	PC 50 CNR 10 BAMH	PC 50 CNR 10 BAM1MH
17 x 50 x 50 mm	10 m	Low	PC 50 CNR 10 BAML	PC 50 CNR 10 BAM1ML

**Note:** Reflector to be ordered separately

## Specifications

<b>Rated operating distance (S<sub>n</sub>)</b>	10 m, with reflector type ER 4, ref. target	<b>Voltage drop (U<sub>d</sub>)</b>	≤ 2.5 VDC @200 mA
<b>Blind zone</b>	Max. 10 cm	<b>Test input</b>	
<b>Sensitivity</b>	Adjustable by single-turn potentiometer	Impedance	10kΩ
<b>Temperature drift</b>	≤ 0.5%/°C	Voltage	
<b>Hysteresis (H)</b>		Active high	> 8.5 VDC
Differential travel	3-20%	Active low	< 3 VDC
<b>Rated operational volt. (U<sub>B</sub>)</b>	10 to 30 VDC (ripple included)	<b>Test input response time</b>	
<b>Ripple (U<sub>rpp</sub>)</b>	≤ 10%	ON-OFF (t <sub>1</sub> )	≤ 200 ms
<b>Output current</b>		ON-OFF (t <sub>2</sub> )	≤ 200 ms
Continuous (I <sub>a</sub> )	≤ 200 mA	<b>Protection</b>	Short-circuit, reverse polarity, transients
Short-time (I)	≤ 200 mA, (max. load capacity 100 nF)	<b>Light source</b>	GaAIAs, LED, 880 nm
<b>No load supply current (I<sub>o</sub>)</b>	≤ 40 mA	<b>Light type</b>	infrared, modulated
<b>Minimum operational current (I<sub>m</sub>)</b>	0.5 mA	<b>Sensing angle</b>	± 2° at 1/2 range
<b>OFF-state current (I<sub>r</sub>)</b>	≤ 100 μA	<b>Ambient light</b>	Max. 5'000 lux
		<b>Operating frequency</b>	500 Hz
		<b>Response time</b>	
		OFF-ON (t <sub>ON</sub> )	≤ 1 ms
		ON-OFF (t <sub>OFF</sub> )	≤ 1 ms
		<b>Power ON delay (t<sub>v</sub>)</b>	≤ 300 ms

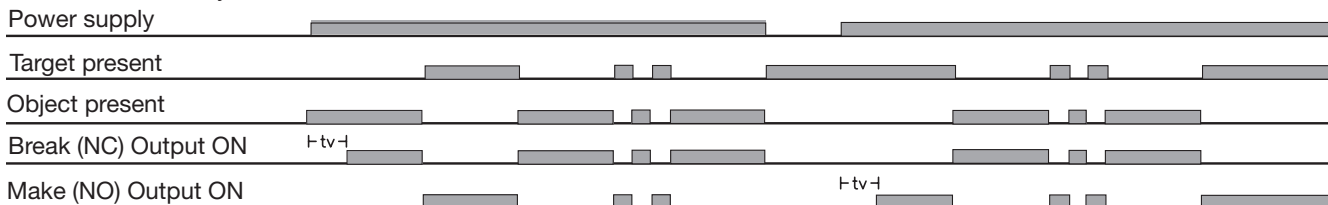


## Specifications (cont.)

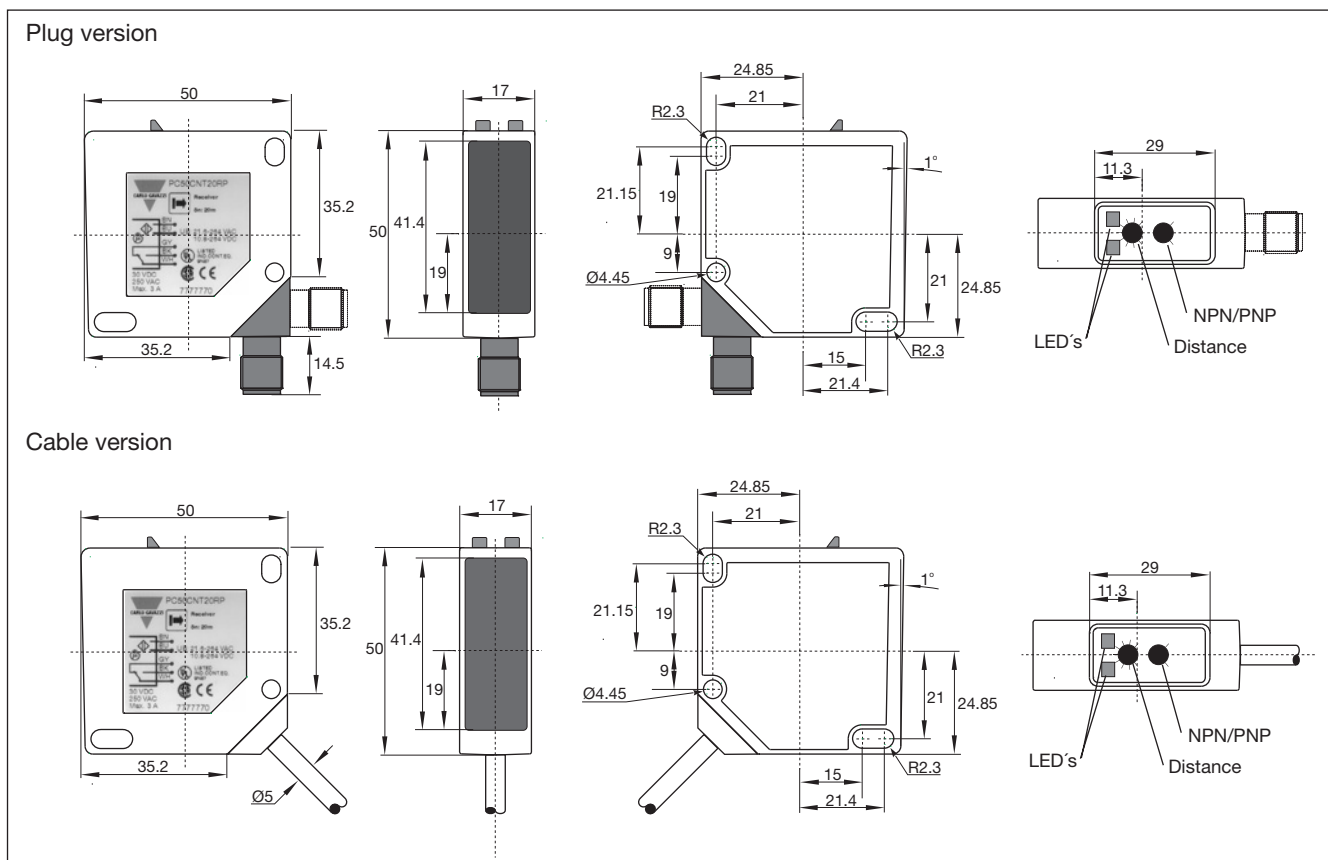
<b>Output function</b> NPN and PNP Complementary function	Switch selectable Make and break (NO + NC)	<b>Vibration</b>	10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6)
<b>Indication function</b> Output ON Signal stability ON and power ON	LED, yellow LED, green	<b>Shock</b>	2 x 1 m & 100 x 0.5 m (IEC 60068-2-32)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

## Operation Diagram

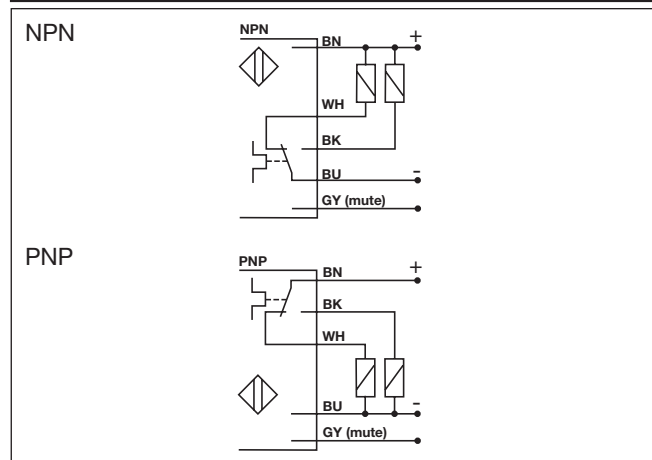
tv = Power ON delay



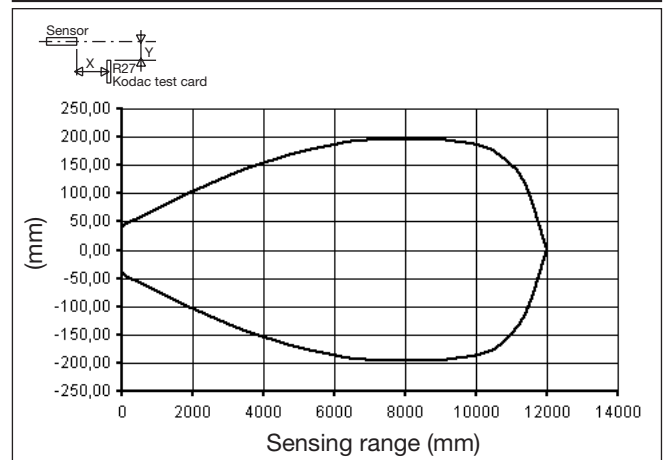
## Dimensions



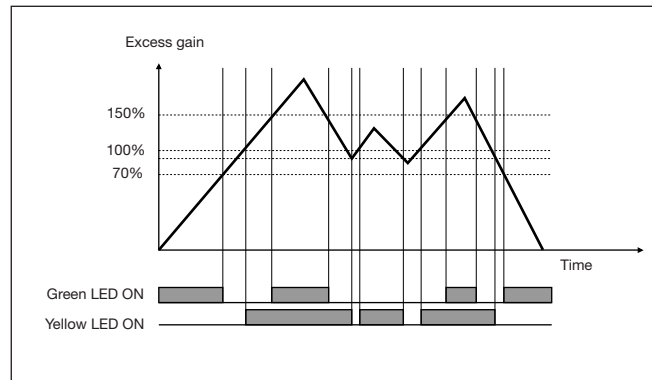
## Wiring Diagrams



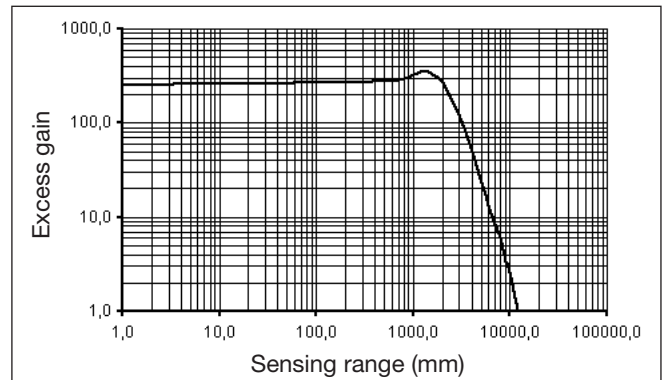
## Detection Diagram



## 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>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>
---	---	---	--

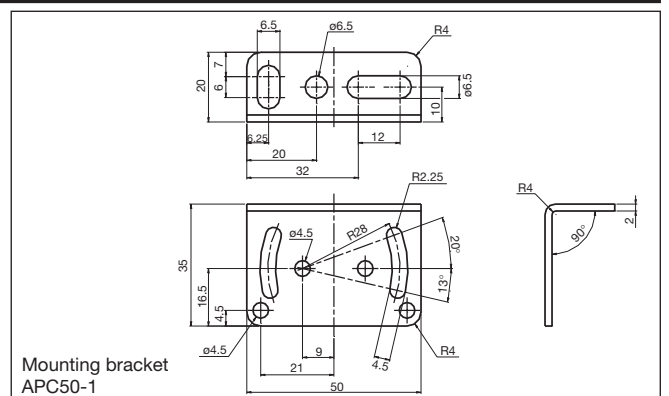
## Delivery Contents

- Photoelectric switch: PC50CNR..
- Installation instruction
- Mounting bracket APC50-1
- **Packaging:** Cardboard box

## Accessories

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

For further information refer to "Accessories"



**По вопросам продаж и поддержки обращайтесь:**

Алматы (7273)495-231  
Архангельск (8182)63-90-72  
Астрахань (8512)99-46-04  
Барнаул (3852)73-04-60  
Белгород (4722)40-23-64  
Брянск (4832)59-03-52  
Владивосток (423)249-28-31  
Волгоград (844)278-03-48  
Вологда (8172)26-41-59  
Воронеж (473)204-51-73  
Екатеринбург (343)384-55-89  
Иваново (4932)77-34-06  
Ижевск (3412)26-03-58  
Иркутск (395)279-98-46  
Россия (495)268-04-70

Казань (843)206-01-48  
Калининград (4012)72-03-81  
Калуга (4842)92-23-67  
Кемерово (3842)65-04-62  
Киров (8332)68-02-04  
Краснодар (861)203-40-90  
Красноярск (391)204-63-61  
Курск (4712)77-13-04  
Липецк (4742)52-20-81  
Магнитогорск (3519)55-03-13  
Москва (495)268-04-70  
Мурманск (8152)59-64-93  
Набережные Челны (8552)20-53-41  
Нижний Новгород (831)429-08-12  
Киргизия (996)312-96-26-47

Новокузнецк (3843)20-46-81  
Новосибирск (383)227-86-73  
Омск (3812)21-46-40  
Орел (4862)44-53-42  
Оренбург (3532)37-68-04  
Пенза (8412)22-31-16  
Пермь (342)205-81-47  
Ростов-на-Дону (863)308-18-15  
Рязань (4912)46-61-64  
Самара (846)206-03-16  
Санкт-Петербург (812)309-46-40  
Саратов (845)249-38-78  
Севастополь (8692)22-31-93  
Симферополь (3652)67-13-56  
Казахстан (7172)727-132

Смоленск (4812)29-41-54  
Сочи (862)225-72-31  
Ставрополь (8652)20-65-13  
Сургут (3462)77-98-35  
Тверь (4822)63-31-35  
Томск (3822)98-41-53  
Тула (4872)74-02-29  
Тюмень (3452)66-21-18  
Ульяновск (8422)24-23-59  
Уфа (347)229-48-12  
Хабаровск (4212)92-98-04  
Челябинск (351)202-03-61  
Череповец (8202)49-02-64  
Ярославль (4852)69-52-93