

Photoelectrics

Diffuse-reflective, Transistor Output

Type PC50CND10BA



- Range: 1 m
- Adjustable sensitivity
- Modulated, infrared light
- 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 version
- High EMC immunity

Product Description

The PC50CND. is a family of general purpose diffuse-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

PC50CND10BAM1

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	1 m	PC 50 CND 10 BA	PC 50 CND 10 BAM1

Specifications

Rated operating distance (S_n)	Up to 1 m, reference target Kodak test card R 27, white, 90% reflectivity, 200 x 200 mm	Light source	GaAlAs, LED, 880 nm
Blind zone	Max. 10 cm	Light type	infrared, modulated
Sensitivity	Adjustable by single-turn potentiometer	Sensing angle	± 2° at 1/2 range
Temperature drift	≤ 0.5%/°C	Ambient light	Max. 5'000 lux
Hysteresis (H) Differential travel	3 - 20%	Operating frequency	500 Hz
Rated operational volt. (U_B)	10 to 30 VDC (ripple included)	Response time OFF-ON (t _{ON}) ON-OFF (t _{OFF})	≤ 1 ms ≤ 1 ms
Ripple (U_{ripple})	≤ 10%	Power ON delay (t_v)	< 300 ms
Output current Continuous (I _a) Short-time (I)	≤ 200 mA ≤ 200 mA (max. load capacity 100 nF)	Output function NPN and PNP Complementary function	Switch selectable Make and break (NO + NC)
No load supply current (I_o)	≤ 40 mA	Indication function Output ON Signal stability ON and power ON	LED, yellow LED, green
Minimum operational current (I_m)	0.5 mA	Environment Installation category	II (IEC 60664/60664A; 60947-1)
OFF-state current (I_r)	≤ 100 µA	Pollution degree	3 (IEC 60664/60664A; 60947-1)
Voltage drop (U_d)	≤ 2.5 VDC @ 200 mA	Degree of protection	IP 67 (IEC 60529; 60947-1)
Protection	Short-circuit, reverse polarity, transients	Temperature Operating Storage	-20° to +60°C (-4° to +140°F) -25° to +80°C (-13° to +176°F)

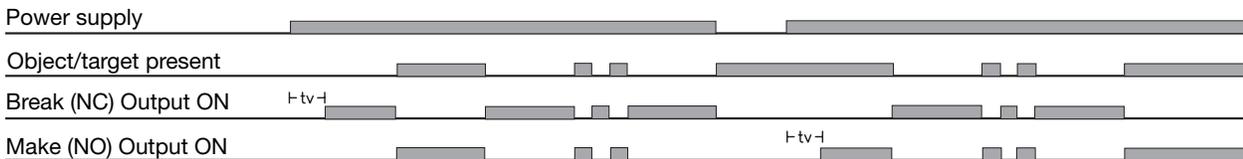


Specifications (cont.)

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 60068-2-6, 60068-2-32)	Cable Plug Cables for plug (M1)	PBTP, M12 x 1 CON.1A-series
Rated insulation voltage	50 VAC (rms)	Weight	110 g
Housing material	PC/ABS, grey Body Front glass PC black Mounting bracket Steel, galvanized	Approvals	UL, CSA
		CE-marking	Yes

Operation Diagram

tv = Power ON delay



Dimensions

