

Photoelectrics

Diffuse-reflective, Transistor Output

Type PD40CND25

CARLO GAVAZZI



- Range: 0.25 m
- Adjustable sensitivity
- Modulated, visible red light
- Supply voltage: 10 to 30 VDC
- Output: 100 mA, NPN or PNP
- Make and break switching function selectable
- LED for output indication
- Protection: reverse polarity, short circuit, transients
- Cable and plug version

Product Description

The PD40CND. is a family of general purpose diffuse-reflective sensors in a mini square 10 x 40 x 13.5 mm reinforced ABS-housing. They are useful in applications where mini square sensors provide adequate sensing

performance. The sensing range together with sensitivity adjustment gives a very flexible sensor. They are with a NPN or PNP transistor output and the configuration is programmable NO and NC.

Ordering Key

PD40CND25PPM5

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	Connector	Ordering no. NPN Make or break switching	Ordering no. PNP Make or break switching
10 x 40 x 13.5 mm	0.25 m	Cable	PD 40 CND 25 NP	PD 40 CND 25 PP
10 x 40 x 13.5 mm	0.25 m	Plug	PD 40 CND 25 NPM5	PD 40 CND 25 PPM5

Specifications

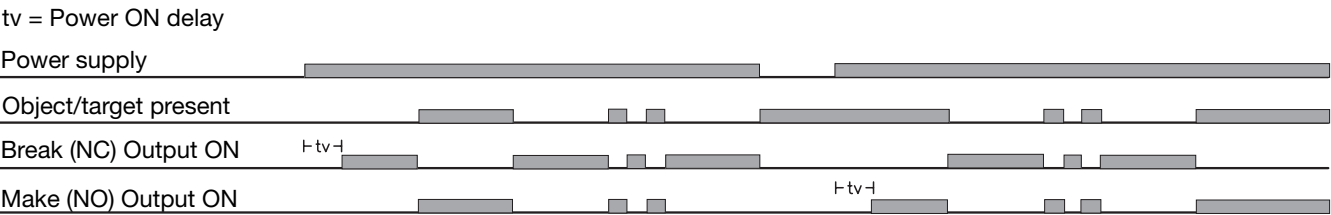
Rated operating distance (S_n)	Up to 0.25 m, reference target Kodak test card R 27, white, 90% reflectivity, 100 x 100 mm	Light source	LED, 644 nm
Blind zone	0 mm at max. sensitivity	Light type	Visible red-light modulated
Sensitivity	Adjustable by multiturn potentiometer	Light spot size	18 mm at 80 mm
Temperature drift	± 0.2%/°C	Ambient light (sunlight)	Max. 10'000 lux
Hysteresis (H)		Operating frequency	500 Hz
Differential travel	3 - 20%	Response time	
Rated operational volt. (U_B)	10 to 30 VDC (ripple included)	OFF-ON (t _{ON})	≤ 1 ms
Ripple (U_{ripple})	≤ 10%	ON-OFF (t _{OFF})	≤ 1 ms
Output current		Power ON delay (t_v)	< 1 ms
Continuous (I _a)	≤ 100 mA	Output function	Selectable Make or break switching
No load supply current (I_o)	≤ 25 mA	Indication function	
Minimum operational current (I_m)	0.5 mA	Output ON	LED, yellow
OFF-state current (I_r)	≤ 1 µA	Environment	
Voltage drop (U_d)	≤ 2.0 VDC @ 100 mA	Installation category	II (IEC 60664/60664A; 60947-1)
Protection	Short-circuit, reverse polarity, transients	Pollution degree	3 (IEC 60664/60664A; 60947-1)
		Degree of protection	IP 67 (IEC 60529; 60947-1)
		Temperature	
		Operating	0° to +50°C (-32° to +122°F)
		Storage	-20° to +80°C (-4° to +176°F)



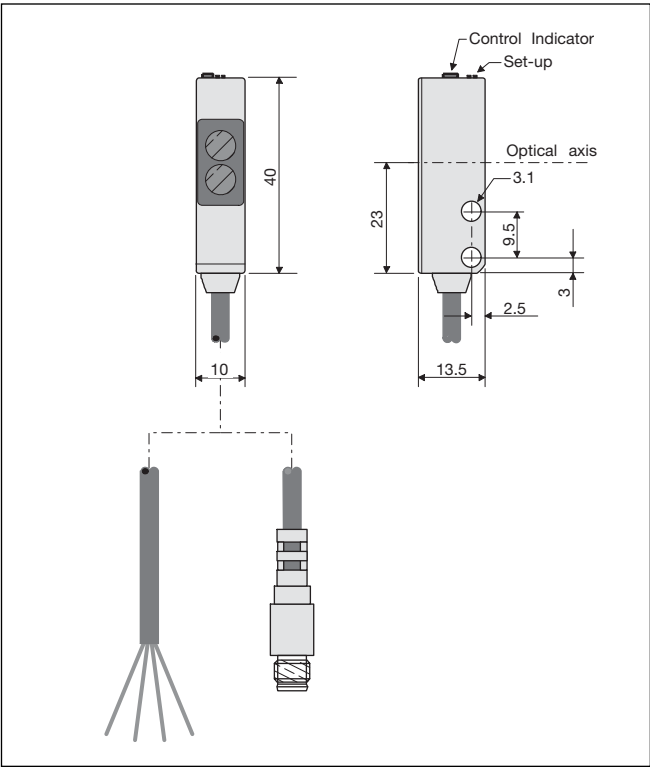
Specifications (cont.)

Rated insulation voltage	550 Vrms/50 Hz	Connection	PVC, grey, 2 m, 4 x 0.25 mm ² Santaprene, M8 x1, 15 cm cable CONG5A-series
Housing material	ABS, grey PMMA, red Steel, galvanized	Weight	44 g 11 g
Body		CE-marking	Yes
Front glass			
Mounting bracket			
		Cables for plug (M5)	
		Plug (M5) pigtail	
		Cable	
		Plug	

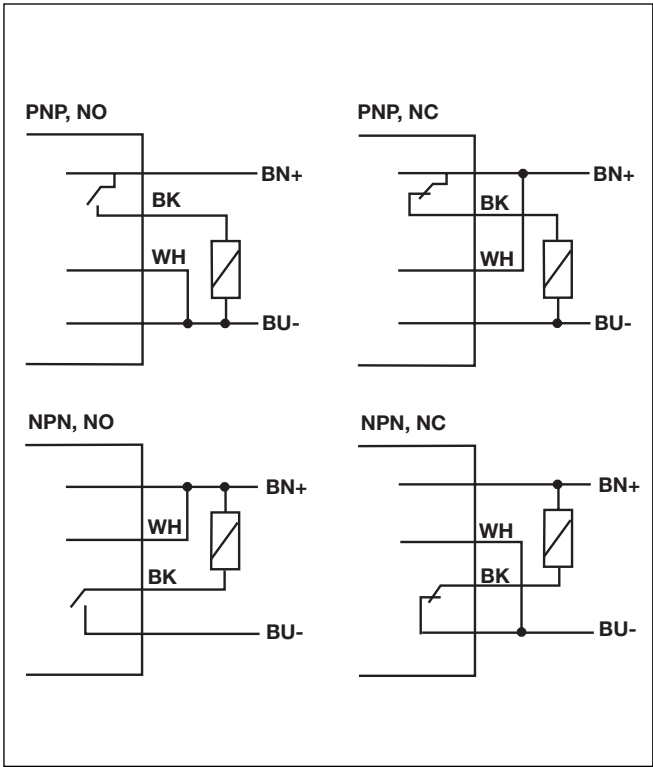
Operation Diagram



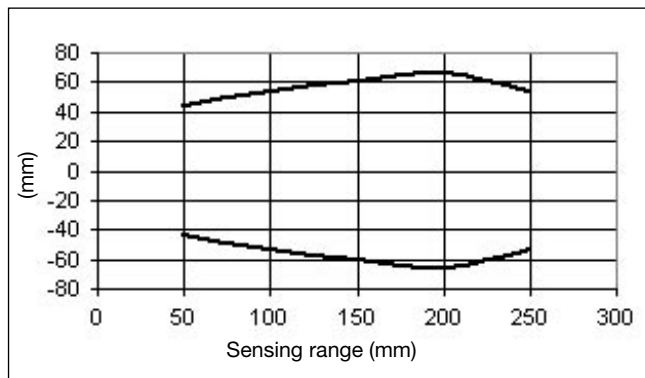
Dimensions



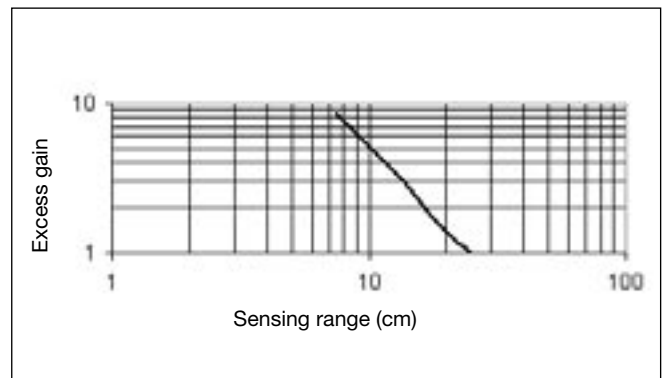
Wiring Diagrams



Detection Diagram



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 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: PD40 CND..
- Installation instruction
- Mounting bracket
- **Packaging:** Cardboard box

Accessories

- Screwdriver for adjustment: 77-001
- Connector type CONG5A..

For further information refer to "Accessories"