

Photoelectrics

Retro-reflective, Polarized, Transistor Output

Type PD40CNP15



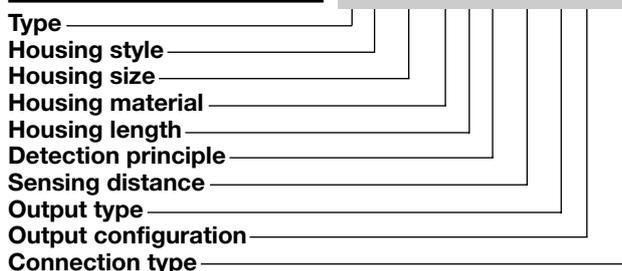
- Range: 1.5 m
- Adjustable sensitivity
- Modulated, visible red light, polarized
- Supply voltage: 10 to 30 VDC
- Output: 100 mA, NPN or PNP
- Make and break switching function selectable
- LED for output indication
- Protection: reverse polarity, short-circuit, transients
- Cable and plug versions

Product Description

The PD40CNP is a family of general purpose polarized retro-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

PD40CNP15NPM5



Type Selection

Housing W x H x D	Range S _n	Connection	Ordering no. NPN Make & break switching	Ordering no. PNP Make & break switching
10 x 40 x 13.5 mm	1.5 m	Cable	PD 40 CNP 15 NP	PD 40 CNP 15 PP
10 x 40 x 13.5 mm	1.5 m	Plug	PD 40 CNP 15 NPM5	PD 40 CNP 15 PPM5

Note: Reflector to be ordered separately

Specifications

Rated operating distance (S_n)	Up to 1.5 m, with reflector type ER 4, ref. target	Light source	LED, 644 nm
Blind zone	20 mm typical value	Light type	Visible red-light, modulated
Sensitivity	Adjustable by multi-turn potentiometer	Light spot size	18 mm at 80 mm
Hysteresis (H)		Ambient light (sunlight)	Max. 10'000 lux
Differential travel	3 - 20%	Operating frequency	500 Hz
Temperature drift	± 0.4%/°C	Response time	
Rated operational volt. (U_B)	10 to 30 VDC (ripple included)	OFF-ON (t _{ON})	≤ 1 ms
Ripple (U_{rpp})	≤ 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)	Max. 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)

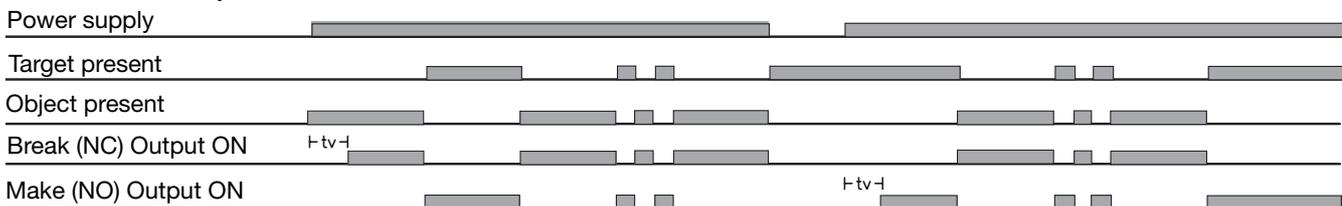


Specifications (cont.)

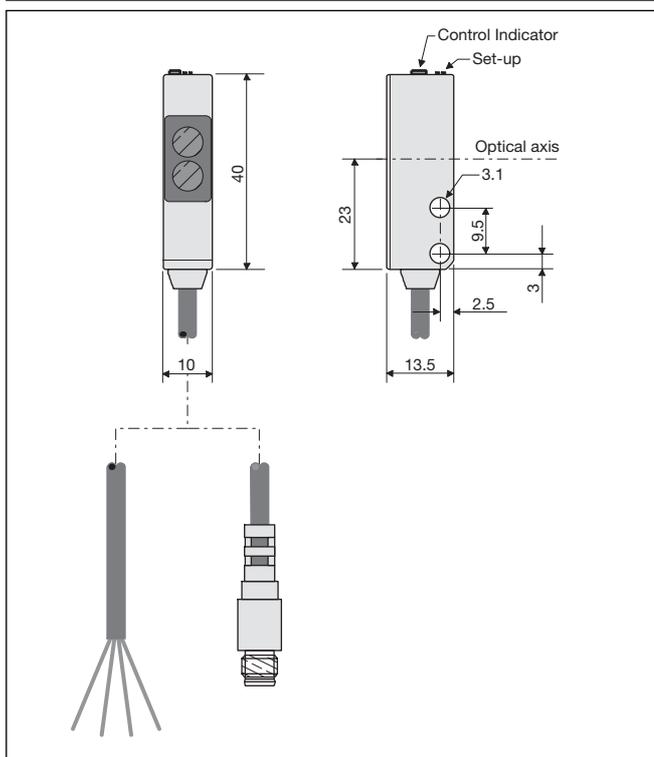
Rated insulation voltage	550 Vrms/50 Hz	Connection	PVC, grey, 2 m, 4 x 0.25 mm ² Santaprene, M8 x 1, 15 cm cable CONG5A-series
Housing material	ABS, grey Front glass PMMA, red Mounting bracket Steel, galvanized	Cable Plug (M5) pigtail	
		Cables for plug (M5)	
		Weight	44 g 11 g
		CE-marking	Yes

Operation Diagram

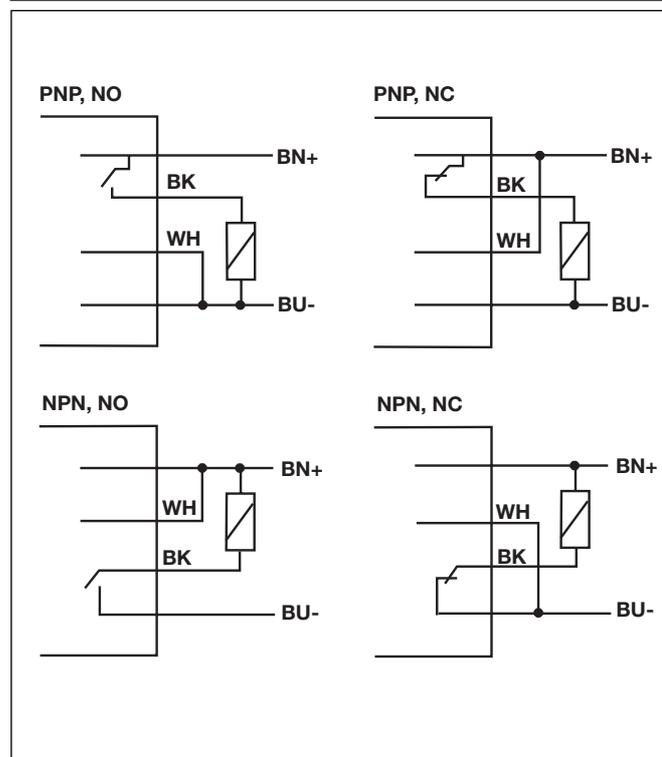
tv = Power ON delay



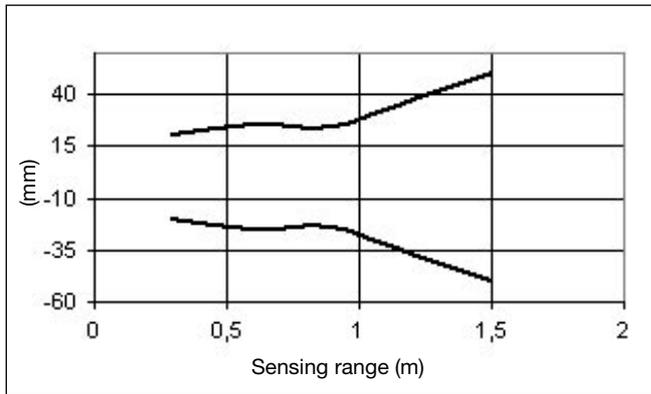
Dimensions



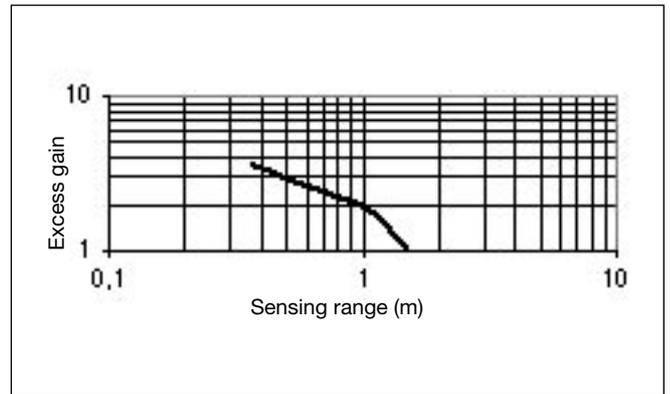
Wiring Diagrams



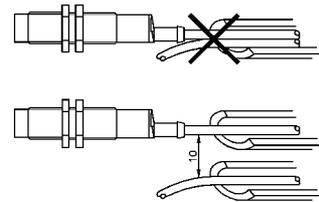
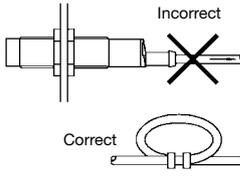
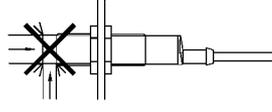
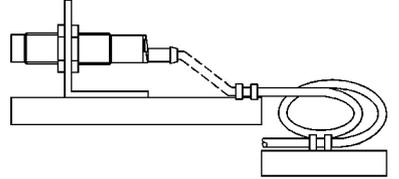
Detection Diagram



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>
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Delivery Contents

- Photoelectric switch: PD40CNP15
- Installation instruction
- Mounting bracket
- **Packaging:** Cardboard box

Accessories

- Reflectors: ER-series
- Screwdriver for adjustment: 77-001
- Connector type CONG5A..

For further information refer to "Accessories"