Photoelectrics Diffuse-reflective, Transistor Output Type PD40CND25





Product Description

The PD40CND. is a family of general purpose diffusereflective 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**

Protection: reverse polarity, short circuit, transients

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	

Range: 0.25 m

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Adjustable sensitivity

LED for output indication

Modulated, visible red light

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		
Blind zone	0 mm at max. sensitivity		
Sensitivity	Adjustable by multiturn potentiometer		
Temperature drift	± 0.2%/°C		
Hysteresis (H) Differential travel	3 - 20%		
Rated operational volt. (U_B)	10 to 30 VDC (ripple included)		
Ripple (U _{rpp})	≤ 10%		
Output current Continuous (I₀)	≤ 100 mA		
No load supply current (I _o)	≤ 25 mA		
Minimum operational current (I _m)	0.5 mA		
OFF-state current (I _r)	≤ 1 µA		
Voltage drop (U _d)	≤ 2.0 VDC @ 100 mA		
Protection	Short-circuit, reverse pola- rity, transients		

Light source Light type Light spot size Ambient light (sunlight)	LED, 644 nm Visible red-light modulated 18 mm at 80 mm Max. 10'000 lux
Operating frequency	500 Hz
$\begin{array}{l} \textbf{Response time} \\ \text{OFF-ON } (t_{\text{ON}}) \\ \text{ON-OFF } (t_{\text{OFF}}) \end{array}$	≤ 1 ms ≤ 1 ms
Power ON delay (t _v)	< 1 ms
Output function	Selectable Make or break switching
Indication function Output ON	LED, yellow
Environment Installation category Pollution degree Degree of protection	II (IEC 60664/60664A; 60947-1) 3 (IEC 60664/60664A; 60947-1) IP 67 (IEC 60529; 60947-1)
Temperature Operating Storage	0° to +50°C (-32° to +122°F) -20° to +80°C (-4° to +176°F)

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BN+

BU-

BN+

BU-

Specifications (cont.)

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

Operation Diagram

tv = Power ON delay			
Power supply			
Object/target present			
Break (NC) Output ON	⊢tv⊣		
Make (NO) Output ON		⊢tv⊣	

Dimensions



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Detection Diagram



Excess Gain



Installation Hints



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"