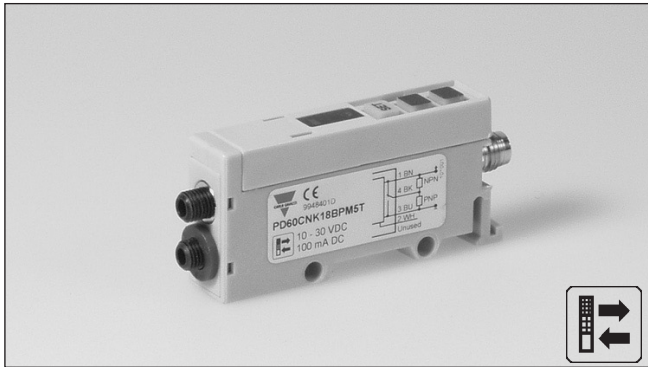


Photoelectrics, Fibre Optic Sensor Contrast Sensor Type PD 60 CNK 18 BP ..



- Range: 18 mm \pm 2 mm
- Microprocessor controlled and EEPROM parameter storage
- Operational voltage 10 - 30 V DC
- Output 100 mA, NPN and PNP
- Light or dark switching selectable
- Cable or M8 standard plug
- IP65 protection
- cUL and CE approved
- Manual contrast set-up



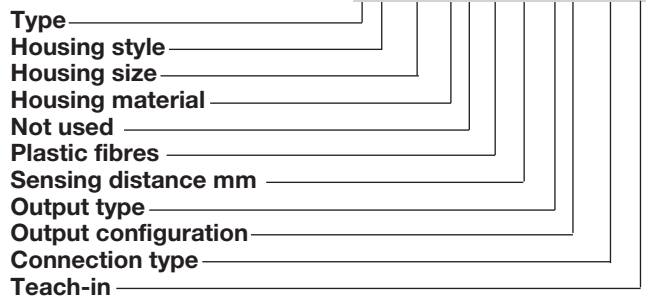
Product Description

The PD60CNK18BP.. is a fibre optic amplifier made specifically for plastic fibres to detect contrast. The sensor is microprocessor-based and features manual distance setup by keyboard. NO or NC (light or dark mode) output is select-able by wiring. The sensor output is built as

a Push-pull output that performs both a NPN and a PNP output, which are fully protected against short-circuit, transients and wrong polarity. The sensor is built in a strong 13 x 30 x 60 mm polycarbonate housing for DIN-rail mounting.

Ordering Key

PD60CNK18BPM5T



Type Selection

Housing W x H x D	Range S _n	Ordering no. NPN and PNP cable	Ordering no. NPN and PNP plug
13 x 30 x 60 mm	18 mm \pm 2 mm	PD 60 CNK 18 BP T	PD 60 CNK 18 BP M5 T

Fibre 100 cm fibre w. M18 lens head **FDPK01SCC100**
To be ordered separately.

Specifications

Detection distance	18 mm \pm 2 mm	Sunlight	20'000 Lux
Temperature drift	< 0,4%/°C	Response time	
Rated operational volt. (U_B)	10 to 30 VDC (ripple included)	OFF-ON (t _{ON})	≤ 25 μs
Ripple (U_{rpp})	≤ 10%	ON-OFF (t _{OFF})	≤ 25 μs
Output current		Power ON delay (t_v)	≤ 300 ms
Continuous (I _a)	100 mA	Output function	
Short-time (I)	100 mA	NPN and PNP	Available (Push-Pull output)
No load supply current (I_o)	50 mA	Indication function	
Switching frequency	20 kHz	Insufficient contrast	Both green LED and red key flash for 2 s
Voltage drop (U_d)		Short-circuit output	Both green LED and red key flash continuously
I _L = 100 mA	≤ 2 VDC	Environment	
I _L = 10 mA	≤ 1 VDC	Installation category	II (IEC 60664/60664A;60947-1)
Protection	Short-circuit, reverse polarity, transients	Pollution degree	3 (IEC 60664/60664A;60947-1)
Light source	White LED	Degree of protection	IP 65 (IEC 60529; 60947-1)
Spot diameter @18 mm	1.5 mm (FDPK01SCC100)	Temperature	
Modulation frequency	40 kHz	Operating	0° to +40°C (32° to +104°F)
Ambient light		Storage	-20° to +80°C (-4° to +176°F)
Incandescent light	10'000 Lux	Vibration	10 to 150 Hz, 0.5 mm/7.5 g (IEC60068-2-6)



Specifications (cont.)

Shock	2 x 1 m & 100 x 0.5 m (IEC 60068-2-6, 60068-2-32)
Rated insulation voltage	50 VAC (rms)
Housing material	
Body	Polycarbonate
Connection	
Cable	PVC, black, 2 m, 4 x 0.25 mm ²
Plug	NPB, M8 x 1
Cable for plug (M5)	CONB5A-series
Weight	24 g
Approvals	cUL
CE-marking	Yes

Programming Function

Teach-in
Colour 1

Press **SET** for 4 sec.

1st colour has now been learned
Triangle LED goes ON

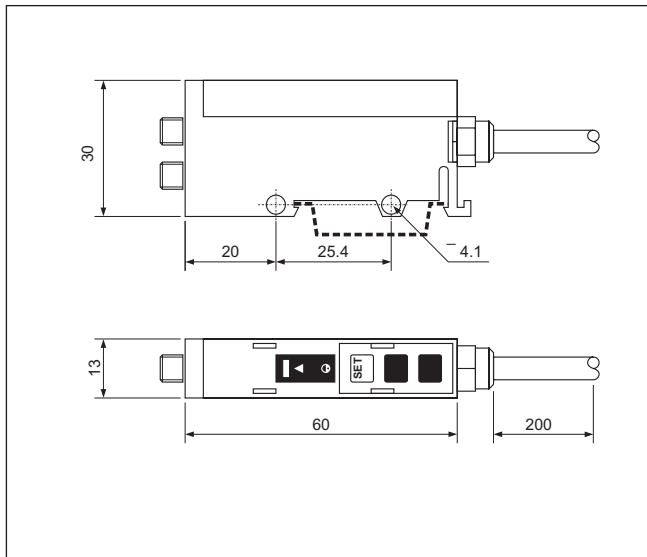
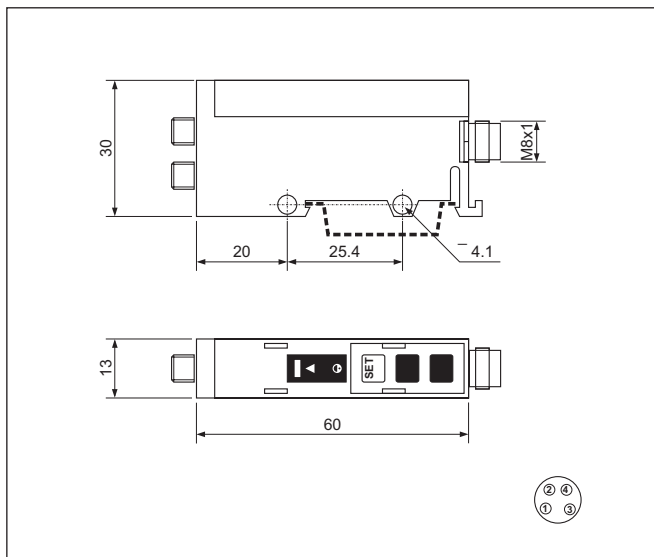
Colour 2
sec.

Press **SET** for 4 sec.

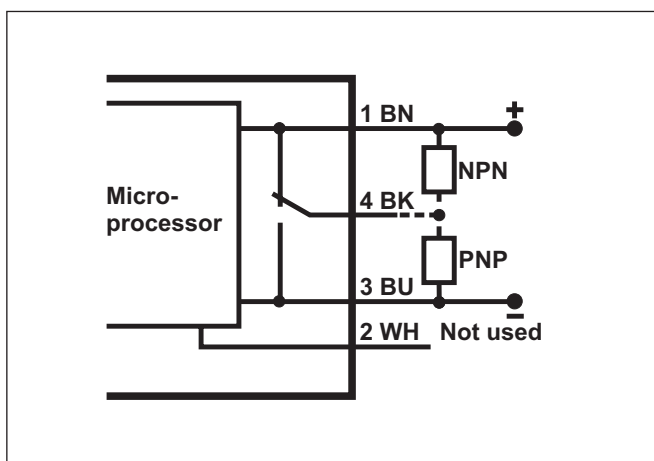
2nd colour has now been learned
Triangle LED goes OFF

Output can be inverted by teaching colour 2 first

Dimensions



Wiring Diagram



Keyboard and LED

Press for 4 secs:
1st colour is learned, and triangle LED goes ON

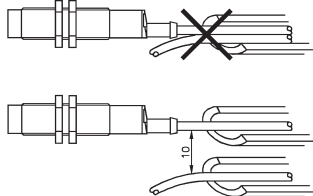
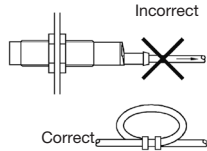
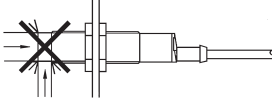
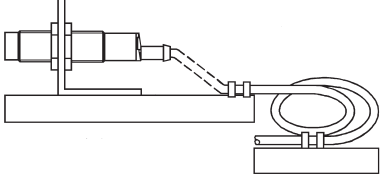
Press for 4 secs again:
2nd colour is learned, and triangle LED goes OFF



* Insufficient contrast:
both green LED and red key flash for 2 s

* Short-circuit output:
both green LED and red key flash continuously

Installation Hints

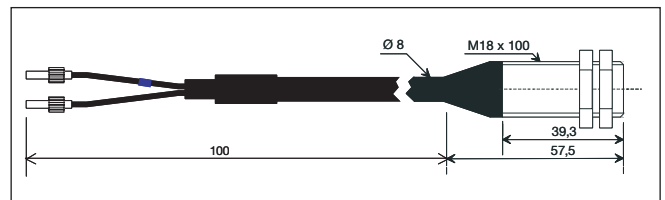
<p>To avoid interference from inductive voltage/ current peaks, separate the prox. switch power cables from any other power cables, e.g. motor, contactor or solenoid cables</p> 	<p>Relief of cable strain</p>  <p>The cable should not be pulled</p>	<p>Protection of the sensing face</p>  <p>A proximity 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: PD60CNK18BP..
- Installation instruction
- **Packaging:** Cardboard box

Accessories

- Plastic fibre type FPDK01SCC100



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