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





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 Housing style Housing size Housing material Not used Plastic fibres Sensing distance mm Output type Output configuration Connection type Teach-in	

• Range: 18 mm ±2 mm

Light or dark switching selectable

Cable or M8 standard plug

Manual contrast set-up

storage

CE

IP65 protection

Type Selection

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

Fibre

To be ordered separately.

100 cm fibre w. M18 lens head FPDK01SCC100

Specifications

Detection distance	18 mm ±2 mm
Temperature drift	< 0,4%/°C
Rated operational volt. (U_B)	10 to 30 VDC (ripple included)
Ripple (U _{rpp})	≤ 10%
Output current Continuous (I _e) Short-time (I)	100 mA 100 mA
No load supply current (l _o)	50 mA
Switching frequency	20 kHz
Voltage drop (U_d) I _L = 100 mA I _L = 10 mA	≤ 2 VDC ≤ 1 VDC
Protection	Short-circuit, reverse pola- rity, transients
Light source	White LED
Spot diameter @18 mm	1.5 mm (FPDK01SCC100)
Modulation frequency	40 kHz
Ambient light Incandescent light	10'000 Lux

Sunlight	20'000 Lux
Response time	
OFF-ON (t _{on})	≤ 25 μs
ON-OFF (t _{OFF})	≤ 25 μs
Power ON delay (t_v)	≤ 300 ms
Output function	
NPN and PNP	Available (Push-Pull output)
Indication function	
Insufficient contrast	Both green LED and red key flash for 2 s
Short-circuit output	Both green LED and red key flash continuously
Environment	
Installation category	II (IEC 60664/60664A;60947-1)
Pollution degree	3 (IEC 60664/60664A;60947-1)
Degree of protection	IP 65 (IEC 60529; 60947-1)
Temperature	
Operating	0° to +40°C (32° to +104°F)
Storage	-20° to +80°C (-4° to +176°F)
Vibration	10 to 150 Hz, 0.5 mm/7.5 g (IEC60068-2-6)



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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 Plug Cable for plug (M5)	PVC, black, 2 m, 4 x 0.25 mm ² NPB, M8 x 1 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
Output can be inverted by	2nd colour has now been learned Triangle LED goes OFF
teaching colour 2 first	

Dimensions



Wiring Diagram



Keyboard and LED



CARLO GAVAZZI

Installation Hints



Delivery Contents

- Photoelectric switch: PD60CNK18BP..
- Installation instruction
- Packaging: Cardboard box

Accessories

• Plastic fibre type FPDK01SCC100

