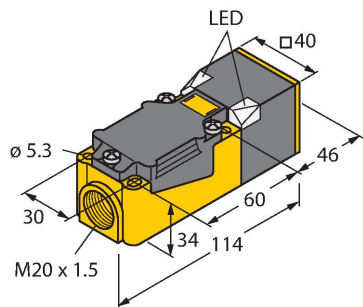


NI20-CP40-AN6X2

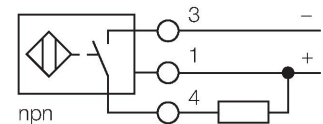
Inductive Sensor



Features

- Rectangular, height 40 mm
- Variable orientation of active face in 9 directions
- Plastic, PBT-GF30-V0
- High luminance corner LEDs
- Optimum view on supply voltage and switching state from any position
- DC 3-wire, 10...30 VDC
- NO contact, NPN output
- Terminal chamber

Wiring diagram



Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

Technical data

Type	NI20-CP40-AN6X2
ID	16224
General data	
Rated switching distance	20 mm
Mounting conditions	Non-flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	≤ 2 % of full scale
Temperature drift	$\leq \pm 10$ %
Hysteresis	3...15 %
Electrical data	
Operating voltage	10...30 VDC
Residual ripple	≤ 10 % U_{ss}
DC rated operational current	≤ 200 mA
No-load current	15 mA
Residual current	≤ 0.1 mA
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes / Cyclic
Voltage drop at I_o	≤ 1.8 V
Wire breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, NO contact, NPN
Switching frequency	0.15 kHz
Mechanical data	
Design	Rectangular, CP40
Dimensions	114 x 40 x 40 mm
Housing material	Plastic, PBT-GF30-V0, Black

Technical data

Active area material	Plastic, PBT-GF30-V0, yellow
Electrical connection	Terminal chamber
Clamping ability	≤ 2.5 mm²
Environmental conditions	
Ambient temperature	-25...+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	2283 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	2 × LEDs, Green
Switching state	2 × LEDs, Yellow

Mounting instructions

Mounting instructions/Description

This diagram illustrates the side view of a yellow terminal block mounted on a grey base. The terminal block has two terminals, each marked with a circular symbol. Dimension lines indicate the following measurements: 'D' is the distance between the centers of the two terminals; 'W' is the total width of the base; 'S' is the height of the base; 'N' is the height of the terminal block above the base; and 'G' is the height of the mounting bracket. Dashed lines show the internal structure and the position of the mounting bracket.

This diagram illustrates the front view of the yellow terminal block mounted on the grey base. Dimension lines indicate the following measurements: 'D' is the distance between the centers of the two terminals; 'W' is the total width of the base; 'S' is the height of the base; 'N' is the height of the terminal block above the base; 'G' is the height of the mounting bracket; and 'B' is the width of the mounting bracket. Dashed lines show the internal structure and the position of the mounting bracket.

Distance D	3 x B
Distance W	3 x Sn
Distance S	1.5 x B
Distance G	6 x Sn
Distance N	0.5 x B
Width active area B	40 mm

Accessories

STRM M20X1.5 SCHWARZ	6965902
M20 × 1.5 cable gland	

JS025/037	69429
Adjusting bar for rectangular housings CK/CP40; material: VA 1.4301	

BSS-CP40
6901318

Mounting clamp for rectangular housings 40 x 40 mm; material: Polypropylene

