

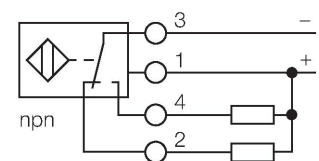
NI30-K40SR-VN4X2

Inductive Sensor

Features

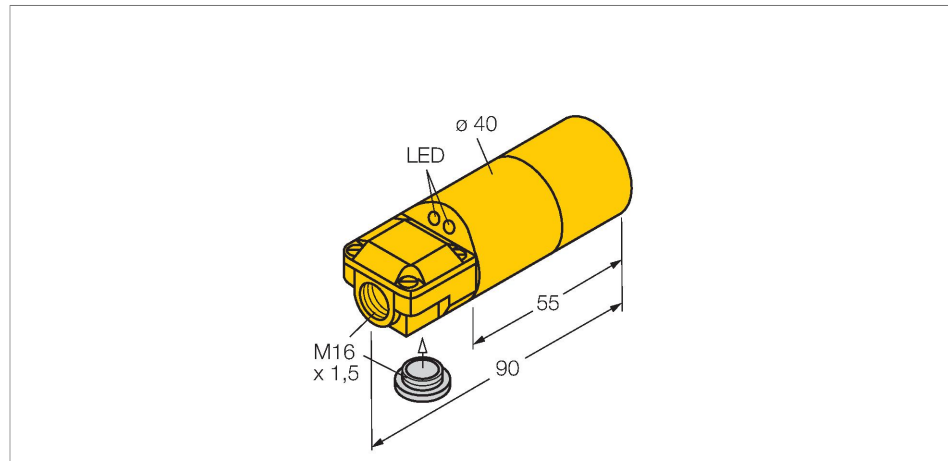
- 2 cable entries (axial, radial)
- Smooth barrel, Ø 40 mm
- Plastic, ABS
- DC 4-wire, 10...65 VDC
- Changeover contact, NPN output
- Terminal chamber

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	NI30-K40SR-VN4X2
ID	15758
General data	
Rated switching distance	30 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 U_B	10...65 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
DC rated operating current I_e	≤ 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_e	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete
Output function	4-wire, Complementary contact, NPN
Switching frequency	0.1 kHz

Technical data

Mechanical data	
Design	Smooth barrel, 40 mm
Dimensions	90 mm
Housing material	Plastic, ABS, Yellow
Active area material	Plastic, ABS, 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	LED, Green
Switching state	LED, Yellow
Included in delivery	BS 40, cable gland, dummy plug

Mounting instructions

Mounting instructions/Description

The image contains three technical diagrams illustrating the mounting of the BS 40 sensor. The top diagram shows a side view of the sensor (a grey L-shaped bracket with two yellow cylindrical active areas) being mounted onto a grey rectangular panel. Dimension lines indicate: 'N' as the distance between the active areas, 'S' as the distance from the panel to the active areas, 'D' as the distance between the mounting holes, and 'W' as the total width of the sensor bracket. The bottom-left diagram shows a top-down view of the sensor's mounting bracket with dimension 'T' indicating the distance from the mounting hole to the edge. The bottom-right diagram shows a side view of the sensor being mounted onto a cable gland, with dimension 'G' indicating the distance from the mounting hole to the gland's center.

Distance D	3 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Distance N	40 mm
Diameter active area B	Ø 40 mm

NI30-K40SR-VN4X2 | 02/21/2025 13-12 | technical changes reserved

Accessories

BS 40

69466

Fixing clamp; material mounting
block: PBT

