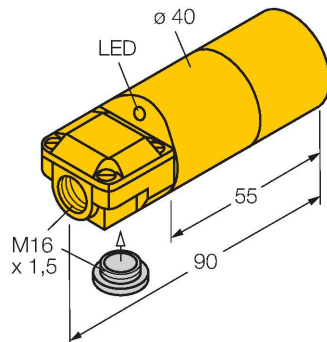


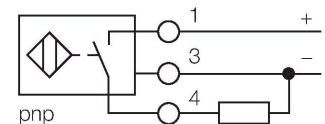
NI20-K40SR-AP6X Inductive Sensor



Features

- 2 cable entries (axial, radial)
- Smooth barrel, Ø 40 mm
- Plastic, ABS
- DC 3-wire, 10...30 VDC
- NO contact, PNP 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-K40SR-AP6X
ID	16026
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, PNP
Switching frequency	0.1 kHz
Mechanical data	
Design	Smooth barrel, 40 mm
Dimensions	90 mm
Housing material	Plastic, ABS, Yellow

Technical data

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
Switching state	LED, Yellow
Included in delivery	BS40, cable gland, blanking plug

Mounting instructions

Mounting instructions/Description

The image contains three technical diagrams illustrating the mounting of the BS40 terminal block. The top diagram is a side view showing two terminal blocks mounted on a rail, with dimensions N (distance between terminals), S (distance from terminal to rail edge), D (distance between terminal centers), and W (distance from terminal center to rail edge). The middle diagram is a top view showing a single terminal block with dimension T (distance from terminal center to rail edge). The bottom diagram is a front view showing two terminal blocks mounted on a rail, with dimension G (distance between terminal centers).

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	2 x Sn
Diameter active area B	Ø 40 mm

Accessories

BS 40

69466

Fixing clamp; material mounting
block: PBT

