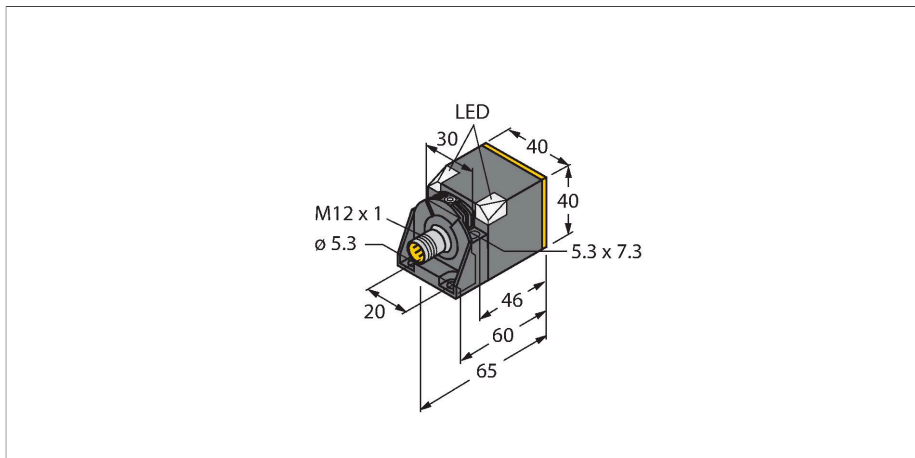


NI40U-CK40-AP6X2-H1141

Inductive Sensor – With Extended Switching Distance



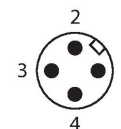
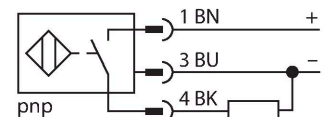
Technical data

Type	NI40U-CK40-AP6X2-H1141
ID	1623641
General data	
Rated switching distance	40 mm
Mounting conditions	Non-flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2 \%$ of full scale
Temperature drift	$\leq \pm 10 \%$ $\leq \pm 20 \%$, $\leq -25 \text{ °C}$ v $\geq +70 \text{ °C}$
Hysteresis	3...15 %
Electrical data	
Operating voltage	10...30 VDC
Residual ripple	$\leq 10 \%$ 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
DC field stability	300 mT
AC field stability	300 mT _{ss}
Insulation class	□
Switching frequency	0.25 kHz

Features

- Rectangular, height 40 mm
- Variable orientation of active face in 5 directions
- Plastic, PBT-GF30-V0
- High luminance corner LEDs
- Optimum view on supply voltage and switching state from any position
- Factor 1 for all metals
- Increased switching distance
- Protection class IP68
- Large coverage
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male connector

Wiring diagram



Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. Approx Factor 1 sensors have significant advantages due to their patented ferrite-coreless multi-coil system. They detect all

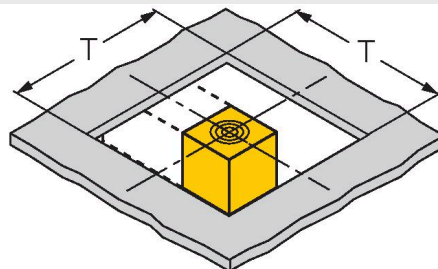
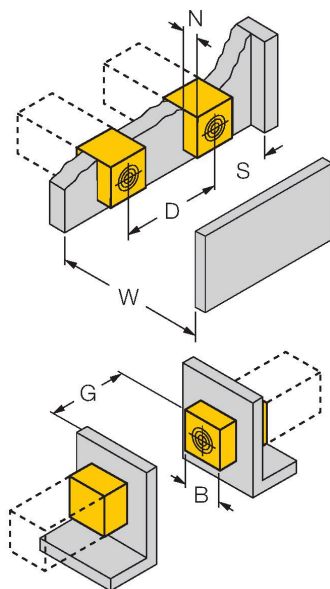
Technical data

metals at the same large switching distance and are resistant to magnetic fields.

Mechanical data	
Design	Rectangular, CK40
Dimensions	65 x 40 x 40 mm
	variable orientation of active face in 5 directions
Housing material	Plastic, PBT-GF20-V0, Black
Active area material	Plastic, PA12-GF30, yellow
Electrical connection	Connector, M12 x 1
Environmental conditions	
Ambient temperature	-30...+85 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68
MTTF	874 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	2 x LEDs, Green
Switching state	2 x LEDs, Yellow
Included in delivery	Fixing clamp BS4-CK40

Mounting instructions

Mounting instructions/Description



Distance D	240 mm
Distance W	120 mm
Distance S	60 mm
Distance G	240 mm
Distance N	40 mm
Width active area B	40 mm

Flush mounting

- 1-side mounting: Sr = 30 mm; D = 240 mm
- 2-side mounting: Sr = 24 mm; D = 240 mm
- 3-side mounting: Sr = 19 mm; D = 80 mm
- 4-side mounting: Sr = 12 mm; D = 60 mm

Backside as well as recessed mounting with reduced switching distance

Recessed mounting in metal:

- x = 10 mm: Sr = 20 mm
- x = 20 mm: Sr = 20 mm
- x = 30 mm: Sr = 20 mm
- x = 40 mm: Sr = 20 mm

Protruded mounting:

- y = 10 mm: Sr = 30 mm
- y = 20 mm: Sr = 40 mm
- y = 30 mm: Sr = 40 mm
- y = 40 mm: Sr = 40 mm

Mounting in aperture plate:

- T = 140 mm:
- Sensor with twisted turning angle
- On metal Sr = 40 mm

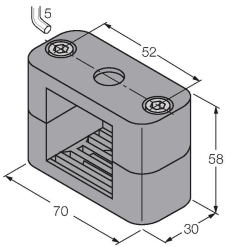
Metal-enclosed on one side Sr = 30mm
 Metal-enclosed on two sides Sr = 20mm
 Metal-enclosed on three sides Sr = 15 mm

The values stated relate to a 1 mm thick steel plate.

Accessories

BSS-CP40 6901318

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



Accessories

Dimension drawing	Type	ID	
	RKC4T-2/TEL	6625010	

Connection cable, M12 female connector, straight, 3-pin, cable length: 2 m, jacket material: PVC, black; cULus approval

