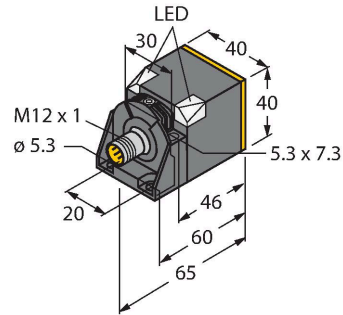


NI50U-CK40-AP6X2-H1141

Inductive Sensor – With Extended Switching Distance



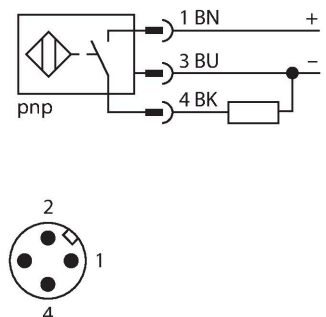
Technical data

Type	NI50U-CK40-AP6X2-H1141
ID	1625837
General data	
Rated switching distance	50 mm
Mounting conditions	Non-flush, flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2 \%$ of full scale
Temperature drift	$\leq \pm 10 \%$ $\leq \pm 20 \%, \leq -25 \text{ °C} \vee \geq +70 \text{ °C}$
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	10...30 VDC
Ripple U_{ss}	$\leq 10 \%$ U_{Bmax}
DC rated operating current I_o	≤ 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 break/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
Mechanical data	
Design	Rectangular, CK40

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
- Resistant to magnetic fields
- Auto-compensation protects against pre-damping
- Partially embeddable
- 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. uprox+ sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching

Technical data

distances, maximum flexibility and operational reliability as well as efficient standardization.

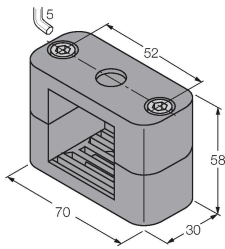
Dimensions	65 x 40 x 40 mm
	variable orientation of active face in 5 directions
Housing material	Plastic, PBT-GF20-V0, Black
Active area material	Plastic, PA12-GF30, yellow
Electrical connection	Connector, M12 × 1
Environmental conditions	
Ambient temperature	-30...+85 °C
Vibration resistance	55 Hz (1 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 × LEDs, Green
Switching state	2 × LEDs, Yellow
Included in delivery	Fixing clamp BS4-CK40

Mounting instructions

Mounting instructions/Description	
	Distance D240 mm
	Distance W105 mm
	Distance S60 mm
	Distance G300 mm
	Distance N30 mm
	Width active area40 mm
	B
	Flush mounting possible on up to 4 sides
	1-side mounting: Sr = 35 mm; D = 240 mm
	2-side mounting: Sr = 25 mm; D = 240 mm
	3-side mounting: Sr = 20 mm; D = 80 mm
	4-side mounting: Sr = 15 mm; D = 60 mm
	Rear-side mounting and set-back installation with reduced switching distance possible
	Sensor mounted on metal, set back from the edge:
	x = 10 mm: Sr = 20 mm
	x = 20 mm: Sr = 20 mm
	x = 30 mm: Sr = 20 mm
	x = 40 mm: Sr = 20 mm
	Sensor mounted on metal, protruding over the edge:
	y = 10 mm: Sr = 40 mm
	y = 20 mm: Sr = 50 mm
	y = 30 mm: Sr = 50 mm
	y = 40 mm: Sr = 50 mm
	Installation in aperture:
	T = 150 mm:
	Sensor with turned rotating bracket
	Surface-mounted on metal Sr = 50 mm
	Surface-mounted on metal, with one side wall Sr = 25 mm
	Surface-mounted on metal, with two side walls Sr = 15 mm
	Surface-mounted on metal, with three side walls Sr = 12 mm
	The values stated relate to a 1-mm-thick steel plate.
	Sr is the switching distance that can be measured under specified temperature and supply conditions, also taking into account series variation.

Accessories

BSS-CP40	6901318
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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