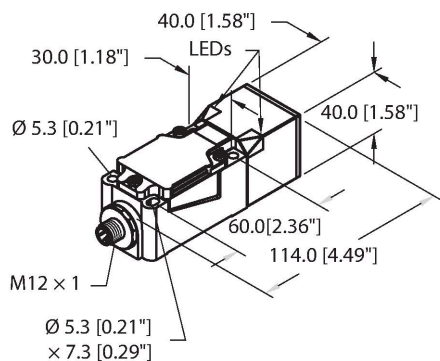


NI40U-CP40-AP6X2-H1141

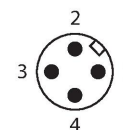
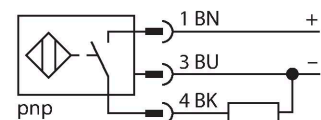
Inductive Sensor – With Extended Switching Distance



Features

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

Technical data

Type	NI40U-CP40-AP6X2-H1141
ID	1623601
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	$\leq \pm 10 \%$
	$\leq \pm 20 \%, \leq -25 \text{ }^{\circ}\text{C} \vee \geq +70 \text{ }^{\circ}\text{C}$
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, CP40

Technical data

Dimensions	114 x 40 x 40 mm
Housing material	Plastic, PBT-GF30-V0, Black
Active area material	Plastic, PA6-GF30-X, 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

Mounting instructions

Mounting instructions/Description

The image contains two technical diagrams illustrating the mounting of the NI40U-CP40-AP6X2-H1 141 sensor. The top diagram shows the sensor (yellow cube) mounted on a vertical surface (grey L-shaped bracket). Dimensions are labeled: N (distance from top edge to sensor center), D (distance between two sensors), S (distance from sensor center to bottom edge), and W (distance from sensor center to the side of the bracket). The bottom diagram shows the sensor mounted on a horizontal surface (grey L-shaped bracket). Dimensions are labeled: G (distance from the side of the bracket to the sensor center) and B (width of the sensor).

Distance D	$6 \times B$
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Distance W	$3 \times S_n$
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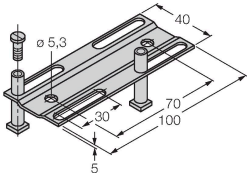
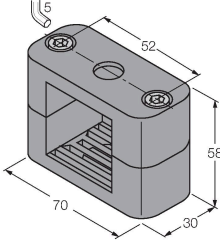
Distance S	$0.5 \times B$
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Distance G	$6 \times S_n$
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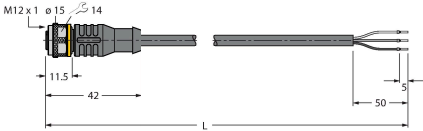
Distance N	$1 \times B$
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Width active area	40 mm
B	

Accessories

JS025/037	69429	BSS-CP40	6901318
Adjusting bar for rectangular housings CK/CP40; material: VA 1.4301		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