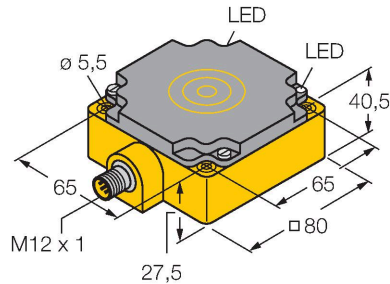


NI75U-CP80-AN6X2-H1141

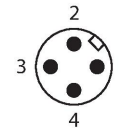
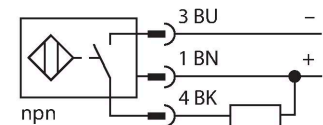
Inductive Sensor – With Increased Switching Distance



Features

- Rectangular, height 41 mm
- Plastic, PBT-GF30-V0
- Factor 1 for all metals
- Resistant to magnetic fields
- Large coverage
- Extended temperature range
- High switching frequency
- DC 3-wire, 10...30 VDC
- NO contact, NPN output
- M12 x 1 male connector

Wiring diagram



Technical data

Type	NI75U-CP80-AN6X2-H1141
ID	1623893
General data	
Rated switching distance	75 mm
Mounting conditions	Non-flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2 \%$ of full scale
	$\leq \pm 15 \%$, $\leq -25 \text{ }^{\circ}\text{C}$ v $\geq +70 \text{ }^{\circ}\text{C}$
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, NPN
DC field stability	300 mT
AC field stability	300 mT _{ss}
Insulation class	□
Switching frequency	0.25 kHz

Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox 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

Mechanical data	
Design	Rectangular, CP80
Dimensions	80 x 80 x 41 mm
Housing material	Plastic, PBT-GF30-V0
Active area material	PBT-GF30-V0
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	IP67
MTTF	874 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	LED, Green
Switching state	LED, Yellow

Mounting instructions

Mounting instructions/Description

The image contains three isometric diagrams illustrating different mounting methods for the CP80 sensor. The sensor is depicted as a yellow rectangular unit with a grey top surface featuring a circular active area.

- Top Diagram:** Shows a single sensor mounted in a U-shaped bracket. Dimension **A** is indicated twice, representing the distance from the sensor's center to the bracket's side walls. Dimension **C** is shown at the bottom, representing the distance from the sensor's center to the bracket's front and back walls. Dimension **G** is shown at the bottom right, representing the distance from the sensor's center to its rear mounting flange.
- Middle Diagram:** Shows two sensors mounted side-by-side in a larger U-shaped bracket. Dimension **B** is the distance between the centers of the two sensors. Dimension **D** is the distance from the sensor's center to the bracket's side wall. Dimension **S** is the distance from the sensor's center to the bracket's front wall. Dimension **W** is the total width of the bracket. Dimension **G** is the distance from the sensor's center to its rear mounting flange.
- Bottom Diagram:** Shows a single sensor mounted on a flat surface. Dimension **G** is the distance from the sensor's center to its rear mounting flange.

Distance D	3 x B
Distance W	3 x Sn
Distance S	1.5 x B
Distance G	6 x Sn
Distance A	1 x B
Distance C	1 x B
Width active area B	80 mm

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