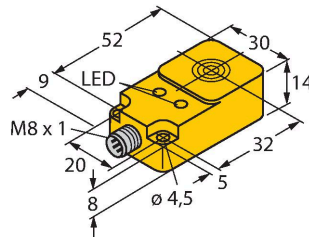


NI20U-Q14-RP6X2-V1131

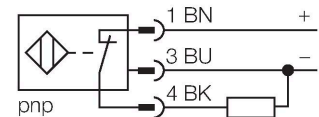
Inductive Sensor



Features

- Rectangular, height 14 mm
- Active face on top
- Plastic, PBT-GF30-V0
- Factor 1 for all metals
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- DC 3-wire, 10...30 VDC
- NC contact, PNP output
- M8 x 1 male connector

Wiring diagram



Technical data

Type	NI20U-Q14-RP6X2-V1131
ID	4690228
General data	
Rated switching distance	20 mm
Mounting conditions	Non-flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2 \%$ of full scale
Temperature drift	$\leq \pm 10 \%$
	$\leq \pm 15 \%, \leq -25^\circ\text{C} \vee \geq +70^\circ\text{C}$
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, NC contact, PNP
DC field stability	300 mT
AC field stability	300 mT _{ss}
Insulation class	□

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

Switching frequency	0.25 kHz
Mechanical data	
Design	Rectangular, Q14
Dimensions	52 x 30 x 14 mm
Housing material	Plastic, PBT-GF30-V0
Active area material	PBT-GF30-V0
Electrical connection	Connector, M8 × 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

Distance D	2 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	2 x B
Width active area B	30 mm

Accessories

MW-Q14/Q20

6945006

Mounting bracket for rectangular Q14 or Q20; material VA 1.4301

The technical drawing shows a 3D perspective view of a mounting bracket. The main vertical plate has a width of 38 mm at the top and a height of 69.5 mm. It features a central rectangular cutout and four circular holes along its edges. The base plate has a total length of 59.5 mm and a width of 14 mm. It includes two slots for screws, each with a width of 6 mm and a depth of 1.5 mm. The distance between the centers of these slots is 32 mm. A dimension of 50 mm indicates the distance from the left edge of the base plate to the center of the first slot. A hole with a diameter of $\varnothing 5.3$ is located 6 mm from the left edge of the base plate.