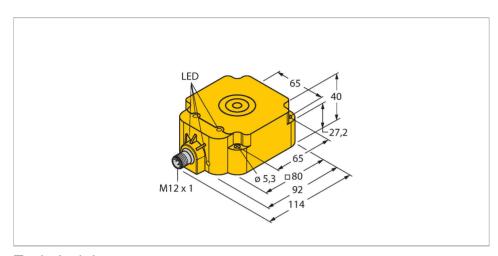


# NI75U-Q80-AP6X2-H1141 Inductive Sensor – With Extended Switching Distance



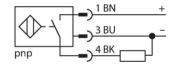
#### Technical data

ID 1625855  General data  Rated switching distance 75 mm  Mounting conditions Non-flush, partially embeddable  Repeat accuracy ≤ 2 % of full scale  Temperature drift ≤ ±10 %  Hysteresis 315 %  Electrical data  Operating voltage 1030 VDC  Residual ripple ≤ 10 % U₂₂   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 I₂   Wire breakage/Reverse polarity protection yes / Complete  Output function 3-wire, NO contact, PNP  DC field stability 300 mT  AC field stability 300 mT  according to the service of	Туре	NI75U-Q80-AP6X2-H1141
Rated switching distance 75 mm  Mounting conditions Non-flush, partially embeddable  Repeat accuracy ≤ 2 % of full scale  Temperature drift ≤ ±10 %  Hysteresis 315 %  Electrical data  Operating voltage 1030 VDC  Residual ripple ≤ 10 % U₅  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 I₀  Wire breakage/Reverse polarity protection yes / Complete  Output function 3-wire, NO contact, PNP  DC field stability 300 mT  AC field stability 300 mT  Insulation class □	ID	1625855
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Temperature drift ≤ ±10 %  Hysteresis 315 %  Electrical data  Operating voltage 1030 VDC  Residual ripple ≤ 10 % U <sub>ss</sub> 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 <sub>s</sub> ≤ 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 <sub>ss</sub> Insulation class	Mounting conditions	Non-flush, partially embeddable
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Operating voltage       1030 VDC         Residual ripple       ≤ 10 % U <sub>ss</sub> 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 <sub>s</sub> ≤ 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 <sub>ss</sub> Insulation class       □	Hysteresis	315 %
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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 I₀ ≤ 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 mTss   Insulation class □	Operating voltage	1030 VDC
No-load current 15 mA   Residual current ≤ 0.1 mA   Isolation test voltage ≤ 0.5 kV   Short-circuit protection yes / Cyclic   Voltage drop at I₀ ≤ 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 mTss   Insulation class □	Residual ripple	≤ 10 % U <sub>ss</sub>
Residual current       ≤ 0.1 mA         Isolation test voltage       ≤ 0.5 kV         Short-circuit protection       yes / Cyclic         Voltage drop at $I_e$ ≤ 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 mTss         Insulation class       □	DC rated operational current	≤ 200 mA
Isolation test voltage       ≤ 0.5 kV         Short-circuit protection       yes / Cyclic         Voltage drop at $I_e$ ≤ 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       □	No-load current	15 mA
Short-circuit protection $yes / Cyclic$ Voltage drop at I₀ $≤ 1.8 \text{ V}$ Wire breakage/Reverse polarity protection $yes / Complete$ Output function $3$ -wire, NO contact, PNP  DC field stability $300 \text{ mT}$ AC field stability $300 \text{ mT}_{ss}$ Insulation class	Residual current	≤ 0.1 mA
Voltage drop at I <sub>e</sub> ≤ 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 <sub>ss</sub> Insulation class	Isolation test voltage	≤ 0.5 kV
Wire breakage/Reverse polarity protection yes / Complete  Output function 3-wire, NO contact, PNP  DC field stability 300 mT  AC field stability 300 mTss	Short-circuit protection	yes / Cyclic
Output function 3-wire, NO contact, PNP  DC field stability 300 mT  AC field stability 300 mT <sub>ss</sub> Insulation class	Voltage drop at I <sub>e</sub>	≤ 1.8 V
DC field stability 300 mT  AC field stability 300 mT <sub>ss</sub> Insulation class	Wire breakage/Reverse polarity protection	yes / Complete
AC field stability 300 mT <sub>ss</sub> Insulation class	Output function	3-wire, NO contact, PNP
Insulation class	DC field stability	300 mT
	AC field stability	300 mT <sub>ss</sub>
Switching frequency 0.25 kHz	Insulation class	
	Switching frequency	0.25 kHz

#### **Features**

- Rectangular, height 40 mm
- Active face on top
- Plastic, PBT-GF30-V0
- ■4 LEDs for 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 predamping
- 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 distances, maximum flexibility and operational reliability as well as efficient standardization.

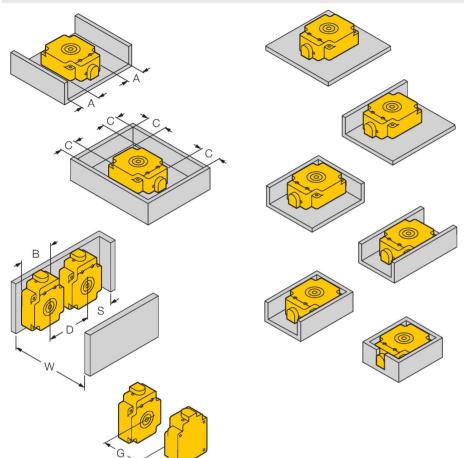


# Technical data

Mechanical data	
Design	Rectangular, Q80
Dimensions	92 x 80 x 40 mm
Housing material	Plastic, PBT-GF30-V0, Yellow
Active area material	PBT-GF30-V0, yellow
Tightening torque fixing screw	4 Nm
Electrical connection	Connector, M12 × 1
Environmental conditions	
Ambient temperature	-25+70 °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	LED, Green
Switching state	LED, Yellow

### Mounting instructions

### Mounting instructions/Description



Distance D	240 mm
Distance W	225 mm
Distance S	60 mm
Distance G	450 mm
Distance A	20 mm
Distance C	80 mm
Width active area B	80 mm

Mounting on metal: Sr = 75 mm

1-side mounting: Sr = 50 mm

2-side mounting: Sr = 45 mm

3-side mounting: Sr = 40 mm

4-side mounting: Sr = 40 mm

recessed mounting without metal baseplate: Sr = 65 mm

The values stated relate to a 1 mm thick steel

Switching distances with different target sizes:

Sheet steel 150 x 150 mm: Sn = 65 mm Sheet steel 60 x 60 mm: Sn = 50 mm Sheet steel 40 x 40 mm: Sn = 40 mm Sheet steel 120 x 40 mm: Sn = 45 mm (simulation of a skid runner)

## Wiring accessories

Dimension drawing	Туре	ID
	RKC4T-2/TEL	6625010



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