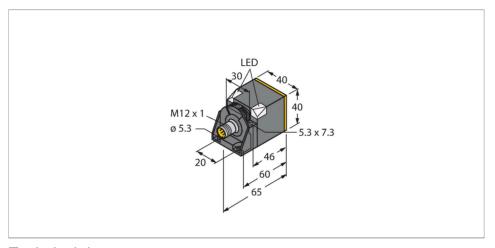


NI35U-CK40-AP6X2-H1141 Inductive Sensor – With Increased Switching Distance





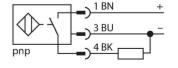
ID 1625800 General data Rated switching distance 35 mm Mounting conditions Non-flush, partially embeddable Secured operating distance ≤ (0.81 × Sn) mm Repeat accuracy ≤ 2 % of full scale Temperature drift ≤ ±10 % ≤ ± 20 %, ≤ -25 °C v ≥ +70 °C Hysteresis 315 % Electrical data Operating voltage 1030 VDC 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 ≤ 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 Insulation class	Туре	NI35U-CK40-AP6X2-H1141
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Secured operating distance≤ $(0.81 \times Sn)$ mmRepeat accuracy≤ 2 % of full scaleTemperature drift≤ ± 10 %≤ ± 20 %, ≤ -25 °C v ≥ +70 °CHysteresis315 %Electrical data0Operating voltage1030 VDCResidual ripple≤ 10 % UssDC rated operational current≤ 200 mANo-load current15 mAResidual current≤ 0.1 mAIsolation test voltage≤ 0.5 kVShort-circuit protectionyes / CyclicVoltage drop at Is≤ 1.8 VWire breakage/Reverse polarity protectionyes / CompleteOutput function3-wire, NO contact, PNPDC field stability300 mTAC field stability300 mT	Rated switching distance	35 mm
Repeat accuracy≤ 2 % of full scaleTemperature drift≤ ± 10 %≤ ± 20 %, ≤ -25 °C v ≥ +70 °CHysteresis315 %Electrical data	Mounting conditions	Non-flush, partially embeddable
Temperature drift $\leq \pm 10 \%$ $\leq \pm 20 \%, \leq -25 ^{\circ}\text{C v} \geq +70 ^{\circ}\text{C}$ Hysteresis 315% Electrical data Operating voltage 1030 VDC Residual ripple $\leq 10 \% \text{ U}_{ss}$ DC rated operational current $\leq 200 \text{ mA}$ No-load current 15 mA Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $\leq 0.5 \text{ kV}$ Short-circuit protection 20.5 kV Wire breakage/Reverse polarity protection 20.5 kV Wire breakage/Reverse polarity protection 20.5 kV Output function 20.5 kV Output function 20.5 kV Other protection 20.5 kV Wire breakage/Reverse polarity protection 20.5 kV Wire breakage/Reverse polarity protection 20.5 kV Output function 20.5 kV Other protection 20.5 kV Output function 20.5 kV Other protection 20.5 kV Output function 20.5 kV Other protection 20.5 kV Other protection 20.5 kV Other protection 20.5 kV Output function 20.5 kV Other protection 20.5 kV Other protection 20.5 kV Output function 20.5 kV Other protection 20.5 kV Output function 20.5 kV	Secured operating distance	≤ (0.81 × Sn) mm
$≤ \pm 20 \text{ %, } ≤ -25 \text{ °C v} ≥ +70 \text{ °C}$ Hysteresis 315 % Electrical data $Operating \text{ voltage}$ 1030 VDC Residual ripple $≤ 10 \text{ % U}_{ss}$ DC rated operational current $≤ 200 \text{ mA}$ No-load current 15 mA Residual current $≤ 0.1 \text{ mA}$ Isolation test voltage $≤ 0.5 \text{ kV}$ Short-circuit protection $yes / Cyclic$ Voltage drop at I_e $≤ 1.8 \text{ V}$ Wire breakage/Reverse polarity protection $yes / Complete$ Output function $3-wire, NO \text{ contact, PNP}$ DC field stability 300 mT AC field stability 300 mT	Repeat accuracy	≤ 2 % of full scale
Hysteresis 315 % Electrical data Operating voltage 1030 VDC Residual ripple ≤ 10 % U _{ss} 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 _o ≤ 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}	Temperature drift	≤ ±10 %
Electrical data Operating voltage 1030 VDC Residual ripple ≤ 10 % U _{ss} 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 mT _{ss}		≤ ± 20 %, ≤ -25 °C v ≥ +70 °C
Operating voltage 1030 VDC Residual ripple ≤ 10 % U _{ss} 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 _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	Hysteresis	315 %
Residual ripple ≤ 10 % U _{ss} 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 _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}	Electrical data	
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	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	Residual ripple	≤ 10 % U _{ss}
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	DC rated operational current	≤ 200 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	No-load current	15 mA
Short-circuit protection Voltage drop at I₀ ≤ 1.8 V Wire breakage/Reverse polarity protection Output function DC field stability AC field stability 300 mT 300 mTss	Residual current	≤ 0.1 mA
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}	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 mT _{ss}	Short-circuit protection	yes / Cyclic
Output function 3-wire, NO contact, PNP DC field stability 300 mT AC field stability 300 mT _{ss}	Voltage drop at I _o	≤ 1.8 V
DC field stability 300 mT AC field stability 300 mT _{ss}	Wire breakage/Reverse polarity protection	yes / Complete
AC field stability 300 mT _{ss}	Output function	3-wire, NO contact, PNP
	DC field stability	300 mT
Insulation class	AC field stability	300 mT _{ss}
	Insulation class	



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
- ■Extended temperature range
- High switching frequency
- Auto-compensation protects against predamping
- ■DC 3-wire, 10...30 VDC
- ■NO contact, PNP output
- ■M12 x 1 male connector

Wiring diagram







Technical data

Switching frequency	0.25 kHz
Mechanical data	
Design	Rectangular, CK40
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

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 ferritecoreless multi-coil system. They detect all metals at the same large switching distance and are resistant to magnetic fields.

Mounting instructions

Mounting instructions/Description	
G	T

Distance D	120 mm
Distance W	105 mm
Distance T	140 mm
Distance S	60 mm
Distance G	210 mm
Distance N	30 mm
Width active area B	40 mm

Flush mounting

1-side mounting: Sr = 28 mm

2-side mounting: Sr = 24 mm

3-side mounting: Sr = 19 mm

Backside mounting with full switching distance.

Recessed mounting with reduced switching distance.

The values stated relate to a 1 mm thick steel plate.

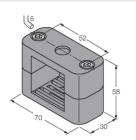
NI35U-CK40-AP6X2-H1141| 11/07/2023 13-09 | technical changes reserved



Accessories

BSS-CP40

6901318



Mounting clamp for rectangular housings 40 x 40 mm; material: Polypropylene

Wiring accessories

ID Dimension drawing Туре RKC4T-2/TEL 6625010

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

