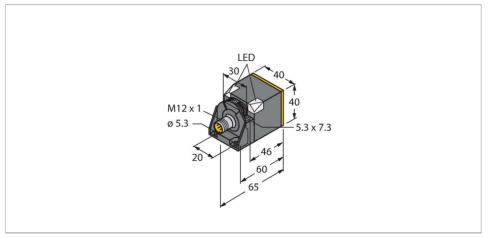


NI35U-CK40-AP6X2-H1141/S1590 W/BS4 Inductive Sensor – With Increased Switching Distance





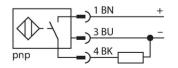
ID 1625892 Special version S1590 Corresponds to:WeldGuard™ coating General data Rated switching distance 35 mm Mounting conditions Non-flush, partially embeddable Secured operating distance ≤ (0.81 × Sn) mm Repeat accuracy ≤ 2 % of full scale ≤ ± 20 %, ≤ -25 °C v ≥ +70 °C Hysteresis 315 % Electrical data Operating voltage U _a 1030 VDC Ripple U _{as} ≤ 10 % U _{Breax} DC rated operating current I _e ≤ 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 break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP DC field stability 300 mT AC field stability 300 mT Secured operating to: Strong partial protection to the strong partial protection operating partial p	Туре	NI35U-CK40-AP6X2-H1141/S1590 W/BS4
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Repeat accuracy $\leq 2\%$ of full scale $\leq \pm 20\%$, ≤ -25 °C v ≥ +70 °C Hysteresis 315% Electrical data Operating voltage U _B 1030 VDC Ripple U _{SS} $\leq 10\% \text{ U}_{Bmax}$ DC rated operating current I _B $\leq 200 \text{ mA}$ No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage 0.5 kV Short-circuit protection $9 \text{ ves}/\text{Cyclic}$ Voltage drop at I _B $\leq 1.8 \text{ V}$ Wire break/reverse polarity protection $9 \text{ ves}/\text{Complete}$ Output function 9 - wire , NO contact, PNP DC field stability 300 mT	Mounting conditions	Non-flush, partially embeddable
$\leq \pm 20 \text{ %, } \leq -25 \text{ °C v} \geq +70 \text{ °C}$ Hysteresis 315 % Electrical data $Operating \text{ voltage } U_{\text{B}}$ 1030 VDC Ripple U_{ss} $\leq 10 \text{ % } U_{\text{Bmax}}$ $DC \text{ rated operating current } I_{\text{e}}$ $\leq 200 \text{ mA}$ No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage 0.5 kV Short-circuit protection $yes/Cyclic$ $Voltage drop at I_{\text{e}}$ $\leq 1.8 \text{ V}$ Wire break/reverse polarity protection $yes/Complete$ Output function $3-wire, \text{ NO contact, PNP}$ $DC \text{ field stability}$ 300 mT	Secured operating distance	≤ (0.81 × Sn) mm
Hysteresis 315 % Electrical data Operating voltage U _B 1030 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I _e ≤ 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 break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP DC field stability 300 mT	Repeat accuracy	≤ 2 % of full scale
Electrical data Operating voltage U_B 1030 VDC Ripple U_{ss} $\leq 10 \% U_{Bmax}$ DC rated operating current I_e No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage 0.5 kV Short-circuit protection Voltage drop at I_e $\leq 1.8 \text{ V}$ Wire break/reverse polarity protection Output function 3-wire, NO contact, PNP DC field stability 300 mT		≤ ± 20 %, ≤ -25 °C v ≥ +70 °C
Operating voltage U_B 1030 VDC Ripple U_{ss} ≤ 10 % U_{Bmax} DC rated operating current I_e ≤ 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 break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP DC field stability 300 mT	Hysteresis	315 %
Ripple Uss ≤ 10 % Usmax DC rated operating current Is ≤ 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 Is ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP DC field stability 300 mT	Electrical data	
DC rated operating current I₀ ≤ 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 break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP DC field stability 300 mT	Operating voltage U _B	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 break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP DC field stability 300 mT	Ripple U _{ss}	≤ 10 % U _{Bmax}
Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP DC field stability 300 mT	DC rated operating current I _e	≤ 200 mA
Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I _e ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP DC field stability 300 mT	No-load current	≤ 15 mA
Short-circuit protection Voltage drop at I₀ Wire break/reverse polarity protection Output function DC field stability yes/Cyclic ≤ 1.8 V yes/Cyclic ≤ 1.8 V yes/Complete 3-wire, NO contact, PNP	Residual current	≤ 0.1 mA
Voltage drop at I _e ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP DC field stability 300 mT	Isolation test voltage	0.5 kV
Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP DC field stability 300 mT	Short-circuit protection	yes/Cyclic
Output function 3-wire, NO contact, PNP DC field stability 300 mT	Voltage drop at I _e	≤ 1.8 V
DC field stability 300 mT	Wire break/reverse polarity protection	yes/Complete
	Output function	3-wire, NO contact, PNP
AC field stability 300 mT _{ss}	DC field stability	300 mT
	AC field stability	300 mT _{ss}



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

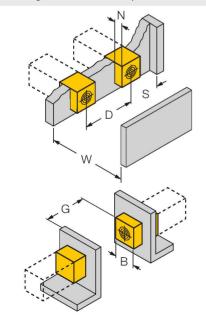
Insulation class	
Switching frequency	0.25 kHz
Mechanical data	
Design	Rectangular, CK40
Dimensions	65 x 40 x 40 mm
	variable orientation of active face in 5 directions
Housing material	Plastic, PBT-GF20-V0, Black
Active area material	Plastic, PA12-GF30, yellow
Electrical connection	Connector, M12 × 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

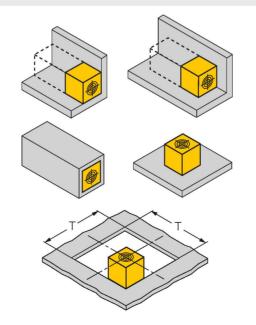
Functional principle

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





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.

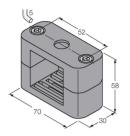
NI35U-CK40-AP6X2-H1141/S1590 W/BS4 02/21/2025 14-42 | technical changes reserved



Accessories

BSS-CP40

6901318



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