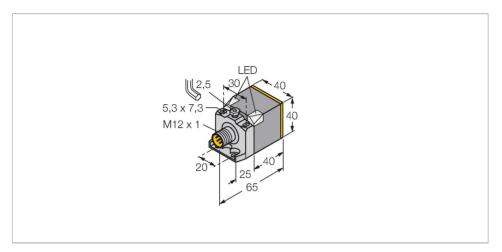


NI20-CK40-AD4X-H1141 W/BS2.1 Inductive Sensor



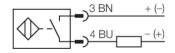
Technical data

ID	Type	NI20-CK40-AD4X-H1141 W/BS2.1
Rated switching distance 20 mm Mounting conditions Non-flush Secured operating distance ≤ (0.81 × Sn) mm Correction factors St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4 Repeat accuracy ≤ 2 % of full scale Hysteresis 115 % Electrical data Operating voltage U _B Operating voltage U _B 1065 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I _B ≤ 100 mA Residual current ≤ 0.6 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I _B ≤ 5 V Wire break/reverse polarity protection Complete Output function 2-wire, NO contact, 2-wire	ID	4465290
Mounting conditions Non-flush Secured operating distance ≤ (0.81 × Sn) mm Correction factors St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4 Repeat accuracy ≤ 2 % of full scale Hysteresis 115 % Electrical data Operating voltage U _B Operating voltage U _B 1065 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I _e ≤ 100 mA Residual current ≤ 0.6 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I _e ≤ 5 V Wire break/reverse polarity protection Complete Output function 2-wire, NO contact, 2-wire	General data	
Secured operating distance $\leq (0.81 \times Sn) \text{ mm}$ Correction factors $St37 = 1$; Al = 0.3; stainless steel = 0.7; Ms = 0.4 Repeat accuracy ≤ 2 % of full scale Hysteresis 115 % Electrical data Operating voltage U_B 1065 VDC Ripple U_{ss} ≤ 10 % U_{Bmax} DC rated operating current I_B ≤ 100 mA Residual current ≤ 0.6 mA Isolation test voltage 0.5 kV Short-circuit protection 0.5 kV Short-circuit protection 0.5 kV Wire break/reverse polarity protection 0.5 Complete Output function 0.5 contact, 2-wire	Rated switching distance	20 mm
Correction factors $ \begin{array}{c} St37 = 1; \ Al = 0.3; \ stainless \ steel = 0.7; \ Ms \\ = 0.4 \\ \hline \\ Repeat \ accuracy & \leq 2 \ \% \ of \ full \ scale \\ \hline \\ Hysteresis & 115 \ \% \\ \hline \\ Electrical \ data \\ \hline \\ Operating \ voltage \ U_{\scriptscriptstyle B} & 1065 \ VDC \\ \hline \\ Ripple \ U_{\scriptscriptstyle Bs} & \leq 10 \ \% \ U_{\scriptscriptstyle Bmax} \\ \hline \\ DC \ rated \ operating \ current \ I_{\scriptscriptstyle e} & \leq 100 \ mA \\ \hline \\ Residual \ current & \leq 0.6 \ mA \\ \hline \\ Isolation \ test \ voltage & 0.5 \ kV \\ \hline \\ Short-circuit \ protection & yes/Cyclic \\ \hline \\ Voltage \ drop \ at \ I_{\scriptscriptstyle e} & \leq 5 \ V \\ \hline \\ Wire \ break/reverse \ polarity \ protection & Complete \\ \hline \\ Output \ function & 2-wire, \ NO \ contact, \ 2-wire \\ \hline \end{array} $	Mounting conditions	Non-flush
= 0.4 Repeat accuracy ≤ 2 % of full scale Hysteresis 115 % Electrical data Operating voltage U _B 1065 VDC Ripple U _{SS} ≤ 10 % U _{Bmax} DC rated operating current I _B ≤ 100 mA Residual current ≤ 0.6 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I _B ≤ 5 V Wire break/reverse polarity protection Complete Output function 2-wire, NO contact, 2-wire	Secured operating distance	≤ (0.81 × Sn) mm
Hysteresis 115 % Electrical data 1065 VDC Ripple U_{ss} ≤ 10 % U_{Bmax} DC rated operating current I_e ≤ 100 mA Residual current ≤ 0.6 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I_e ≤ 5 V Wire break/reverse polarity protection Complete Output function 2-wire, NO contact, 2-wire	Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Electrical data Operating voltage U_B 1065 VDC Ripple U_{ss} $\leq 10 \% U_{Bmax}$ DC rated operating current I_e $\leq 100 \text{ mA}$ Residual current $\leq 0.6 \text{ mA}$ Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I_e $\leq 5 \text{ V}$ Wire break/reverse polarity protection Complete Output function 2-wire, NO contact, 2-wire	Repeat accuracy	≤ 2 % of full scale
$\begin{array}{lll} \text{Operating voltage } U_{\text{B}} & 1065 \text{ VDC} \\ \\ \text{Ripple } U_{\text{ss}} & \leq 10 \text{ % } U_{\text{Bmax}} \\ \\ \text{DC rated operating current } I_{\text{e}} & \leq 100 \text{ mA} \\ \\ \text{Residual current} & \leq 0.6 \text{ mA} \\ \\ \text{Isolation test voltage} & 0.5 \text{ kV} \\ \\ \text{Short-circuit protection} & \text{yes/Cyclic} \\ \\ \text{Voltage drop at } I_{\text{e}} & \leq 5 \text{ V} \\ \\ \text{Wire break/reverse polarity protection} & \text{Complete} \\ \\ \text{Output function} & 2\text{-wire, NO contact, 2-wire} \\ \end{array}$	Hysteresis	115 %
Ripple Uss ≤ 10 % Usmax DC rated operating current I_e ≤ 100 mA Residual current ≤ 0.6 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I_e ≤ 5 V Wire break/reverse polarity protection Complete Output function 2-wire, NO contact, 2-wire	Electrical data	
DC rated operating current I₀ ≤ 100 mA Residual current ≤ 0.6 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 5 V Wire break/reverse polarity protection Complete Output function 2-wire, NO contact, 2-wire	Operating voltage U _B	1065 VDC
Residual current ≤ 0.6 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 5 V Wire break/reverse polarity protection Complete Output function 2-wire, NO contact, 2-wire	Ripple U _{ss}	≤ 10 % U _{Bmax}
Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 5 V Wire break/reverse polarity protection Complete Output function 2-wire, NO contact, 2-wire	DC rated operating current I _e	≤ 100 mA
Short-circuit protection Voltage drop at I₀ Vire break/reverse polarity protection Output function yes/Cyclic ≤ 5 V Complete 2-wire, NO contact, 2-wire	Residual current	≤ 0.6 mA
Voltage drop at I _e ≤ 5 V Wire break/reverse polarity protection Complete Output function 2-wire, NO contact, 2-wire	Isolation test voltage	0.5 kV
Wire break/reverse polarity protection Complete Output function 2-wire, NO contact, 2-wire	Short-circuit protection	yes/Cyclic
Output function 2-wire, NO contact, 2-wire	Voltage drop at I _e	≤ 5 V
	Wire break/reverse polarity protection	Complete
Smallest operating current ≥ 3 mA	Output function	2-wire, NO contact, 2-wire
	Smallest operating current	≥ 3 mA
Switching frequency 0.2 kHz	Switching frequency	0.2 kHz
Mechanical data	Mechanical data	
Design Rectangular, CK40	Design	Rectangular, CK40



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
- ■DC 2-wire, 10...65 VDC
- ■NO contact
- ■M12 x 1 male connector





Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

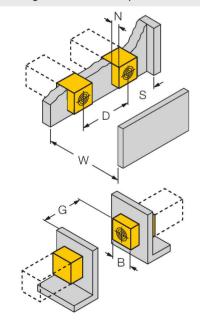


Technical data

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	-25+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	2283 years acc. to SN 29500 (Ed. 99) 40 °C
Switching state	2 × LEDs, Yellow
Included in delivery	BS2.1-CK40

Mounting instructions

Mounting instructions/Description



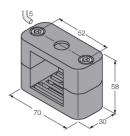
Distance D	3 x B
Distance W	3 x Sn
Distance S	1.5 x B
Distance G	6 x Sn
Distance N	20 mm
Width active area B	40 mm



Accessories

BSS-CP40

6901318



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