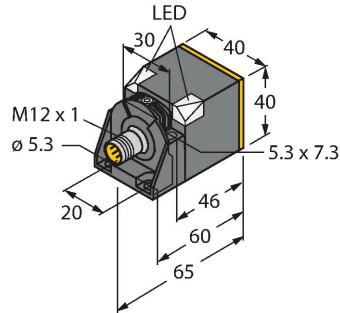


NI50U-CK40-AP6X2-H1141/S1590 W/BS4

Inductive Sensor – With WeldGuard™ Coating



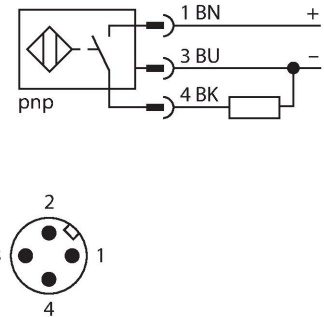
Features

- Rectangular, height 40 mm
- Variable orientation of active face in 5 directions
- Plastic, PBT-GF30-V0
- Factor 1 for all metals
- Increased switching distance
- Protection class IP68
- Resistant to magnetic fields
- Auto-compensation protects against pre-damping
- Partially embeddable
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male connector

Technical data

Type	NI50U-CK40-AP6X2-H1141/S1590 W/BS4
Ident. no.	1625891
Special version	S1590 corresponds to: WeldGuard™ coating
Rated switching distance	50 mm
Mounting conditions	Non-flush, flush
Secured operating distance	$\leq (0.81 \times S_n) \text{ mm}$
Repeat accuracy	$\leq 2 \text{ \% of full scale}$
Temperature drift	$\leq \pm 10 \text{ \%}$ $\leq \pm 20 \text{ \%}, \leq -25 \text{ }^\circ\text{C} \vee \geq +70 \text{ }^\circ\text{C}$
Hysteresis	3...15 %
Ambient temperature	-30...+85 °C
Operating voltage	10...30 VDC
Residual ripple	$\leq 10 \text{ \% } U_{ss}$
DC rated operational current	$\leq 200 \text{ mA}$
No-load current	$\leq 15 \text{ mA}$
Residual current	$\leq 0.1 \text{ mA}$
Isolation test voltage	$\leq 0.5 \text{ kV}$
Short-circuit protection	yes / Cyclic
Voltage drop at I_o	$\leq 1.8 \text{ V}$
Wire breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, NO contact, PNP
Insulation class	□
Switching frequency	0.25 kHz

Wiring diagram



Functional principle

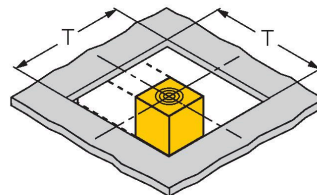
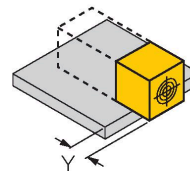
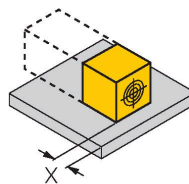
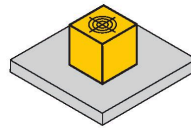
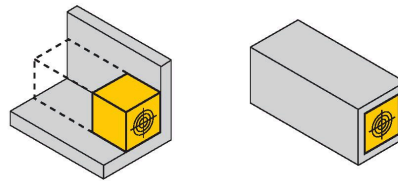
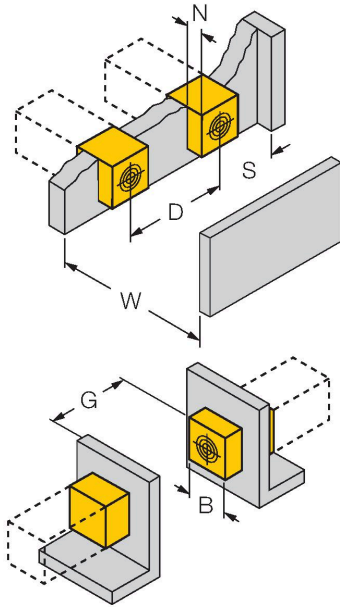
Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox+ sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching distances, maximum flexibility and operational reliability as well as efficient standardization.

Technical data

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
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

Mounting instructions

Mounting instructions/Description



Distance D 240 mm

Distance W 105 mm

Distance S 60 mm

Distance G 300 mm

Distance N 30 mm

Width active area B 40 mm

Flush mounting

1-side mounting: $S_r = 35 \text{ mm}$; $D = 240 \text{ mm}$

2-side mounting: $S_r = 25 \text{ mm}$; $D = 240 \text{ mm}$

3-side mounting: $S_r = 20 \text{ mm}$; $D = 80 \text{ mm}$

4-side mounting: $S_r = 15 \text{ mm}$; $D = 60 \text{ mm}$

Backside as well as recessed mounting with reduced switching distance

Recessed mounting in metal:

$x = 10 \text{ mm}$: $S_r = 20 \text{ mm}$

$x = 20 \text{ mm}$: $S_r = 20 \text{ mm}$

$x = 30 \text{ mm}$: $S_r = 20 \text{ mm}$

$x = 40 \text{ mm}$: $S_r = 20 \text{ mm}$

Protruded mounting:

$y = 10 \text{ mm}$: $S_r = 40 \text{ mm}$

$y = 20 \text{ mm}$: $S_r = 50 \text{ mm}$

$y = 30 \text{ mm}$: $S_r = 50 \text{ mm}$

$y = 40 \text{ mm}$: $S_r = 50 \text{ mm}$

Mounting in aperture plate:

$T = 150 \text{ mm}$:

Sensor with twisted turning angle

On metal $S_r = 50 \text{ mm}$

Metal-enclosed on one side $S_r = 25 \text{ mm}$

Metal-enclosed on two sides $S_r = 15 \text{ mm}$

Metal-enclosed on three sides $S_r = 12 \text{ mm}$

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

Accessories

BSS-CP40

6901318

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

