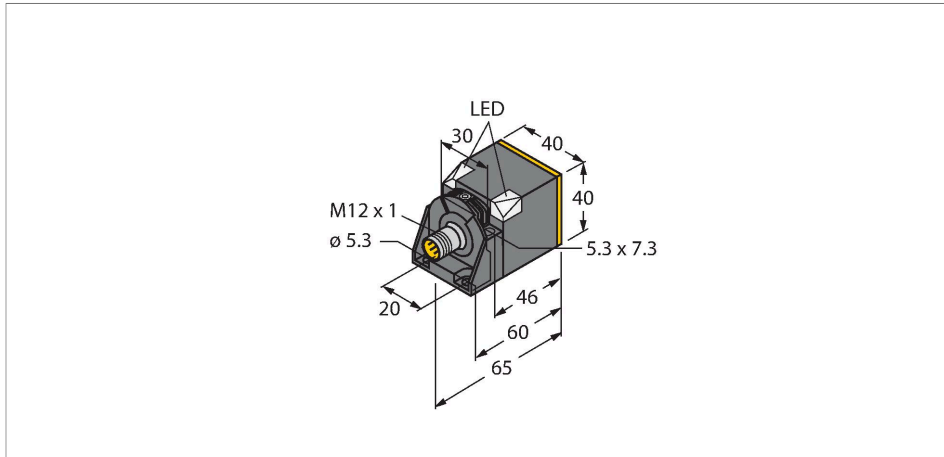


# NI50U-CK40-AP6X2-H1141/S1590 W/BS4

## Inductive Sensor – With Extended Switching Distance



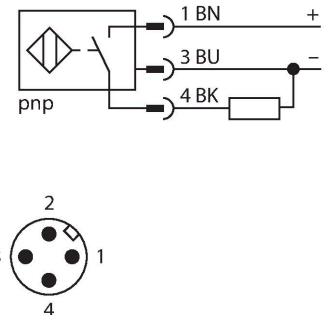
### Technical data

Type	NI50U-CK40-AP6X2-H1141/S1590 W/BS4
ID	1625891
Special version	S1590 corresponds to: WeldGuard™ coating
<b>General data</b>	
Rated switching distance	50 mm
Mounting conditions	Non-flush, flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2\%$ of full scale
Hysteresis	$\leq \pm 20\%$ , $\leq -25\text{ °C}$ v $\geq +70\text{ °C}$
<b>Electrical data</b>	
Operating voltage	10...30 VDC
Residual ripple	$\leq 10\% U_{ss}$
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	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
DC field stability	300 mT
AC field stability	300 mT <sub>ss</sub>

### 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

### Wiring diagram



### Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox+ sensors have significant advantages

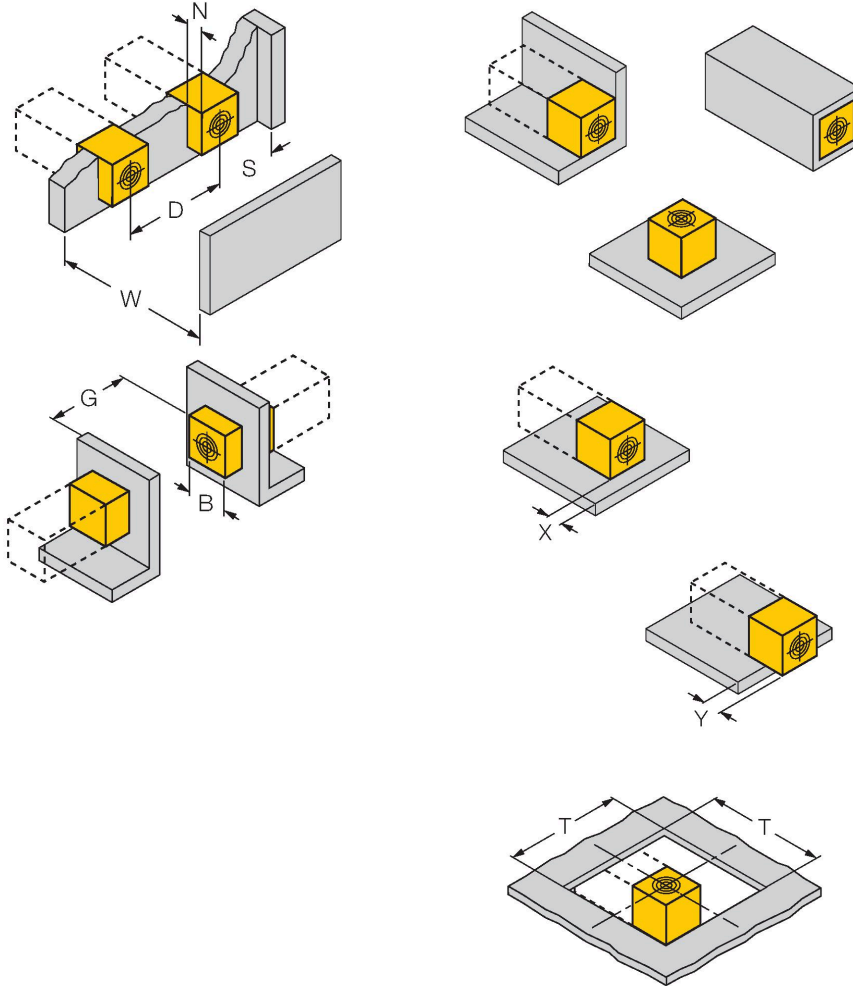
## Technical data

Insulation class	□
Switching frequency	0.25 kHz
<b>Mechanical data</b>	
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
<b>Environmental conditions</b>	
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

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.

## 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:  $S_r = 35$  mm;  $D = 240$  mm
- 2-side mounting:  $S_r = 25$  mm;  $D = 240$  mm
- 3-side mounting:  $S_r = 20$  mm;  $D = 80$  mm
- 4-side mounting:  $S_r = 15$  mm;  $D = 60$  mm

Backside as well as recessed mounting with reduced switching distance

#### Recessed mounting in metal:

- $x = 10$  mm:  $S_r = 20$  mm
- $x = 20$  mm:  $S_r = 20$  mm
- $x = 30$  mm:  $S_r = 20$  mm
- $x = 40$  mm:  $S_r = 20$  mm

#### Protruded mounting:

- $y = 10$  mm:  $S_r = 40$  mm
- $y = 20$  mm:  $S_r = 50$  mm
- $y = 30$  mm:  $S_r = 50$  mm
- $y = 40$  mm:  $S_r = 50$  mm

#### Mounting in aperture plate:

- $T = 150$  mm:
- Sensor with twisted turning angle
- On metal  $S_r = 50$  mm
- Metal-enclosed on one side  $S_r = 25$  mm
- Metal-enclosed on two sides  $S_r = 15$  mm
- Metal-enclosed on three sides  $S_r = 12$  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

