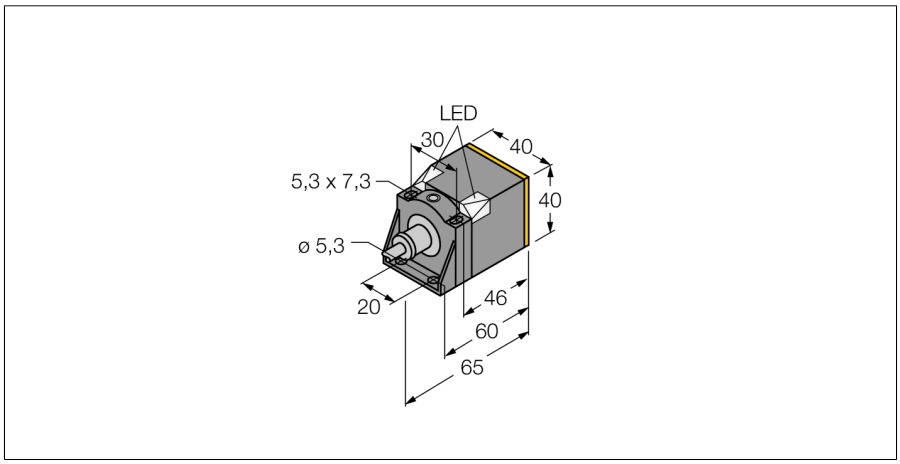
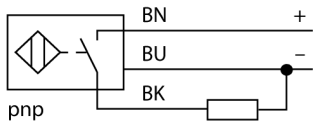
Inductive sensor
NI50U-CK40-AP6X2



Type code	NI50U-CK40-AP6X2
Ident no.	1625808
Rated operating distance Sn	50 mm
Mounting condition	non-flush, flush mountable
Assured sensing range	≤ (0,81 x Sn) mm
Repeatability	≤ 2 % of full scale
Temperaturdrift	10 % ≤ ± 20 %, ≤ -25 °C v ≥ +70 °C
Hysteresis	3…15 %
Ambient temperature	-30…+85 °C
Operating voltage	10…30VDC
Residual ripple	≤ 10 % U_{ss}
DC rated operational current	≤ 200 mA
No-load current I_0	≤ 15 mA
Residual current	≤ 0.1 mA
Rated insulation 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
Protection class	⧈
Switching frequency	0.25 kHz
Design	rectangular, CK40
Dimensions	65 x 40 x 40 mm variable orientation of active face in 5 directions
Housing material	plastic, PBT, black
Connection	cable
Cable quality	5.2 mm, LifYY, PVC, 2 m
Cable cross section	3 x 0.34 mm²
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 x LEDs green
Switching state	LED yellow
Included in scope of supply	BS4-CK40

- **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**
- **Auto-compensation protects against pre-attenuation**
- **Partially embeddable**
- **3-wire DC, 10…30 VDC**
- **NO contact, PNP output**
- **Cable connection**

Wiring diagram

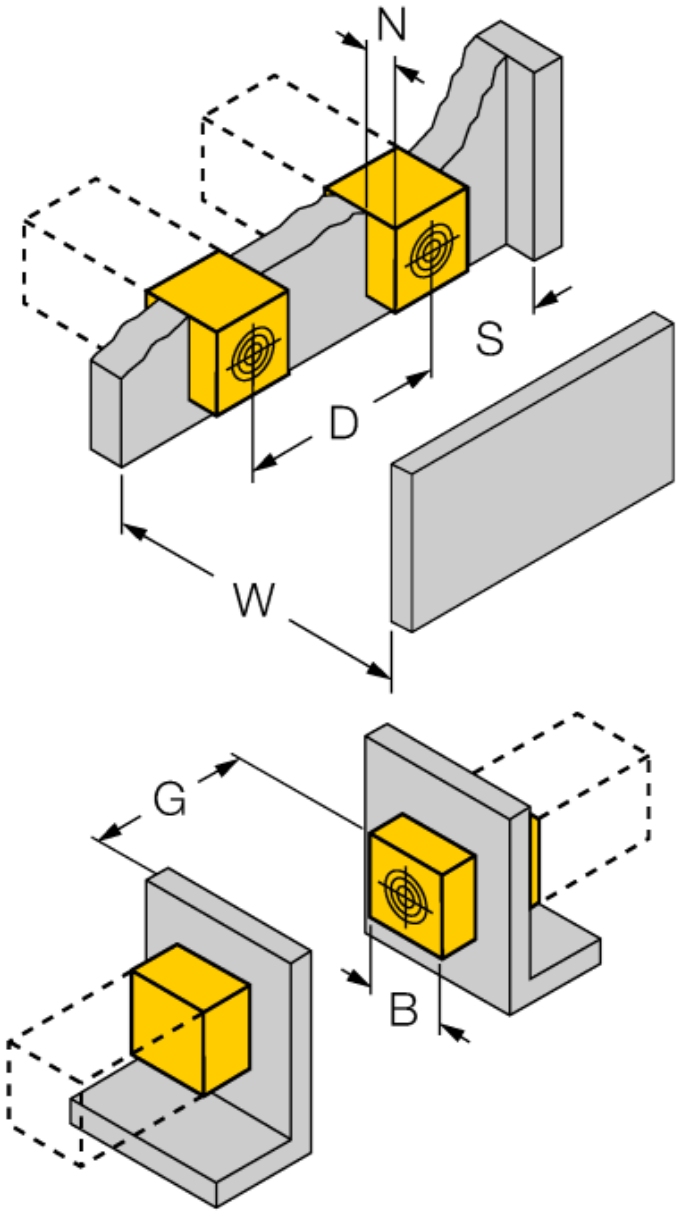


Functional principle

Inductive sensors detect metal objects contactless and wear-free. Due to the patented multi-coil system, *uprox*®+ sensors have distinct advantages over conventional sensors. They excel in largest switching distances, maximum flexibility and operational reliability as well as efficient standardization.

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Distance D	240 mm
Distance W	105 mm
Distance S	60 mm
Distance G	300 mm
Distance N	30 mm
Width of the active face B	40 mm



Flush mounting
1-side mounting: Sr = 35 mm; D = 240 mm
2-side mounting: Sr = 25 mm; D = 240 mm
3-side mounting: Sr = 20 mm; D = 80 mm
4-side mounting: Sr = 17 mm; D = 60 mm

Backside as well as recessed mounting with reduced switching distance

Recessed mounting in metal:
x = 10 mm: Sr = 20 mm
x = 20 mm: Sr = 20 mm
x = 30 mm: Sr = 20 mm
x = 40 mm: Sr = 20 mm

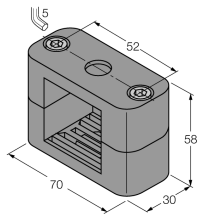
Protruded mounting:
y = 10 mm: Sr = 40 mm
y = 20 mm: Sr = 50 mm
y = 30 mm: Sr = 50 mm
y = 40 mm: Sr = 50 mm

Mounting in aperture plate:
T = 150 mm:
Sensor with twisted turning angle
On metal Sr = 50 mm
Metal-enclosed on one side Sr = 25 mm
Metal-enclosed on two sides Sr = 15 mm
Metal-enclosed on three sides Sr = 12 mm

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

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Accessories

Type code	Ident no.	Description	Dimension drawing
BSS-CP40	6901318	Mounting bracket for rectangular devices; material: Polypropylene	

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