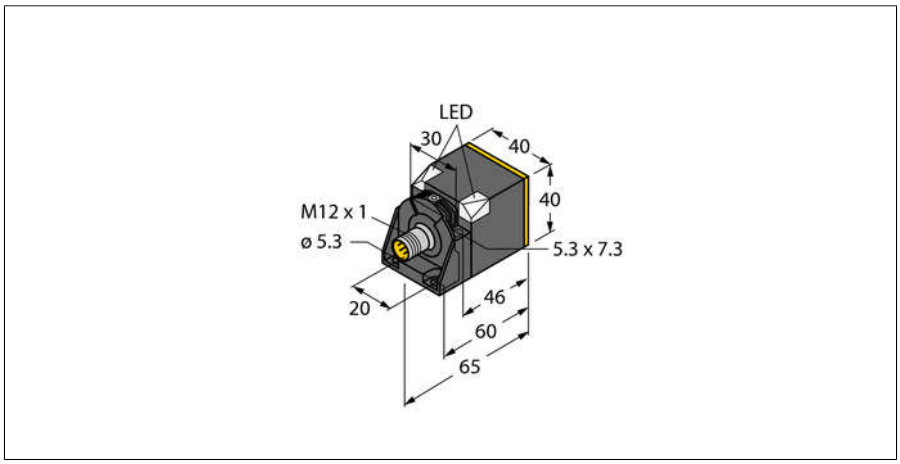
Inductive sensor
IO-Link Communication and Configuration
NI50U-CK40-IOL6X2-H1141



Type designation	NI50U-CK40-IOL6X2-H1141
Ident-No.	1625871
Rated switching distance Sn	50 mm
Mounting conditions	Non-flush, flush mountable
Secured operating distance	≤ (0,81 x Sn) mm
Repeat accuracy	≤ 2 % of full scale
Temperature drift	≤ ± 10 %
	≤ ± 20 %, ≤ -25 °C v ≥ +70 °C
Hysteresis	3…15 %
Ambient temperature	-25…+70 °C
Operating voltage	10…30 VDC
Residual ripple	≤ 10 % U_{ss}
DC rated operational current	≤ 150 mA
No-load current I_0	≤ 20 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 breakage/Reverse polarity protection	yes/ Complete
Output function	4-wire, NO/NC, PNP/NPN, IO-Link
Output 1	Switching output or IO-Link mode
Output 2	switching output
Protection class	⧈
Switching frequency	0.5 kHz
IO-Link	
IO-Link Specification	V 1.1
IO-Link port type	Class A
Communication Mode	COM 2 (38.4 kBaud)
Process data width	16 bit
Switchpoint information	2 bit
Status bit information	3 bit
Frame type	2.2
Minimum cycle time	8 ms
Function Pin 4	IO-Link
Function Pin 2	DI
Maximum cable length	20 m

- **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 predamping**
- **Partially embeddable**
- **DC 4-wire, 10…30 VDC**
- **M12 x 1 connector**
- **Configuration and communication via IO-Link v1.1 or via standard I/O**
- **Electrical outputs independently configurable**
- **Switching distance can be parametrized per output and hysteresis**
- **Identification via 32-byte memory**
- **Temperature monitoring with adjustable limits**
- **Various timer and pulse monitoring functions**

Wiring Diagram



Functional principle

Inductive sensors detect metal objects contactless and wear-free. *uprox®3* sensors have significant advantages due to their patented ferrite-coreless multicoil system. They excel in largest switching distances, maximum flexibility and operational reliability as well as efficient standardization. In addition, the *uprox®3-IO-Link* sensors allow certain parameters to be set within predefined limits and various device functions to be configured to customer needs, using an IO-Link Master. For detailed information refer to the *uprox®3-IO-Link* manual.

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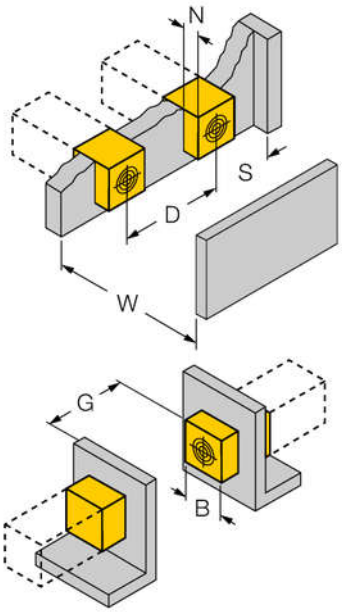
Design	Rectangular,CK40
Dimensions	65 x 40 x 40 mm
	variable orientation of active face in 5 directions
Housing material	Plastic, PBT-GF20-V0, Black
Active area material	Plastic, PA12-GF30, yellow
Electrical connection	Connector, M12 × 1
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68
MTTF	874 years acc. to SN 29500 (Ed. 99) 40 °C
Packaging unit	1

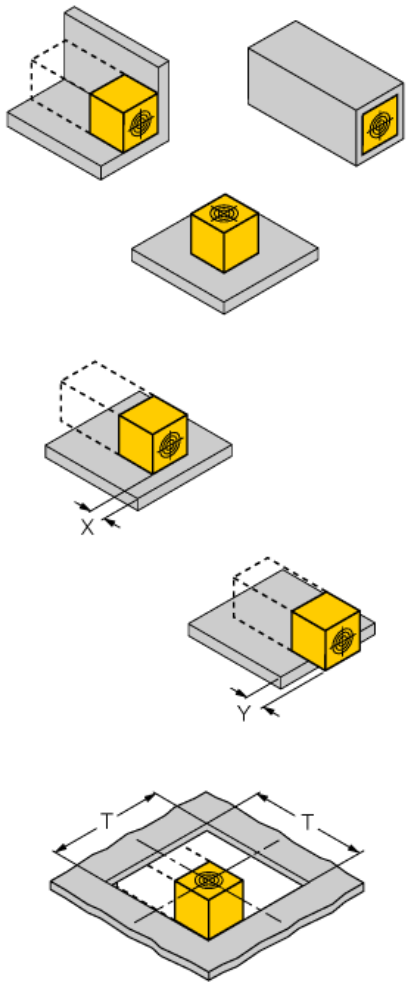
Power-on indication	2 × LEDs,Green
Switching state	2 × LEDs, Yellow
Included in delivery	Fixing clamp BS4-CK40

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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 active area 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 = 15 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

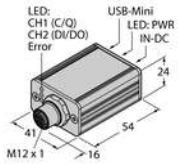
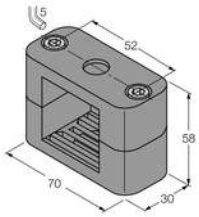
Mounting in aperture plate:
T = 150 mm:
Sensor with twisted turning angle
On metal Sr = 50 mm
Metal-enclosed on one side Sr = 25 mm
Metal-enclosed on two sides Sr = 15 mm
Metal-enclosed on three sides Sr = 12 mm

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

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Accessories

Type code	Ident-No.	Description	
USB-2-IOL-0002	6825482	IO-Link Master with integrated USB port	
BSS-CP40	6901318	Mounting bracket for rectangular devices; material: Polypropylene	

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