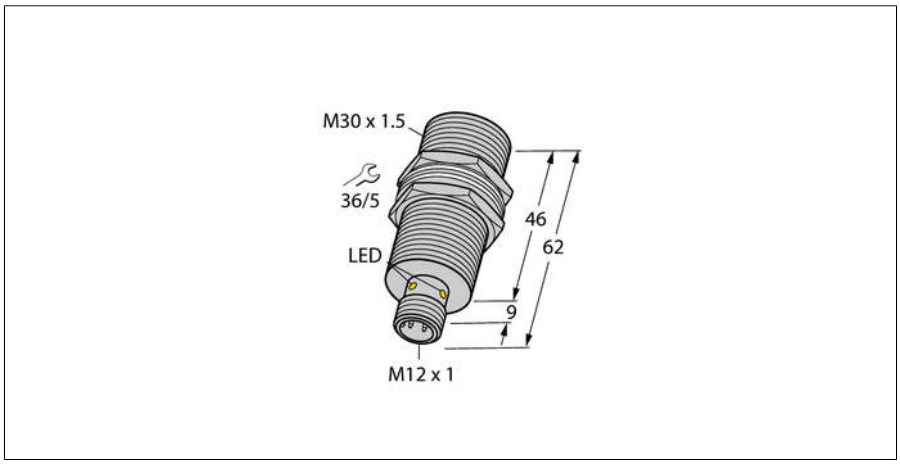
Inductive sensor
IO-Link Communication and Configuration
BI20U-MT30-IOL6X2-H1141



Type designation	BI20U-MT30-IOL6X2-H1141
Ident-No.	1644883
Rated switching distance Sn	20 mm
Mounting conditions	Flush
Secured operating distance	≤ (0,81 x Sn) mm
Repeat accuracy	≤ 2 % of full scale
Temperature drift	≤ ± 10 %
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
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
Design	Threaded barrel,M30 × 1.5
Dimensions	62 mm
Housing material	Metal, CuZn, PTFE-coated
Active area material	Plastic, LCP, PTFE-coated
Max. tightening torque housing nut	50 Nm
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

- **Threaded barrel, M30 x 1.5**
- **Brass, PTFE-coated**
- **Factor 1 for all metals**
- **Resistant to magnetic fields**
- **Large switching distance**
- **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 in a contactless and wear-free process. *uprox®3* sensors have significant advantages due to their patented multicoil system. They excel thanks to their optimum 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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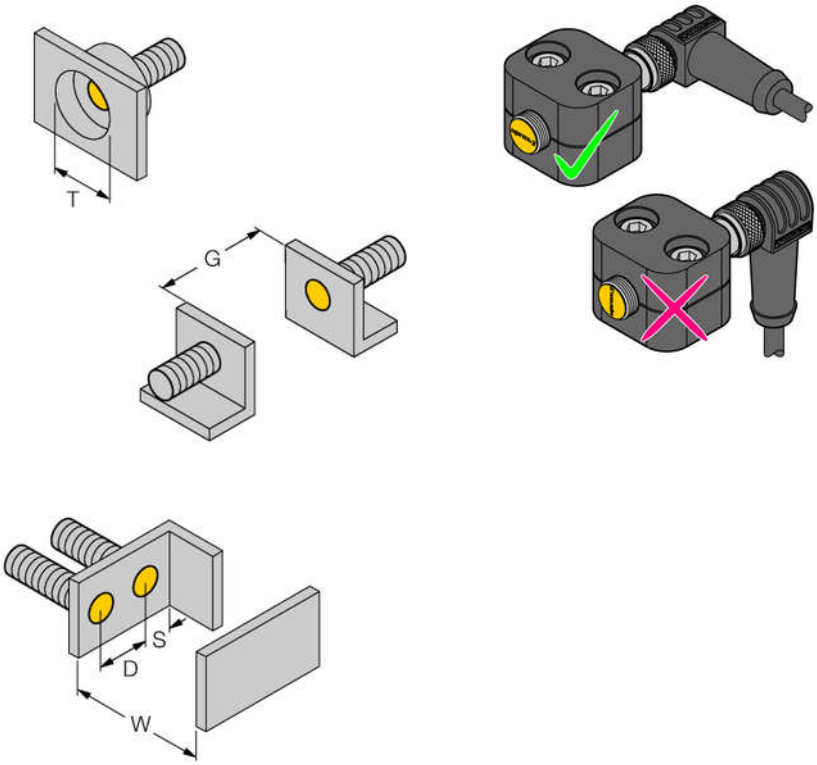
Power-on indication	LED,Green
Switching state	LED, Yellow

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Distance D	60 mm
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn

Diameter active area B	Ø 30 mm

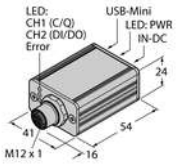
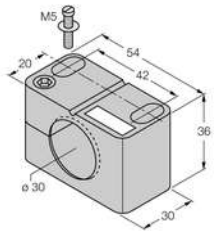
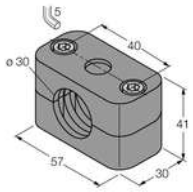


When installing the sensor in combination with the illustrated half-shell-clamp, observe its correct alignment towards the clamp. For this, see the uprox-lettering on the front cap of the sensor and the adjacent installation drawing.

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Accessories

Type code	Ident-No.	Description	
USB-2-IOL-0002	6825482	IO-Link Master with integrated USB port	
BST-30B	6947216	Fixing clamp for threaded barrel devices, with dead-stop; material: PA6	
BSS-30	6901319	Mounting bracket for smooth and threaded barrel devices; material: Polypropylene	

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