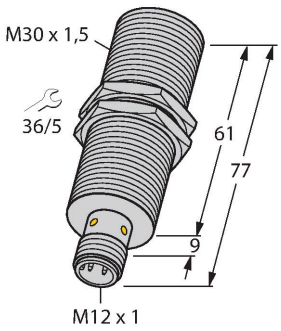
BI10-M30-IOLU69X2-H1141
Inductive Sensor – With Analog Output and IO-Link Communication



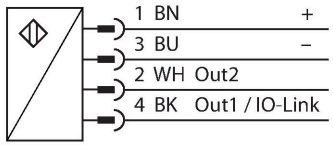
Technical data

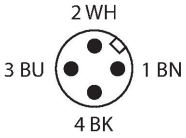
Type	BI10-M30-IOLU69X2-H1141
ID	100001079
General data	
Measuring range	2…10 mm
Mounting conditions	Flush
Secured operating distance	≤ (0.81 × Sn) mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeatability	≤ 1 % of measuring range |A - B|
	0.25 % of full scale, after 0.5 h warm-up
Linearity deviation	≤ 1 %
Temperature drift	≤ ±3 %
	≤ ± 5 %, ≤ 0 °C, ≥ +50 °C
Electrical data	
Operating voltage U_B	15…30 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
No-load current	≤ 20 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes
Wire break/reverse polarity protection	no/Complete (analog output restricted)
Communication protocol	IO-Link
Output function	4-wire, PNP/NPN, analog output
Voltage output	0…10 V
Load resistance voltage output	≥ 4.7 kΩ
Response time	0.0015 s
	At the output

Features

- M30 × 1.5 threaded tube
- Chrome-plated brass
- Configuration and communication via IO-Link v1.1 or standard I/O
- Adjustable distance value in 12-bit IO-Link process data
- Switchpoint configurable via two teach points
- Switching output freely configurable
- Identification via 32-byte memory
- Temperature monitoring with adjustable limits
- 4-wire, 15…30 VDC
- Analog output, 0…10 V (2…10 V parameterizable)
- M12 × 1 connector

Wiring diagram





Functional principle

Inductive sensors with analog output from TURCK accomplish simple control tasks. They provide a distance-proportional current, voltage or frequency signal. With TURCK

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Technical data

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	1 bit
Status bit information	2 bit
Frame type	2.2
Minimum cycle time	2.3 ms
Function pin 4	IO-Link
Function Pin 2	Analog
Maximum cable length	20 m
Included in the SIDI GSDML	Yes
Mechanical data	
Design	Threaded barrel, M30 x 1.5
Dimensions	77 mm
Housing material	Metal, CuZn, Chrome-plated
Active area material	Plastic, PA12-GF30
Max. tightening torque of housing nut	75 Nm
Electrical connection	Connector, M12 × 1
Environmental conditions	
Ambient temperature	-25…+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	751 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	LED, Green
Switching state	LED, Yellow

analog sensors, this output signal is linear to the distance of the target over the entire sensing range. Using an IO-Link Master also enables various functions to be configured and certain parameters of analog IO-Link sensors to be adjusted within predefined limits to suit customer needs. Please refer to the operating instructions for the analog IO-Link sensor for more detailed information.

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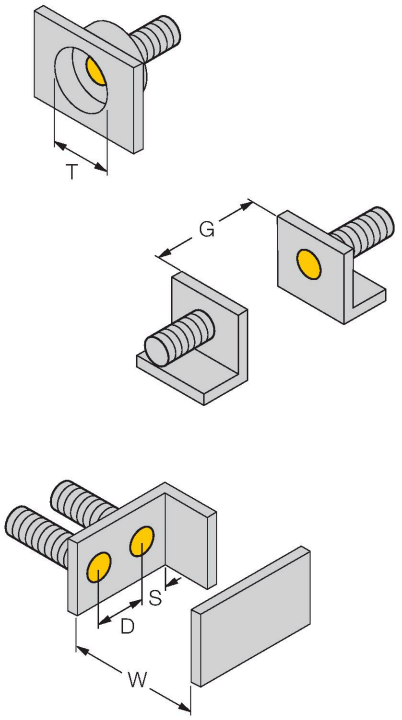
Mounting instructions

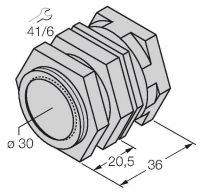
Mounting instructions/Description



Distance D	2 x B
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

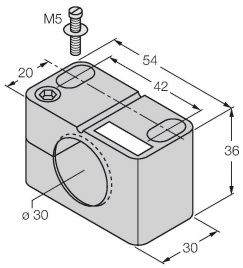
Accessories

QM-30 6945103



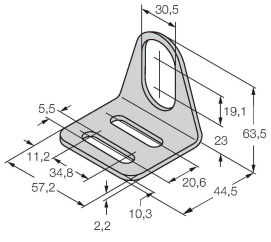
Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M36 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

BST-30B 6947216



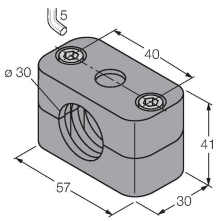
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

MW30 6945005



Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

BSS-30 6901319



Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene

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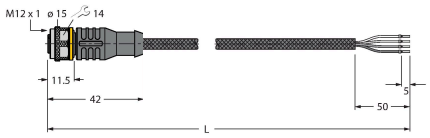
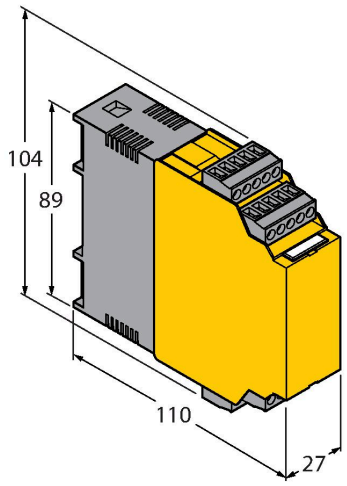
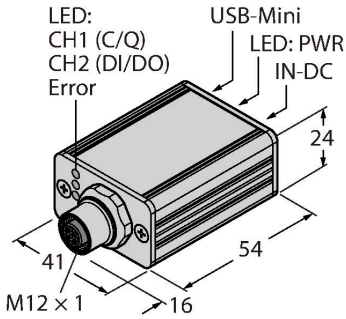
Accessories

Dimension drawing	Type	ID	
	RKC4.4T-2/TXL1001	6628825	Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, protective jacket material: aramid fibers, yellow; temperature peak: 200 °C

Accessories

Dimension drawing	Type	ID	
	IM43-13-SR	7540041	Trip amplifier; 1-channel; input 0/4…20 mA or 0/2…10 V; supply of 2- or 3-wire transmitters/sensors; limit value adjustment via teach button; three relay outputs with one NO contact each; removable terminal blocks; 27 mm wide; universal voltage supply 20…250 VUC; further Limit value indicators are described in our "Interface Technology" catalog.
	USB-2-IOL-0002	6825482	IO-Link Master with integrated USB port

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