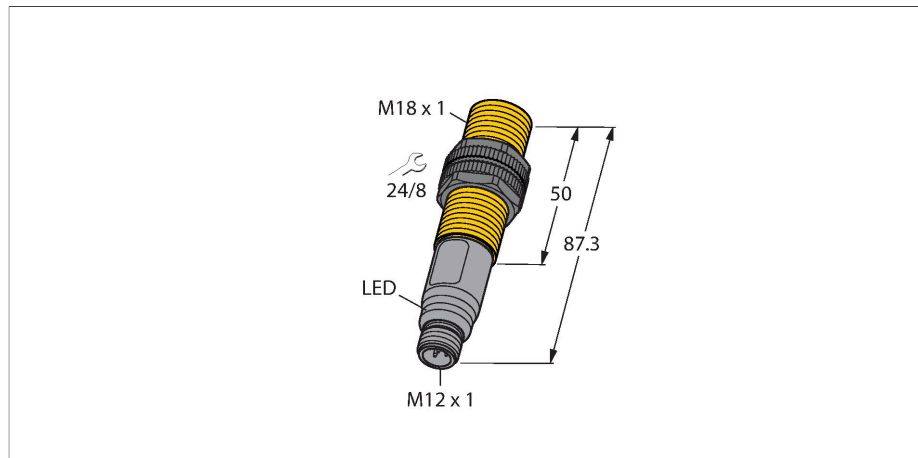


BCT5-S18-UN6X2-H1151

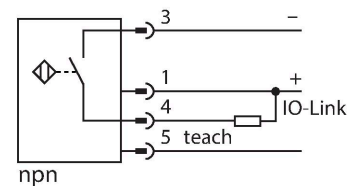
Capacitive Sensor



Features

- M18 × 1 threaded barrel
- Plastic, PA12-GF30
- Teach-in and configuration via pin 5 and IO-Link

Wiring diagram



Technical data

Type	BCT5-S18-UN6X2-H1151
ID	2101400
Remark to product	For remote teaching via pin 5 please use 5-wire cable (e.g. RKC4.5T.../WKC4.5T...)
Rated switching distance (flush)	5 mm
Rated switching distance (non-flush)	7.5 mm
Secured operating distance	$\leq (0.72 \times S_n)$
Hysteresis	1...20 %
Temperature drift	Typical 20 %
Repeat accuracy	≤ 2 % of full scale
Ambient temperature	-25...+70 °C
Electrical data	
Operating voltage	18...30 VDC
	In IO-Link mode
Residual ripple	≤ 10 % U_{ss}
DC rated operational current	≤ 200 mA
No-load current	≤ 15 mA
Residual current	≤ 0.1 mA
Switching frequency	0.01 kHz
Oscillation frequency	According to EN 60947-5-2, 8.2.6.2 Table 9: 0.1...2.0 MHz
Isolation test voltage	≤ 0.5 kV
Communication protocol	IO-Link
Output function	3-wire, NO/NC, NPN
Short-circuit protection	yes / Cyclic
Voltage drop at I_o	≤ 2.4 V

Functional principle

Capacitive proximity switches are designed for non-contact and wear-free detection of electrically conductive as well as non-conductive metal objects.

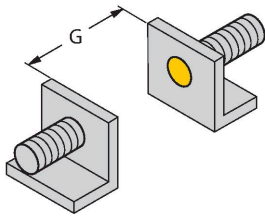
Technical data

Wire breakage/Reverse polarity protection yes / Complete

Tests/approvals	
Approvals	UL
UL registration number	E210608
IO-Link	
IO-Link specification	V 1.1
Programming	FDT/DTM
Transmission physics	corresponds to 3-wire physics (PHY2)
Transmission rate	COM 2/38.4 kbps
Process data width	16 bit
Measured value information	12 bit
Frame type	2.2
Included in the SIDI GSDML	Yes
Mechanical data	
Design	Threaded barrel, M18 x 1
Dimensions	87.3 mm
Housing material	Plastic, PA12-GF30, PEI
Active area material	PA12-GF30, yellow
Admissible pressure on front cap	≤ 6 bar
Max. tightening torque of housing nut	2 Nm
Electrical connection	Connector, M12 × 1
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67 IP69K
MTTF	1080 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	Green
Switching state	LED, Yellow

Mounting instructions

Product features



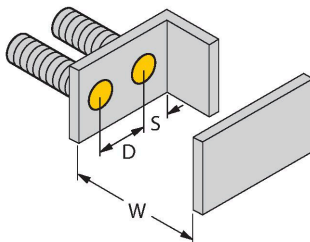
Distance D 36 mm

Distance W 15 mm

Distance S 27 mm

Distance G 30 mm

Diameter active area B \varnothing 18 mm



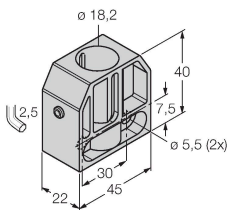
The given minimum distances have been checked against the standard switching distance.
Should the sensitivity of the sensors be changed via potentiometer, the data sheet specifications no longer apply.

Accessories

BS 18

69471

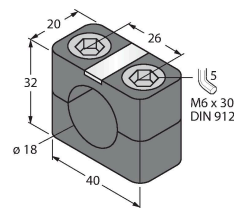
Mounting clamp for threaded barrel sensors; material: PA66-GF



BSN 18

69472

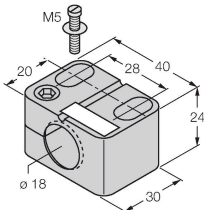
Mounting clamp for threaded barrel sensors; material: PA66-GF



BST-18B

6947214

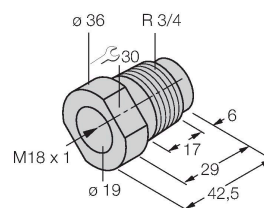
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



MAP-M18

6950012

Mounting adapter; material: Polypropylene; sensor replacement with filled container possible (adapter remains in container during sensor replacement)



Accessories

Dimension drawing

Type

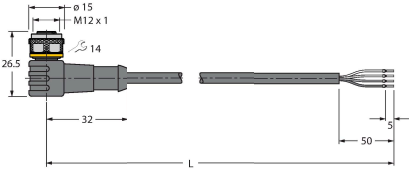
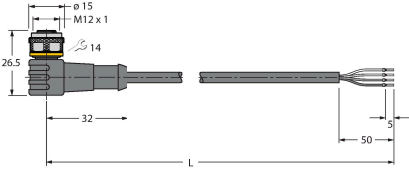

ID

RKC4.4T-2/TXL

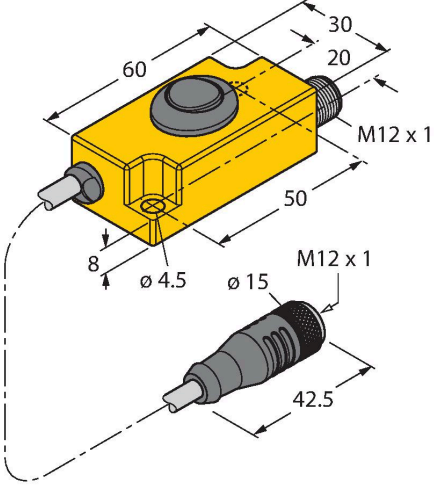
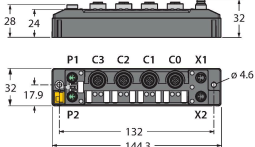
6625503

Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, jacket material: PUR, black; cULus approval



Dimension drawing	Type	ID	
 <p>Dimension drawing of WKC4.4T-2/TXL cable. It shows an angled M12 female connector with a cable length of 2 m. Dimensions include a connector diameter of 15 mm, a connector length of 26.5 mm, a cable diameter of 14 mm, and a cable length of 32 mm from the connector to the end of the cable. The total length is L. The cable ends in a 4-pin connector with a length of 50 mm.</p>	WKC4.4T-2/TXL	6625515	Connection cable, M12 female connector, angled, 4-pin, cable length: 2 m, jacket material: PUR, black; cULus approval
 <p>Dimension drawing of WKC4.4T-2/TEL cable. It shows an angled M12 female connector with a cable length of 2 m. Dimensions include a connector diameter of 15 mm, a connector length of 26.5 mm, a cable diameter of 14 mm, and a cable length of 32 mm from the connector to the end of the cable. The total length is L. The cable ends in a 4-pin connector with a length of 50 mm.</p>	WKC4.4T-2/TEL	6625025	Connection cable, M12 female connector, angled, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval
 <p>Dimension drawing of RKC4.4T-2/TEL cable. It shows a straight M12 female connector with a cable length of 2 m. Dimensions include a connector diameter of 15 mm, a connector length of 11.5 mm, a cable diameter of 14 mm, and a cable length of 42 mm from the connector to the end of the cable. The total length is L. The cable ends in a 4-pin connector with a length of 50 mm.</p>	RKC4.4T-2/TEL	6625013	Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval

Accessories

Dimension drawing	Type	ID	
 <p>Dimension drawing of TX1-Q20L60 teach adapter. It is a yellow rectangular device with a length of 60 mm, a width of 30 mm, and a height of 20 mm. It features an M12 x 1 connector on the side and a 4-pin connector on the front. Dimensions include a connector diameter of 15 mm, a connector length of 8 mm, and a cable length of 42.5 mm. The device is used for teaching inductive encoders, linear position, angle, ultrasonic and capacitive sensors.</p>	TX1-Q20L60	6967114	Teach adapter for inductive encoders, linear position, angle, ultrasonic and capacitive sensors
 <p>Dimension drawing of TBEN-S2-4IOL I/O module. It is a compact module with a length of 144.3 mm and a width of 28 mm. It features four IO-Link ports labeled P1, C3, C2, C1, C0, X1, P2, and X2. The module is used as a compact multiprotocol I/O module with 4 IO-Link Master 1.1 Class A, 4 universal PNP digital channels 0.5 A.</p>	TBEN-S2-4IOL	6814024	Compact multiprotocol I/O module, 4 IO-Link Master 1.1 Class A, 4 universal PNP digital channels 0.5 A

Dimension drawing	Type	ID	
	USB-2-IOL-0002	6825482	IO-Link Master with integrated USB port

