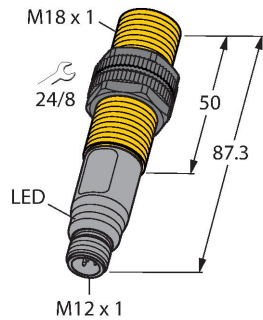


# BCT5-S18-UN6X2-H1151

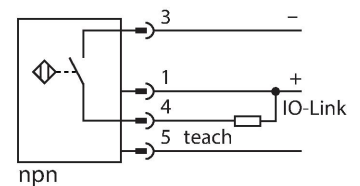
## Capacitive Sensor



### 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             | $\leq (0.72 \times S_n)$ mm                                                        |
| Hysteresis                             | 1...20 %                                                                           |
| Temperature drift                      | Typical 20 %                                                                       |
| Repeat accuracy                        | $\leq 2$ % of full scale                                                           |
| Ambient temperature                    | -25...+70 °C                                                                       |
| <b>Electrical data</b>                 |                                                                                    |
| Operating voltage $U_B$                | 18...30 VDC                                                                        |
|                                        | In IO-Link mode                                                                    |
| Ripple $U_{ss}$                        | $\leq 10$ % $U_{Bmax}$                                                             |
| DC rated operating current $I_o$       | $\leq 200$ mA                                                                      |
| No-load current                        | $\leq 15$ mA                                                                       |
| Residual current                       | $\leq 0.1$ 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 $I_o$                  | $\leq 2.4$ V                                                                       |
| Wire break/reverse polarity protection | yes/Complete                                                                       |

### Functional principle

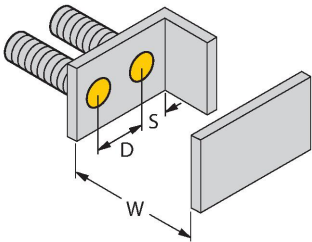
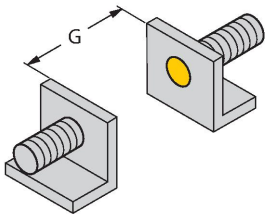
Capacitive proximity switches are designed for non-contact and wear-free detection of electrically conductive as well as non-conductive metal objects.

Technical data

|                                       |                                            |
|---------------------------------------|--------------------------------------------|
| 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<br>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 | Ø 18 mm |

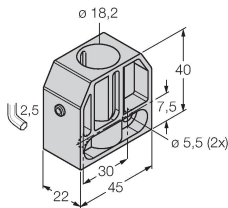
The given minimum distances have been checked against the standard switching distance.  
Should the sensitivity of the sensors be changed via potentiometer, the data sheet specifications no longer apply.

Accessories

BS 18

69471

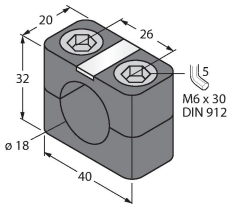
Mounting clamp for threaded barrel sensors; material: PA66-GF



BSN 18

69472

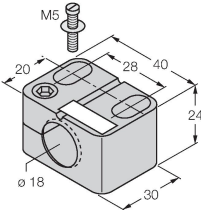
Mounting clamp for threaded barrel sensors; material: PA66-GF



BST-18B

6947214

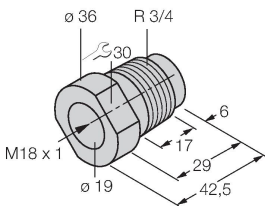
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



MAP-M18

6950012

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



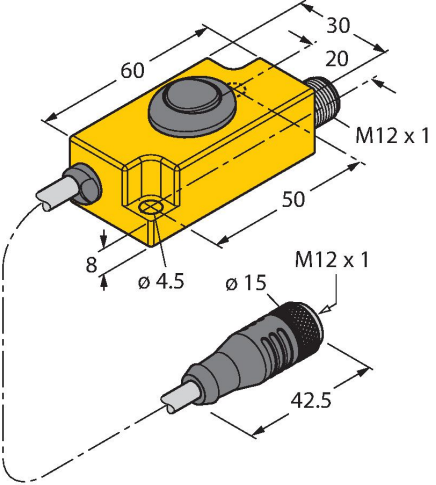
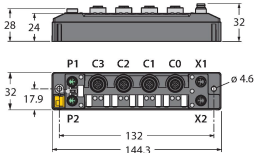
Accessories

| 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      |                                                                                                                         |
|-----------------------------------------------------------------------------------|---------------|---------|-------------------------------------------------------------------------------------------------------------------------|
|  | WKC4.4T-2/TXL | 6625515 | Connection cable, M12 female connector, angled, 4-pin, cable length: 2 m, jacket material: PUR, black; cULus approval   |
|  | WKC4.4T-2/TEL | 6625025 | Connection cable, M12 female connector, angled, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval   |
|  | 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      |                                                                                                        |
|-------------------------------------------------------------------------------------|--------------|---------|--------------------------------------------------------------------------------------------------------|
|  | TX1-Q20L60   | 6967114 | Teach adapter for inductive encoders, linear position, angle, ultrasonic and capacitive sensors        |
|  | 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 |

