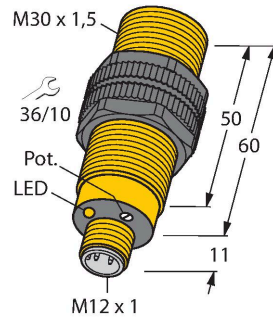


# BC10-S30-VN4X-H1141

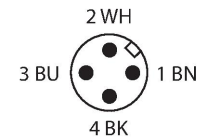
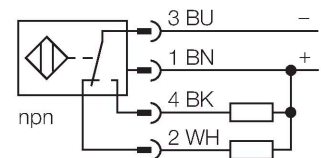
## Capacitive Sensor



### Features

- M30 × 1.5 threaded barrel
- Plastic, PA12-GF30
- Fine adjustment via potentiometer
- DC 4-wire, 10...65 VDC
- Complementary contact, NPN output
- M12 × 1 connector

### Wiring diagram



### 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

|                                        |                                                           |
|----------------------------------------|-----------------------------------------------------------|
| Type                                   | BC10-S30-VN4X-H1141                                       |
| ID                                     | 2506010                                                   |
| Rated switching distance (flush)       | 10 mm                                                     |
| Rated switching distance (non-flush)   | 15 mm                                                     |
| Secured operating distance             | $\leq (0.72 \times S_n) \text{ mm}$                       |
| 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 $U_B$                | 65 VDC                                                    |
| Ripple $U_{ss}$                        | $\leq 10 \% U_{Bmax}$                                     |
| DC rated operating current $I_o$       | $\leq 200 \text{ mA}$                                     |
| No-load current                        | $\leq 15 \text{ mA}$                                      |
| Residual current                       | $\leq 0.1 \text{ mA}$                                     |
| Switching frequency                    | 0.1 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                                                    |
| Output function                        | 4-wire, Complementary contact, NPN                        |
| Short-circuit protection               | yes/Cyclic                                                |
| Voltage drop at $I_o$                  | $\leq 1.8 \text{ V}$                                      |
| Wire break/reverse polarity protection | yes/Complete                                              |
| <b>Tests/approvals</b>                 |                                                           |
| Approvals                              | UL                                                        |
| UL registration number                 | E210608                                                   |

Technical data

| Mechanical data                       |                                            |
|---------------------------------------|--------------------------------------------|
| Design                                | Threaded barrel, M30 x 1.5                 |
| Dimensions                            | 60 mm                                      |
| Housing material                      | Plastic, PA12-GF30, PEI                    |
| Active area material                  | PA12-GF30, yellow                          |
| Admissible pressure on front cap      | ≤ 3 bar                                    |
| Max. tightening torque of housing nut | 5 Nm                                       |
| Electrical connection                 | Connector, M12 × 1                         |
| Vibration resistance                  | 55 Hz (1 mm)                               |
| Shock resistance                      | 30 g (11 ms)                               |
| Protection class                      | IP67                                       |
| MTTF                                  | 1080 years acc. to SN 29500 (Ed. 99) 40 °C |
| Switching state                       | LED, Yellow                                |

Mounting instructions

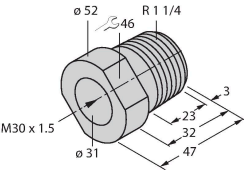
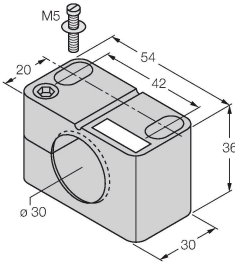
Product features

|                        |         |
|------------------------|---------|
| Distance D             | 60 mm   |
| Distance W             | 30 mm   |
| Distance S             | 45 mm   |
| Distance G             | 60 mm   |
| Diameter active area B | Ø 30 mm |

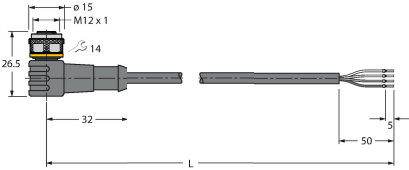
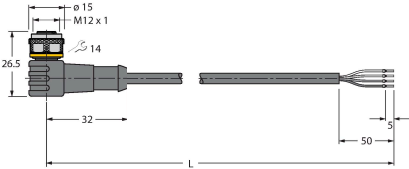
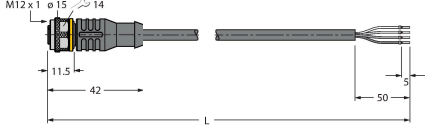
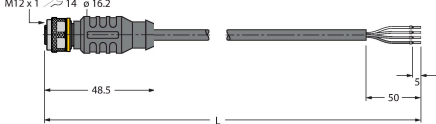
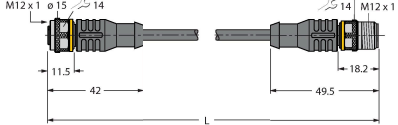
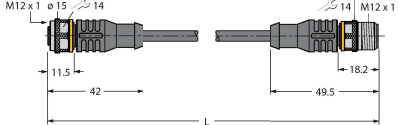
The given minimum distances have been checked against the standard switching distance.

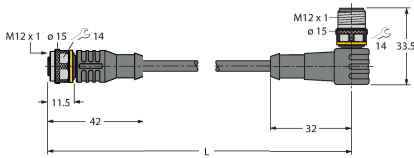
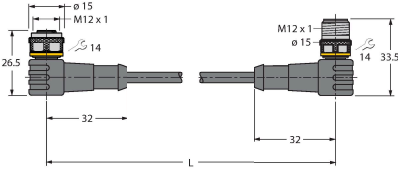
Should the sensitivity of the sensors be changed via potentiometer, the data sheet specifications no longer apply.

Accessories

| MAP-M30                                                                                                                                               | 6950013 | BST-30B                                                                              | 6947216 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------------------------------------------------------------------------------------|---------|
|                                                                    |         |  |         |
| Mounting adapter; material: Polypropylene; sensor replacement with filled container possible (adapter remains in container during sensor replacement) |         | Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6            |         |

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                                       |
|    | 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                                       |
|  | RKC4.4T-P7X2-10/TXL   | 6626184 | Connection cable, M12 female connector, straight, 4-pin, LED, cable length: 10 m, jacket material: PUR, black; cULus approval                                 |
|  | RKC4.4T-2-RSC4.4T/TEL | 6625208 | Extension cable, M12 female connector, straight, 4-pin to M12 male connector, straight, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval |
|  | RKC4.4T-2-RSC4.4T/TXL | 6625608 | Extension cable, M12 female connector, straight, 4-pin to M12 male connector, straight, 4-pin; cable length: 2 m, jacket material: PUR, black; cULus approval |

| Dimension drawing                                                                 | Type                  | ID      |                                                                                                                                                             |
|-----------------------------------------------------------------------------------|-----------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | RKC4.4T-2-WSC4.4T/TXL | 6625624 | Extension cable, M12 female connector, straight, 4-pin to M12 male connector, angled, 4-pin; cable length: 2 m, jacket material: PUR, black; cULus approval |
|  | WKC4.4T-2-WSC4.4T/TXL | 6625656 | Extension cable, M12 female connector, angled, 4-pin to M12 male connector, angled, 4-pin; cable length: 2 m, jacket material: PUR, black; cULus approval   |