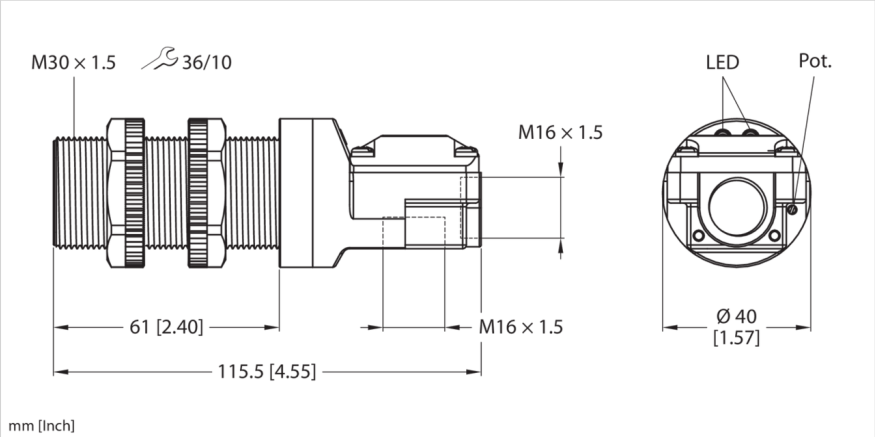
**BC10-P30SR-VP4X2**

# Capacitive sensor






| Type designation | BC10-P30SR-VP4X2 |
|---|---|
| Ident-No. | 25050 |

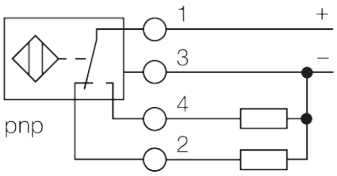
## Technical data

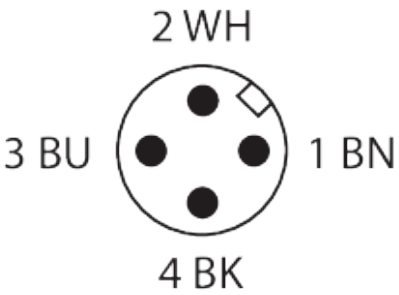
| | |
|---|---|
| **General data** | |
| Measuring principle | Capacitive |
| **Detection area/measuring range** | |
| Rated switching distance | 15 mm |
| Rated switching distance (flush) | 10 mm |
| Rated switching distance (non-flush) | 15 mm |
| Secured operating distance | ≤ (0.72 × Sn) mm |
| **Power supply** | |
| Operating voltage $U_B$ | 65 VDC |
| Voltage drop at $I_e$ | ≤ 1,8 V |
| **Electrical data** | |
| No-load current | 15 mA |
| Output function | 4-wire, Complementary contact, PNP |
| Short-circuit protection | yes/Cyclic |
| Wire break/reverse polarity protection | yes/Complete |
| DC rated operational current | ≤ 200 mA |
| Isolation test voltage | ≤ 0,5 kV |
| Oscillation frequency | According to EN 60947-5-2, 8.2.6.2<br>Table 9: 0.1…2.0 MHz |
| Residual current | ≤ 0,1 mA |

## Features

- M30 × 1.5 threaded barrel
- Plastic, ABS
- Fine adjustment via potentiometer
- DC 4-wire, 10…65 VDC
- Complementary contact, PNP output
- Terminal chamber

## Wiring Diagram




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## Technical data

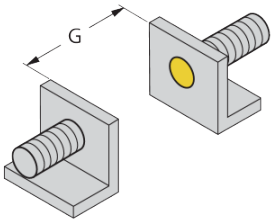
| | |
|---|---|
| Residual ripple | ≤ 10 % $U_{SS}$ |
| Switching frequency | 0,1 kHz |
| **Accuracy/deviation** | |
| Hysteresis | 1 % v. E...20 % v. E. |
| Temperature drift | Typical 20 % |
| Repeat accuracy | ≤ 2 % v. E. |
| **Mechanical data** | |
| Design | Threaded barrel, M30 x 1.5 |
| Construction type designation | P30SR |
| | ⌀ 30 mm |
| Dimensions | 115 mm |
| Housing color | Yellow |
| Housing material | Plastic, ABS, Black |
| Terminal chamber cover material | PBT |
| Active area material | ABS, yellow |
| End cap | Plastic, PA |
| Admissible pressure on front cap | ≤ 3 bar |
| Max. tightening torque of housing nut | 5 Nm |
| Electrical connection | Terminal chamber |
| Thread size | M30 × 1.5 |
| Mounting conditions | Flush |
| **Ambient conditions** | |
| Ambient temperature | -25...+70 °C |
| Pollution degree | 3 |
| Shock resistance | 30 g (11 ms) |
| Vibration resistance | 55 Hz (1 mm) |
| Protection class | IP67 |
| **Tests/approvals** | |
| UL registration number | E210608 |
| Approvals | UL |
| MTTF | 1080 Years acc. to SN 29500 (Ed. 99) 40 °C |
| **Displays/controls** | |
| Switching state | 2 × LEDs, Yellow |
| Setting 1 | Potentiometer |
| **Other properties** | |
| RoHs compatibility | yes |

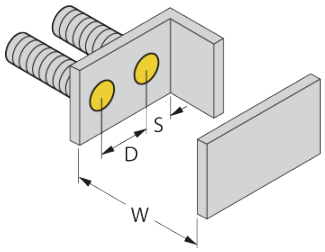
## Functional principle

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

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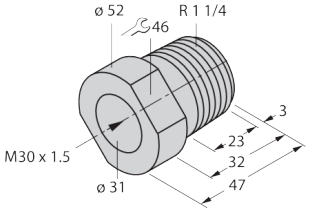
## Assembly instructions




Distance D: 60 mm
Distance W: 30 mm
Distance S: 45 mm
Distance G: 60 mm
Diameter active area B: 30 mm
Installation information:
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.

## Mounting accessories

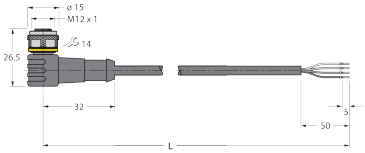
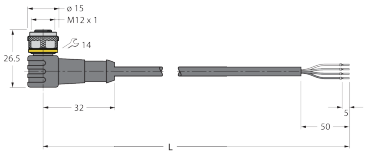
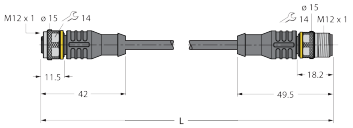
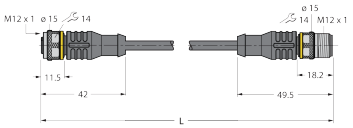
| MAP-M30 | 6950013 |
|---|---|
|  | Mounting adapter; material: Polypropylene; sensor replacement with filled container possible (adapter remains in container during sensor replacement) |



| BST-30B | 6947216 |
|---|---|
| | Mounting bracket for threaded barrel sensors, with dead-stop; material: PA6 |

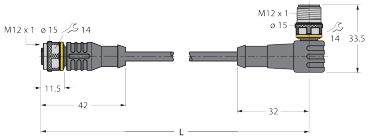
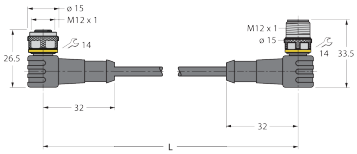
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## Connection accessories

| | |
|---|---|
| **RKC4.4T-2/TEL** | **6625013** |
|  | Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, jacket material: PVC, 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/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 |
| **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 |
| **RKC4.4T-2-WSC4.4T/TXL** | **6625624** |

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## Connection accessories

| | |
|---|---|
|  | 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 |

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