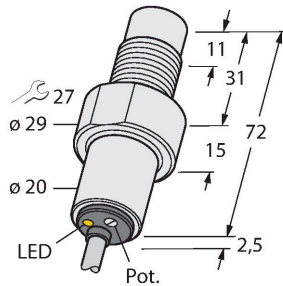


# BC5-S185-AP4X/S100

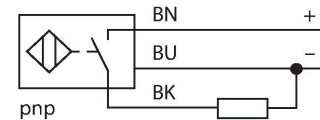
## Capacitive Sensor – With Increased Temperature Range



### Features

- M18 × 1 threaded barrel
- Plastic, PVDF
- Fine adjustment via potentiometer
- For temperatures up to 100°C
- DC 3-wire, 10...65 VDC
- NO contact, PNP output
- Cable connection

### Wiring diagram

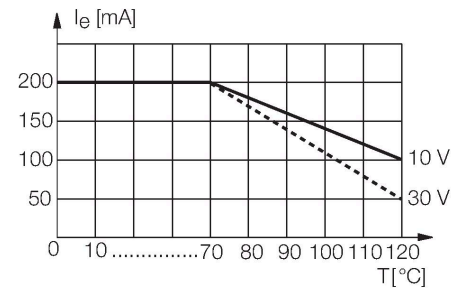


### Technical data

|  |   |
|--|---|
| Type                                   | BC5-S185-AP4X/S100  |
| ID                                     | 2503502   |
| 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 %  |
| Repeat accuracy                        | $\leq 2$ % of full scale                                  |
| Ambient temperature                    | -25...+100 °C   |
| <b>Electrical data</b>                 |   |
| Operating voltage $U_B$                | 65 VDC  |
| Ripple $U_{ss}$                        | $\leq 10$ % $U_{Bmax}$                                    |
| DC rated operating current $I_e$       | $\leq 200$ mA   |
| Rated operational current              | See derating curve  |
| No-load current                        | $\leq 15$ mA  |
| Residual current                       | $\leq 0.1$ 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                        | 3-wire, NO contact, PNP                                   |
| Short-circuit protection               | yes/Cyclic  |
| Voltage drop at $I_e$                  | $\leq 1.8$ 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. Special capacitive sensor versions can be used at temperatures of up to +100°C.



Technical data

| Tests/approvals                       |  |
|---------------------------------------|--|
| Approvals                             | UL   |
| UL registration number                | E210608                                    |
| Mechanical data                       |  |
| Design                                | Threaded barrel, M18 x 1                   |
| Dimensions                            | 74.5 mm                                    |
| Housing material                      | Plastic, PVDF                              |
| Active area material                  | PVDF, ecru                                 |
| Max. tightening torque of housing nut | 2 Nm                                       |
| Electrical connection                 | Cable                                      |
| Cable quality                         | Ø 5.2 mm, LifYY, PVC, 2 m                  |
| Core cross-section                    | 3 x 0.5 mm²                                |
| 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             | 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.

BC5-S185-AP4X(S100) 02/21/2025 17-27 | technical changes reserved