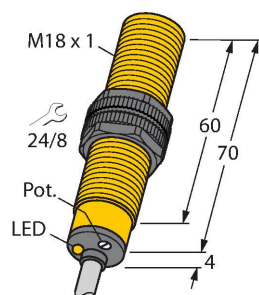


# BCF5-S18-AN4X

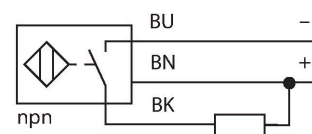
## Capacitive Sensor



### Features

- M18 × 1 threaded barrel
- Plastic, PA12-GF30
- Fine adjustment via potentiometer
- Increased EMI protection (even with high frequency equipment)
- Suited for highly viscous media
- DC 3-wire, 10...65 VDC
- NO contact, NPN output
- Cable connection

### 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

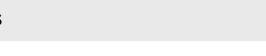
|                                           |                           |
|-------------------------------------------|---------------------------|
| Type                                      | BCF5-S18-AN4X             |
| Ident. no.                                | 2503012                   |
| Rated switching distance (flush)          | 5 mm                      |
| Rated switching distance (non-flush)      | 5 mm                      |
| Secured operating distance                | $\leq (0.72 \times S_n)$  |
| Hysteresis                                | 2...20 %                  |
| Temperature drift                         | type 20 %                 |
| Repeat accuracy                           | $\leq 2 \%$ of full scale |
| Ambient temperature                       | -25...+70 °C              |
| <b>Electrical data</b>                    |                           |
| Operating voltage                         | 10...65 VDC               |
| Residual ripple                           | $\leq 10 \%$ $U_{ss}$     |
| DC rated operational current              | $\leq 200$ mA             |
| No-load current                           | $\leq 15$ mA              |
| Residual current                          | $\leq 0.1$ mA             |
| Switching frequency                       | 0.1 kHz                   |
| Isolation test voltage                    | $\leq 0.5$ kV             |
| Output function                           | 3-wire, NO contact, NPN   |
| Short-circuit protection                  | yes / Cyclic              |
| Voltage drop at $I_o$                     | $\leq 1.8$ V              |
| Wire breakage/Reverse polarity protection | yes / Complete            |
| Approvals                                 | UL                        |

Technical data

| Mechanical data                       |                                            |
|---------------------------------------|--------------------------------------------|
| Design                                | Threaded barrel, M18 × 1                   |
| Dimensions                            | 74 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                 | Cable                                      |
| Cable quality                         | Ø 5.2 mm, LifYY, PVC, 2 m                  |
| Core cross-section                    | 3 x 0.34 mm <sup>2</sup>                   |
| 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

The image shows two isometric views of a sensor. The top view shows the sensor from the side, with a dimension line labeled 'G' indicating the distance between the two mounting flanges. The bottom view shows the sensor from the front, with a yellow circle in the center representing the active area. Dimension lines are shown for 'D' (total height), 'W' (flange width), 'S' (flange thickness), and 'B' (active area diameter).

|                        |         |
|------------------------|---------|
| 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.