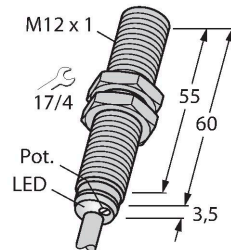


# BC3-M12-AN6X

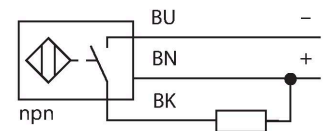
## Capacitive Sensor



### Features

- M12 × 1 threaded barrel
- Chrome-plated brass
- Fine adjustment via potentiometer
- DC 3-wire, 10...30 VDC
- NO contact, NPN output
- Cable connection

### Wiring diagram



### Technical data

|                                        |                                                           |
|----------------------------------------|-----------------------------------------------------------|
| Type                                   | BC3-M12-AN6X                                              |
| ID                                     | 2601100                                                   |
| Rated switching distance (flush)       | 3 mm                                                      |
| Rated switching distance (non-flush)   | 3 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 $U_B$                | 30 VDC                                                    |
| 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                    | 0.1 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, NPN                                   |
| Short-circuit protection               | yes/Cyclic                                                |
| Voltage drop at $I_o$                  | $\leq 1.8$ V                                              |
| Wire break/reverse polarity protection | yes/Complete                                              |
| <b>Tests/approvals</b>                 |                                                           |
| Approvals                              | UL                                                        |
| UL registration number                 | E210608                                                   |

### Functional principle

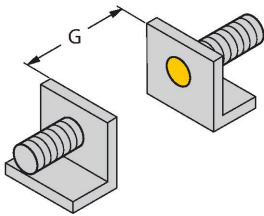
Capacitive proximity switches are designed for non-contact and wear-free detection of electrically conductive as well as non-conductive metal objects.

Technical data

| Mechanical data                       |                                            |
|---------------------------------------|--------------------------------------------|
| Design                                | Threaded barrel, M12 x 1                   |
| Dimensions                            | 63.5 mm                                    |
| Housing material                      | Metal, CuZn, Chrome-plated                 |
| Active area material                  | ABS                                        |
| Admissible pressure on front cap      | ≤ 5 bar                                    |
| Max. tightening torque of housing nut | 10 Nm                                      |
| Electrical connection                 | Cable                                      |
| Cable quality                         | Ø 4 mm, LiYY, PVC, 2 m                     |
| Core cross-section                    | 3 x 0.25 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             | 24 mm   |
| Distance W             | 9 mm    |
| Distance S             | 18 mm   |
| Distance G             | 18 mm   |
| Diameter active area B | Ø 12 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-M12-PP   | 6950016 | Mounting adapter; material: Polypropylene; sensor replacement with filled container possible (adapter remains in container during sensor replacement) |
| MAP-M12-PVDF | 6950017 | Mounting adapter; material: Polyvinylidenfluorid; sensor can be replaced with filled container (adapter remains in container during replacement)      |
| BST-12B      | 6947212 | Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6                                                                             |

