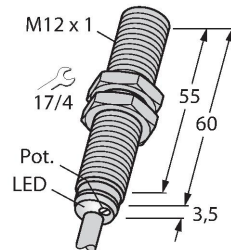


# BC3-M12-AN6X

## 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

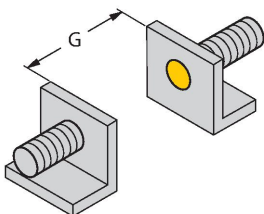
Capacitive proximity switches are designed for non-contact and wear-free detection of electrically conductive as well as non-conductive metal objects.

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

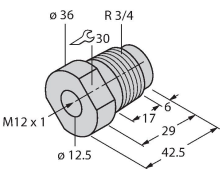


|                        |         |
|------------------------|---------|
| Distance D             | 24 mm   |
| Distance W             | 9 mm    |
| Distance S             | 18 mm   |
| Distance G             | 18 mm   |
| Diameter active area B | Ø 12 mm |

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.

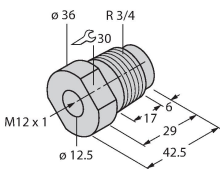
Accessories

MAP-M12-PP 6950016



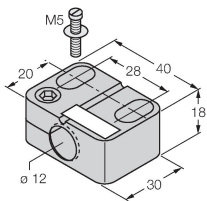
Mounting adapter; material: Polypropylene; sensor replacement with filled container possible (adapter remains in container during sensor replacement)

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