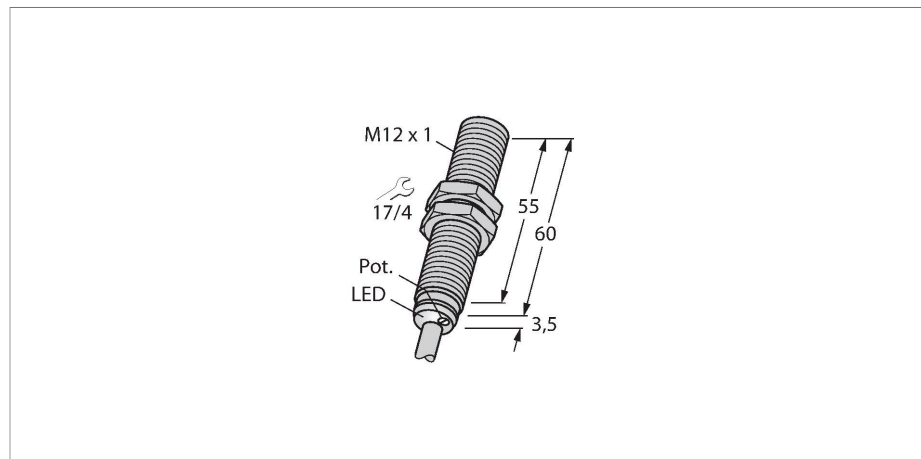


# BC3-M12-AP6X

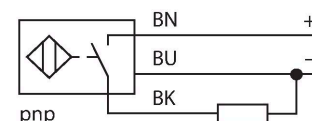
## Capacitive Sensor



### Features

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

### Wiring diagram



### Technical data

|                                      |   |
|--------------------------------------|---|
| Type                                 | BC3-M12-AP6X  |
| ID                                   | 2601000   |
| Rated switching distance (flush)     | 3 mm  |
| Rated switching distance (non-flush) | 3 mm  |
| Secured operating distance           | $\leq (0.72 \times Sn)$                                   |
| Hysteresis                           | 1...20 %  |
| Temperature drift                    | Typical 20 %  |
| Repeat accuracy                      | $\leq 2$ % of full scale                                  |
| Ambient temperature                  | -25...+70 °C  |
| Storage temperature                  | -25...+80 °C  |
| <b>Electrical data</b>               |   |
| Operating voltage                    | 10...30 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   |
| Oscillation frequency                | According to EN 60947-5-2, 8.2.6.2 Table 9: 0.1...2.0 MHz |
| Isolation test voltage               | $\leq 0.5$ kV   |
| Output function                      | 3-wire, NO contact, PNP                                   |
| Short-circuit protection             | yes / Cyclic  |
| Voltage drop at $I_o$                | $\leq 1.8$ V  |

### Functional principle

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

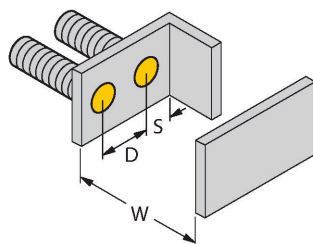
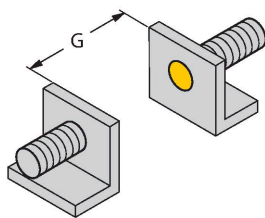
## Technical data

Wire breakage/Reverse polarity protection      yes / Complete

| Mechanical data                       |  |
|---------------------------------------|--|
| Design                                | Threaded barrel, M12 × 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, LifYY, PVC, 2 m                    |
| Core cross-section                    | 3 x 0.25 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



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