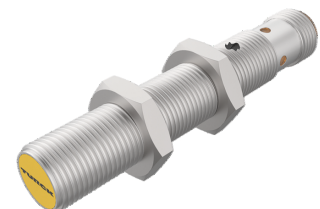# BC3-M12-AP6X-H1141
# Capacitive Sensor
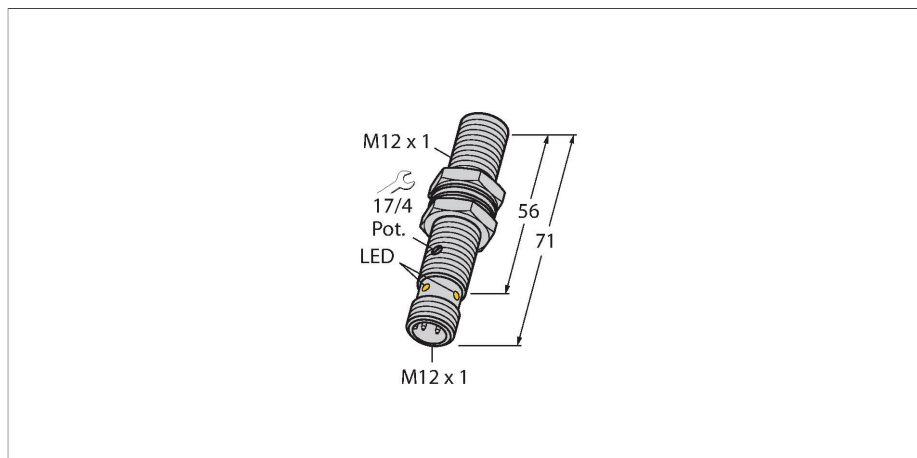
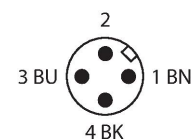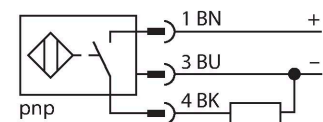

## Technical data

| | |
|---|---|
| Type | BC3-M12-AP6X-H1141 |
| ID | 2601011 |
| Rated switching distance (flush) | 3 mm |
| Rated switching distance (non-flush) | 3 mm |
| Secured operating distance | ≤ (0.72 × Sn) |
| Hysteresis | 1…20 % |
| Temperature drift | type 20 % |
| Repeat accuracy | ≤ 2 % of full scale |
| Ambient temperature | -25…+70 °C |
| **Electrical data** | |
| Operating voltage | 10…30 VDC |
| Residual ripple | ≤ 10 % $U_{ss}$ |
| DC rated operational current | ≤ 200 mA |
| No-load current | ≤ 15 mA |
| Residual current | ≤ 0.1 mA |
| Switching frequency | 0.1 kHz |
| Isolation test voltage | ≤ 0.5 kV |
| Output function | 3-wire, NO contact, PNP |
| Short-circuit protection | yes / Cyclic |
| Voltage drop at $I_e$ | ≤ 1.8 V |
| Wire breakage/Reverse polarity protection | yes / Complete |
| **Tests/approvals** | |
| Approvals | UL |
| UL registration number | E210608 |
| **Mechanical data** | |
| Design | Threaded barrel, M12 × 1 |

## Features

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

## 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

| | |
|---|---|
| Dimensions | 71  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 | Connector, M12 × 1 |
| 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 |

## Mounting instructions

### Product features
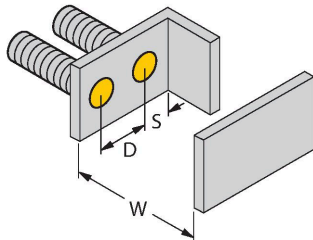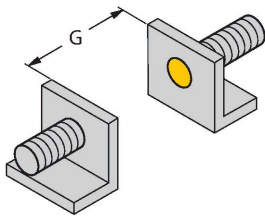




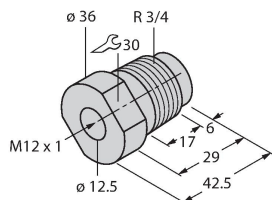| | |
|---|---|
| Distance D | 24 mm |
| Distance W | 9 mm |
| Distance S | 18 mm |
| Distance G | 18 mm |
| Diameter active area B | Ø 12 mm |

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.
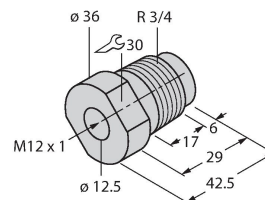
## Accessories

| MAP-M12-PP | 6950016 |
|---|---|



Mounting adapter; material: Polypropylene; sensor replacement with filled container possible (adapter remains in container during sensor replacement)
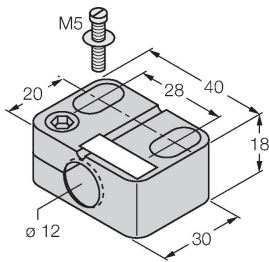
| MAP-M12-PVDF | 6950017 |
|---|---|



Mounting adapter; material: Polyvenylidenflourid; 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

## Accessories

| Dimension drawing | Type | ID | |
|---|---|---|---|
| | RKC4T-2/TXL | 6625500 | Connection cable, female M12, straight, 3-pin, cable length: 2 m, sheath material: PUR, black; cULus approval; other cable lengths and qualities available, see www.turck.com |
| | WKC4T-2/TXL | 6625512 | Connection cable, female M12, angled, 3-pin, cable length: 2 m, sheath material: PUR, black; cULus approval; other cable lengths and qualities available, see www.turck.com |
| | RKC4T-2/TEL | 6625010 | Connection cable, female M12, straight, 3-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com |
| | WKC4T-2/TEL | 6625022 | Connection cable, female M12, angled, 3-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com |