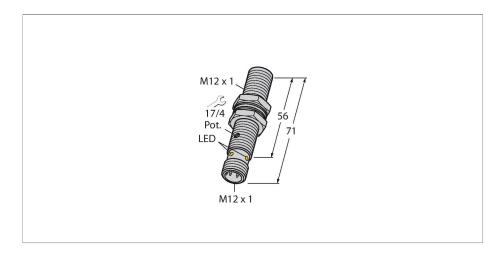


# BC3-M12-AP6X-H1141 Capacitive Sensor





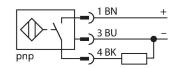
ID 2601011  Rated switching distance (flush) 3 mm  Rated switching distance (non-flush) 3 mm  Secured operating distance ≤ (0.72 × Sn)  Hysteresis 120 %  Temperature drift Typical 20 %  Repeat accuracy ≤ 2 % of full scale  Ambient temperature -25+70 °C  Electrical data  Operating voltage 30 VDC  Residual ripple ≤ 10 % U₅s  DC rated operational current ≤ 200 mA  No-load current ≤ 15 mA  Residual current ≤ 0.1 mA  Switching frequency 0.1 kHz	_	D00 1440 AD0V 114444
Rated switching distance (flush)       3 mm         Rated switching distance (non-flush)       3 mm         Secured operating distance       ≤ (0.72 × Sn)         Hysteresis       120 %         Temperature drift       Typical 20 %         Repeat accuracy       ≤ 2 % of full scale         Ambient temperature       -25+70 °C         Electrical data       Operating voltage         Operating voltage       30 VDC         Residual ripple       ≤ 10 % U <sub>ss</sub> DC rated operational current       ≤ 200 mA         No-load current       ≤ 15 mA         Residual current       ≤ 0.1 mA         Switching frequency       0.1 kHz         Oscillation frequency       According to EN 60947-5-2, 8.2.6.2 Table	Туре	BC3-M12-AP6X-H1141
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Oscillation frequency According to EN 60947-5-2, 8.2.6.2 Table	Residual current	≤ 0.1 mA
	Switching frequency	0.1 kHz
	Oscillation frequency	According to EN 60947-5-2, 8.2.6.2 Table 9: 0.12.0 MHz
Isolation test voltage ≤ 0.5 kV	Isolation test voltage	≤ 0.5 kV
Output function 3-wire, NO contact, PNP	Output function	3-wire, NO contact, PNP
Short-circuit protection yes / Cyclic	Short-circuit protection	yes / Cyclic
Voltage drop at I <sub>e</sub> ≤ 1.8 V	Voltage drop at I。	≤ 1.8 V
Wire breakage/Reverse polarity protection yes / Complete		yes / Complete
Tests/approvals	Tests/approvals	
Approvals UL	Approvals	UL
UL registration number E210608	UL registration number	E210608

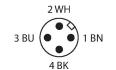


#### **Features**

- ■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.

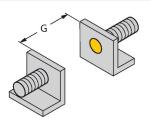


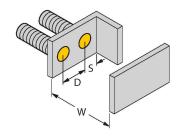
#### Technical data

Mechanical data	
Design	Threaded barrel, M12 x 1
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
Power-on indication	Green
Switching state	Yellow

### Mounting instructions

#### Product features





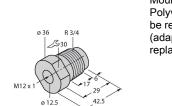
Distance D	24 mm
Distance W	9 mm
Distance S	18 mm
Distance G	18 mm
Diameter active area B	Ø 12 mm

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
σ36 R3/4	Mounting adapter; material: Polypropylene; sensor replacement with filled container possible (adapter remains in container during sensor replacement)

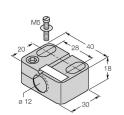


MAP-M12-PVDF

Mounting adapter; material: Polyvenylidenflourid; sensor can be replaced with filled container (adapter remains in container during replacement)

6950017

BST-12B 6947212



Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

# Accessories

Dimension drawing	Туре	ID	
M12x1 e 15 % 14	RKC4T-2/TXL	6625500	Connection cable, M12 female connector, straight, 3-pin, cable length: 2 m, jacket material: PUR, black; cULus approval
015 M12x1 20.5 32 	WKC4T-2/TXL	6625512	Connection cable, M12 female connector, angled, 3-pin, cable length: 2 m, jacket material: PUR, black; cULus approval
M12x1 e 15	RKC4T-2/TEL	6625010	Connection cable, M12 female connector, straight, 3-pin, cable length: 2 m, jacket material: PVC, black; cULus approval
8 14 26.5 32 32	WKC4T-2/TEL	6625022	Connection cable, M12 female connector, angled, 3-pin, cable length: 2 m, jacket material: PVC, black; cULus approval
M12×1 0 15	RKC4.4T-2/TEL	6625013	Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval
0 15 M12 x 1 26.5 14	WKC4.4T-2/TEL	6625025	Connection cable, M12 female connector, angled, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval



Dimension drawing	Туре	ID	
M12 x 1 o 15 14 14 11.5 4 42 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	RKC4.4T-2/TXL	6625503	Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, jacket material: PUR, black; cULus approval
0 15 M12 x 1 26.5 14 26.5 	WKC4.4T-2/TXL	6625515	Connection cable, M12 female connector, angled, 4-pin, cable length: 2 m, jacket material: PUR, black; cULus approval
M12x1 0 15 14 0 15 14 M12x1 1 11.5 1 + 18.2 + 49.5 - 49.5	RKC4.4T-2-RSC4.4T/TEL	6625208	Extension cable, M12 female connector, straight, 4-pin to M12 male connector, straight, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval
M12x1 015 12 14 20 15 14 1012x1 1 11.5 1 14 18.2 1 14.5 15.5 14.5 15.5 15.5 15.5 15.5 15	RKC4.4T-2-RSC4.4T/TXL	6625608	Extension cable, M12 female connector, straight, 4-pin to M12 male connector, straight, 4-pin; cable length: 2 m, jacket material: PUR, black; cULus approval
M12x1 015 20 14 015 14 33.5 14 33.5 14 32 14 33.5	RKC4.4T-2-WSC4.4T/TXL	6625624	Extension cable, M12 female connector, straight, 4-pin to M12 male connector, angled, 4-pin; cable length: 2 m, jacket material: PUR, black; cULus approval
015 M12x1 015 14 33.5	WKC4.4T-2-WSC4.4T/TXL	6625656	Extension cable, M12 female connector, angled, 4-pin to M12 male connector, angled, 4-pin; cable length: 2 m, jacket material: PUR, black; cULus approval