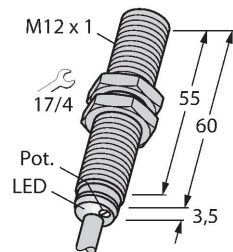


BC3-M12-AN6X

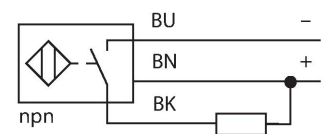
Capacitive Sensor



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	$\leq (0.72 \times S_n)$
Hysteresis	1...20 %
Temperature drift	Typical 20 %
Repeat accuracy	$\leq 2 \%$ of full scale
Ambient temperature	-25...+70 °C
Electrical data	
Operating voltage	30 VDC
Residual ripple	$\leq 10 \%$ U_{ss}
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 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	≤ 1.8 V
Wire breakage/Reverse polarity protection	yes / Complete
Tests/approvals	
Approvals	UL
UL registration number	E210608

Functional principle

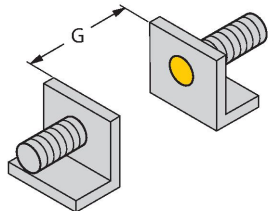
Capacitive proximity switches are designed for non-contact and wear-free detection of electrically conductive as well as non-conductive metal objects.

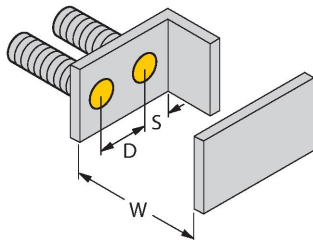
Technical data

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
Power-on indication	Green
Switching state	LED, Yellow

Mounting instructions

Product features

A 3D perspective diagram showing two identical sensors. Each sensor consists of a rectangular base plate with a circular active area in the center, highlighted in yellow. A threaded rod is attached to the back of the plate. A dimension line labeled 'G' indicates the distance between the center of the active area of one sensor and the center of the active area of the other sensor.

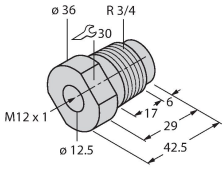
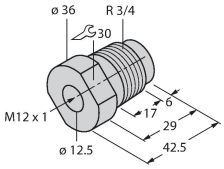
A 3D perspective diagram showing two sensors mounted on a common base plate. The sensors are positioned side-by-side. The active areas are highlighted in yellow. Dimension lines are used to specify the following: 'D' is the distance between the centers of the two active areas; 'S' is the distance from the center of an active area to the edge of the base plate; 'W' is the width of the base plate; and 'G' is the distance between the centers of the two active areas.

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
