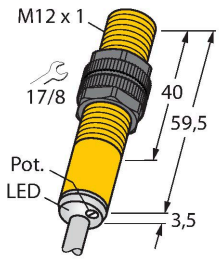
BC3-S12-AP6X/S100
Capacitive Sensor – With Increased Temperature Range



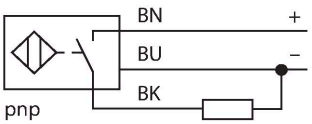
Technical data

Type	BC3-S12-AP6X/S100
ID	2601201
Rated switching distance (flush)	3 mm
Rated switching distance (non-flush)	4.5 mm
Secured operating distance	≤ (0.72 × Sn) mm
Hysteresis	1…20 %
Temperature drift	Typical 20 %
Repeat accuracy	≤ 2 % of full scale
Ambient temperature	-25…+100 °C
Electrical data	
Operating voltage U_B	10…30 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
DC rated operating current I_e	≤ 200 mA
Rated operational current	See derating curve
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, PNP
Short-circuit protection	yes/Cyclic
Voltage drop at I_e	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete

Features

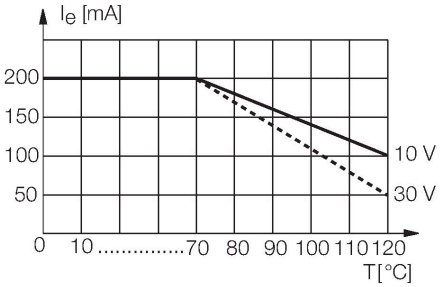
- M12 × 1 threaded barrel
- Plastic, PA12-GF30
- Fine adjustment via potentiometer
- For temperatures up to 100°C
- DC 3-wire, 10…30 VDC
- NO contact, PNP output
- Cable connection

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.
Special capacitive sensor versions can be used at temperatures of up to +100°C.

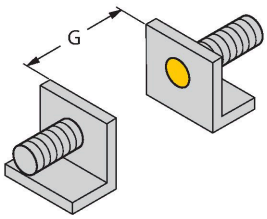


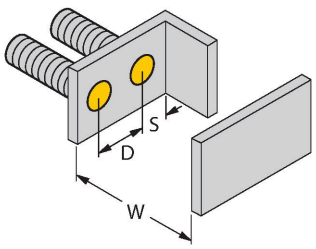
Technical data

Tests/approvals	
Mechanical data	
Design	Threaded barrel, M12 x 1
Housing material	Plastic, PA12-GF30
Active area material	PA12-GF30
Admissible pressure on front cap	≤ 8 bar
Max. tightening torque of housing nut	1 Nm
Electrical connection	Cable
Cable quality	Ø 4 mm, LifYY-11Y, PUR, 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.