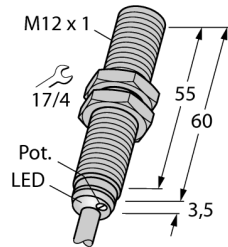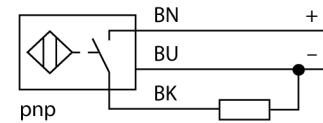# Capacitive sensor
BC3-M12-AP6X

- **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

Functional principle

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

Type designation	BC3-M12-AP6X
Ident-No.	2601000

Rated switching distance Sn	3 mm
Mounting conditions	Flush
Secured operating distance	$\leq$ (0.72 x Sn) mm
Repeat accuracy	$\leq$ 2 % of full scale
Temperature drift	type 20 %
Hysteresis	2…20 %
Ambient temperature	-25…+70 °C
Storage temperature	-25…+80 °C

Operating voltage	10…30 VDC
Residual ripple	$\leq$ 10 % U_{ss}
DC rated operational current	$\leq$ 200 mA
No-load current I_0	$\leq$ 15 mA
Residual current	$\leq$ 0.1 mA
Isolation test voltage	$\leq$ 0.5 kV
Short-circuit protection	yes/ Cyclic
Voltage drop at I_e	$\leq$ 1.8 V
Wire breakage/Reverse polarity protection	yes/ Complete
Output function	3-wire, NO contact, PNP
Switching frequency	0.1 kHz

Design	Threaded barrel,M12 × 1
Dimensions	63.5 mm
Housing material	Metal, CuZn, Chrome-plated
Active area material	Plastic, ABS, yellow
End cap	Plastic, PA
Admissible pressure on front cap	$\leq$ 5 bar
Max. tightening torque housing nut	10 Nm
Electrical connection	Cable
Cable quality	4mm, LifYY, PVC, 2
Cable 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
Packaging unit	1

Switching state	LED,Yellow

Capacitive sensor
BC3-M12-AP6X

Mounting instructions/Description	minimum distances
Distance D	24 mm
Distance W	9 mm
Distance S	18 mm
Distance G	18 mm
Diameter active area B	Ø 12 mm
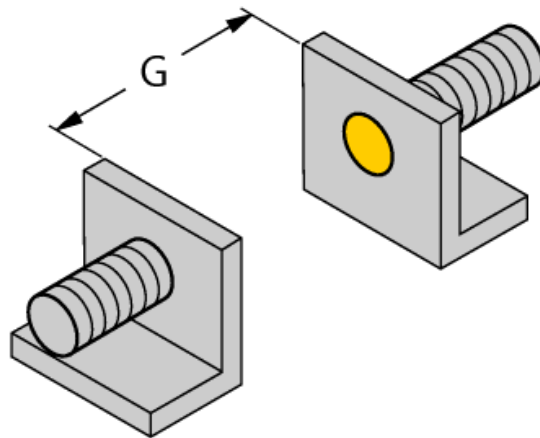
The given minimum distances have been checked against the standard switching distance.
Should the sensitivity of the sensors be changed via potentiometer, the data sheet specifications no longer apply.

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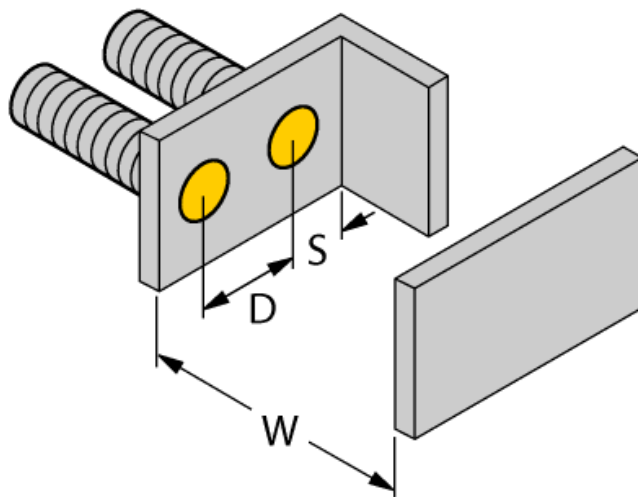
Capacitive sensor
BC3-M12-AP6X

Accessories

Type code	Ident-No.	Description	
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	Fixing clamp for threaded barrel devices, with dead-stop; material: PA6	

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