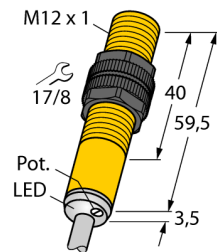# Capacitive sensor
BC3-S12-RP6X
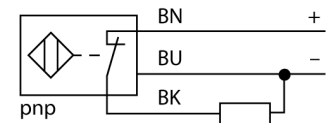
TURCK

Industrial Automation

- **Threaded barrel, M12 x 1**
- **Plastic, PA12-GF30**
- **Fine adjustment via potentiometer**
- **DC 3-wire, 10…30 VDC**
- **NC 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 code	BC3-S12-RP6X
Ident no.	2601202
Rated switching distance (flush)	3 mm
Rated switching distance (non-flush)	4.5 mm
Assured sensing range	$\leq (0.72 \times Sn)$ mm
Hysteresis	2…20 %
Temperature drift	type $\leq \pm$ 20 %
Repeatability	$\leq$ 2 % of full scale
Ambient temperature	-25…+70 °C
Operating voltage	10…30VDC
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
Switching frequency	0.1 kHz
Rated insulation voltage	$\leq$ 0.5 kV
Output function	3-wire, NC contact, PNP
Short-circuit protection	yes/ cyclic
Voltage drop at I_e	$\leq$ 1.8 V
Wire breakage / Reverse polarity protection	yes/ complete
Design	threaded barrel, M12 x 1
Dimensions	63 mm
Housing material	plastic, PA
Material active area	Plastic, PA, yellow
Admissible pressure on front cap	$\leq$ 8 bar
Max. tightening torque housing nut	1 Nm
Connection	cable
Cable quality	Ø 5.2, LifYY, PVC, 2 m
Cable cross section	3 x 0.5 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

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Capacitive sensor
BC3-S12-RP6X

Mounting instructions / Description	minimum distances
Distance D	24 mm
Distance W	9 mm
Distance S	18 mm
Distance G	18 mm

Diameter of the active area B	Ø 12 mm
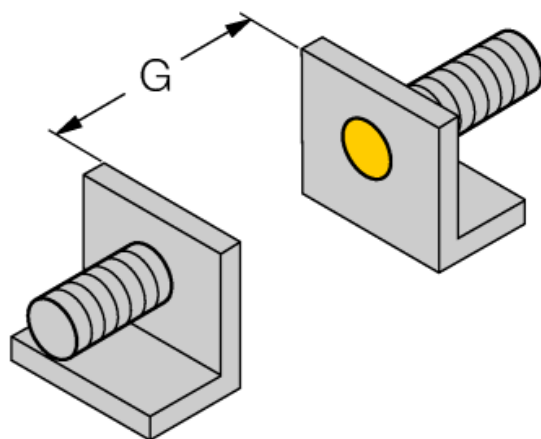
The given minimum distances have been checked in compliance with the standard switching distance. Should the sensitivity of the sensors be changed via potentiometer, the data sheet specifications no longer apply.
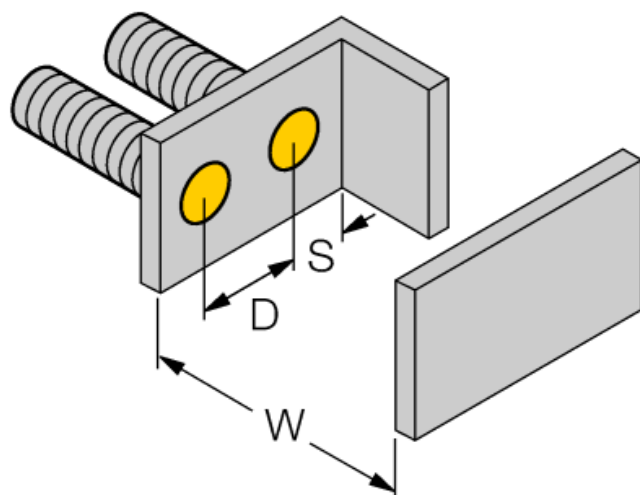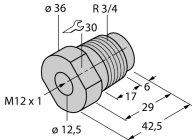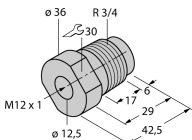
Accessories

Type code	Ident no.	Description	Dimension drawing
MAP-M12-PP	6950016	Mounting adapter; material: Polypropylene; sensor replacement with filled container possible (adapter remains in container during sensor replacement)	ø 36 R 3/4 30 M12 x 1 6 17 29 42,5 ø 12,5
MAP-M12-PVDF	6950017	Mounting adapter; material: Polyvenylidenflourid; sensor can be replaced with filled container (adapter remains in container during replacement)	ø 36 R 3/4 30 M12 x 1 6 17 29 42,5 ø 12,5
BST-12B	6947212	Fixing clamp for threaded barrel devices, with dead-stop; material: PA6	M5 20 28 40 18 ø 12 30