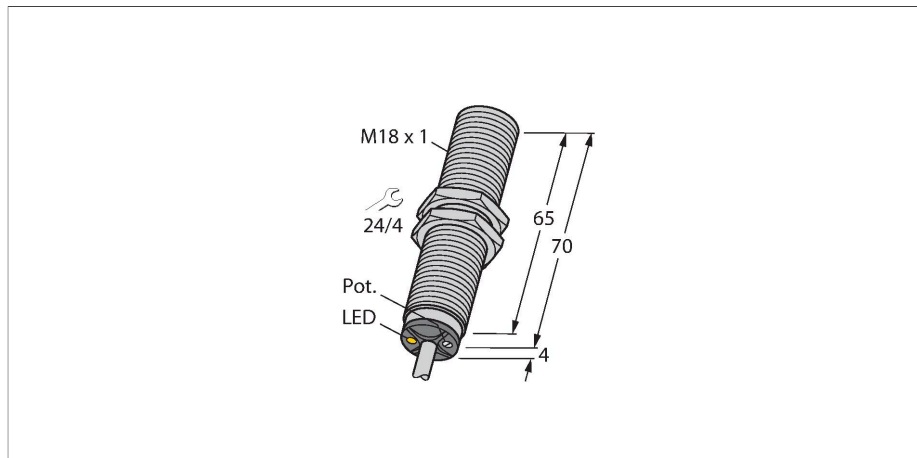# BC5-M18-RZ3X
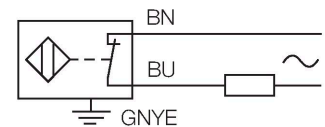# Capacitive Sensor

Features

- M18 × 1 threaded barrel
- Chrome-plated brass
- Fine adjustment via potentiometer
- AC 2-wire, 20…250 VAC
- NC contact
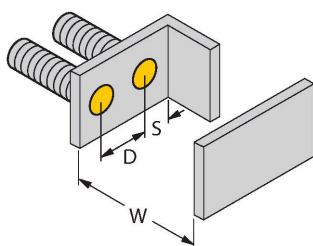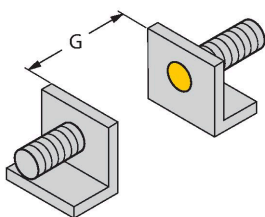- Cable connection

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.

Technical data

Type	BC5-M18-RZ3X
ID	2305100
Rated switching distance (flush)	5 mm
Rated switching distance (non-flush)	5 mm
Secured operating distance	≤ (0.72 × Sn)
Hysteresis	2…20 %
Temperature drift	Typical 20 %
Repeat accuracy	≤ 2 % of full scale
Ambient temperature	-25…+70 °C
Electrical data	
Operating voltage	20…250 VAC
AC rated operational current	≤ 500 mA
Frequency	≥ 50…≤ 60 Hz
Smallest operating current	≥ 5 mA
Residual current	≤ 1.7 mA
Switching frequency	0.02 kHz
Oscillation frequency	According to EN 60947-5-2, 8.2.6.2 Table 9: 0.1…2.0 MHz
Isolation test voltage	≤ 1.5 kV
Output function	2-wire, NC contact, 2-wire
Voltage drop at I_e	≤ 7 V
Tests/approvals	
Approvals	UL
UL registration number	E210608
Mechanical data	
Design	Threaded barrel, M18 x 1
Dimensions	74 mm

Technical data

Housing material	Metal, CuZn, Chrome-plated
Active area material	PBT-GF30-V0, yellow
Admissible pressure on front cap	≤ 4 bar
Max. tightening torque of housing nut	25 Nm
Electrical connection	Cable
Cable quality	Ø 5.2 mm, LifYY, PVC, 2 m
Core 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
Power-on indication	Green
Switching state	LED, Red

Mounting instructions

Product features

Distance D	36 mm
Distance W	15 mm
Distance S	27 mm
Distance G	30 mm
Diameter active area B	Ø 18 mm

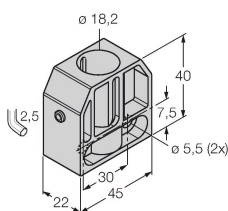The given minimum distances have been checked against the standard switching distance.
Should the sensitivity of the sensors be changed via potentiometer, the data sheet specifications no longer apply.
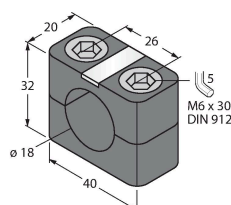
Accessories

BS 18	69471

Mounting clamp for threaded barrel sensors; material: PA66-GF
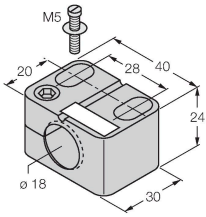

BSN 18	69472

Mounting clamp for threaded barrel sensors; material: PA66-GF

BST-18B	6947214

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

MAP-M18	6950012

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