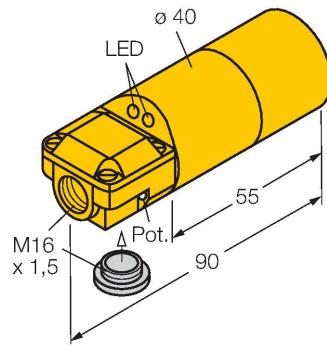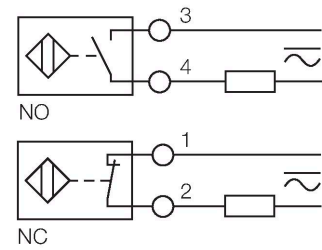# BC20-K40SR-FDZ3X2
Capacitive Sensor

Features

- 2 cable entries (axial, radial)
- Smooth barrel, Ø 40 mm
- Plastic, ABS
- Fine adjustment via potentiometer
- AC 2-wire, 20…250 VAC
- DC 2-wire, 3…320 VDC
- Programmable connection (NC/NO)
- Terminal chamber

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.
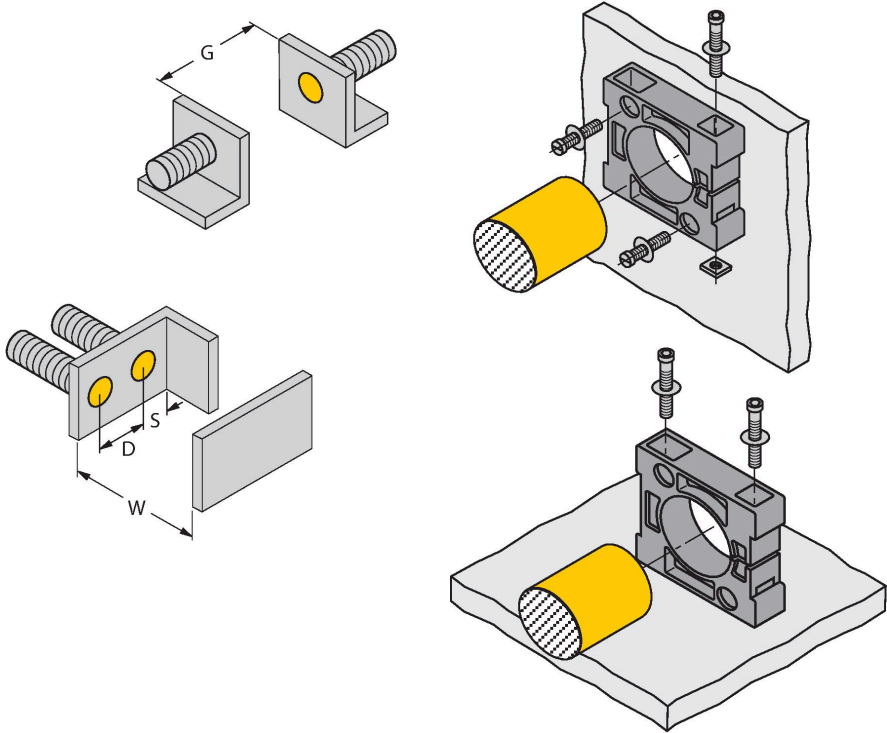
Technical data

Type	BC20-K40SR-FDZ3X2
ID	2204001
Rated switching distance (flush)	20 mm
Rated switching distance (non-flush)	30 mm
Secured operating distance	≤ (0.72 × Sn) mm
Hysteresis	2…20 %
Temperature drift	Typical 20 %
Repeat accuracy	≤ 2 % of full scale
Ambient temperature	-25…+70 °C
Electrical data	
Operating voltage U_B	20…250 VAC
Operating voltage U_B	3…250 VDC
AC rated operational current	≤ 400 mA
DC rated operating current I_e	≤ 200 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, Connection programmable, 2-wire
Voltage drop at I_e	≤ 7 V

Technical data

Tests/approvals	
Mechanical data	
Design	Smooth barrel, 40 mm
Dimensions	90 mm
Housing material	Plastic, ABS
Active area material	ABS
Electrical connection	Terminal chamber
Clamping ability	≤ 2.5 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	LED, Green
Switching state	LED, Red
Included in delivery	BS40, cable gland, blanking plug

Mounting instructions

Product features	

Distance D	40 mm
Distance W	60 mm
Distance S	60 mm
Distance G	120 mm
Diameter active area B	Ø 40 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.