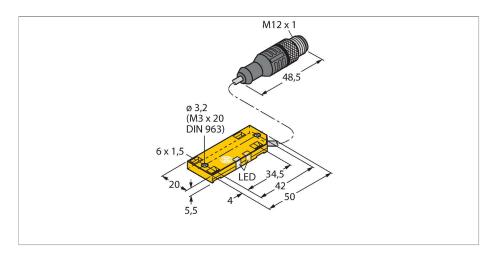
BCE10-QF5.5-AP6X2-0.3-RS4| 22-02-2025 05-39 | Technical modifications reserved

BCE10-QF5.5-AP6X2-0.3-RS4 Capacitive Sensor





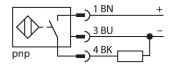
Technical data

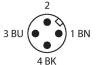
ID	Туре	BCE10-QF5.5-AP6X2-0.3-RS4
Rated switching distance (non-flush) Secured operating distance ≤ (0.72 × Sn) mm Hysteresis 120 % Temperature drift Typical 20 % Repeat accuracy ≤ 5 % of full scale Ambient temperature -10+60 °C Electrical data Operating voltage U _B To ma DC rated operating current I _B No-load current ≤ 10 % U _{Break} DC rated operating current ≤ 15 mA Residual current Switching frequency Oscillation frequency Oscillation test voltage Output function Short-circuit protection Voltage drop at I _B Approvals UL	ID	100029069
Secured operating distance ≤ (0.72 × Sn) mm Hysteresis 120 % Temperature drift Typical 20 % Repeat accuracy ≤ 5 % of full scale Ambient temperature -10+60 °C Electrical data 0perating voltage U _B Operating voltage U _B 1030 VDC Ripple U _{St} ≤ 10 % U _{Broux} DC rated operating current I _B ≤ 100 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Switching frequency 0.05 kHz Oscillation frequency According to EN 60947-5-2, 8.2.6.2 Table 9: 0.12.0 MHz Isolation test voltage 0.5 kV Output function 3-wire, NO contact, PNP Short-circuit protection yes/Cyclic Voltage drop at I _B ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Tests/approvals UL	Rated switching distance (flush)	10 mm
Hysteresis 120 % Temperature drift Typical 20 % Repeat accuracy ≤ 5 % of full scale Ambient temperature -10+60 °C Electrical data Operating voltage U ₈ 1030 VDC Ripple U _{ss} ≤ 10 % U _{Breax} DC rated operating current I _e ≤ 100 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Switching frequency 0.05 kHz Oscillation frequency According to EN 60947-5-2, 8.2.6.2 Table 9: 0.12.0 MHz Isolation test voltage 0.5 kV Output function 3-wire, NO contact, PNP Short-circuit protection Voltage drop at I _e ≤ 1.8 V Wire break/reverse polarity protection Tests/approvals Approvals UL	Rated switching distance (non-flush)	10 mm
Temperature drift Repeat accuracy ≤ 5 % of full scale Ambient temperature -10+60 °C Electrical data Operating voltage U _s Ripple U _{ss} DC rated operating current I _e No-load current ≤ 15 mA Residual current ≤ 0.1 mA Switching frequency Oscillation frequency Oscillation test voltage Output function Short-circuit protection Voltage drop at I _e Typical 20 % full scale -10+60 °C Electrical data Operating voltage 1030 VDC \$\text{VDC} \$\text{Binux}\$ \$\text{\$\text{\$\text{\$\text{\$100\$ mA}}\$}\$ \$\text{\$\text{\$\text{\$\text{\$\$}\$}}\$ \$\text{\$\text{\$\text{\$\$}\$}}\$ \$\text{\$\text{\$\text{\$\$}\$}}\$ \$\text{\$\text{\$\$\text{\$\$}\$}}\$ \$\text{\$\text{\$\$\text{\$\$}\$}}\$ \$\text{\$\text{\$\$\text{\$\$}\$}}\$ \$\text{\$\text{\$\$\text{\$\$\text{\$\$}\$}}\$ \$\$\text{	Secured operating distance	≤ (0.72 × Sn) mm
Repeat accuracy ≤ 5 % of full scale Ambient temperature -10+60 °C Electrical data Operating voltage U _B 1030 VDC Ripple U _{SS} ≤ 10 % U _{Bmax} DC rated operating current I _B ≤ 100 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Switching frequency 0.05 kHz Oscillation frequency According to EN 60947-5-2, 8.2.6.2 Table 9: 0.12.0 MHz Isolation test voltage 0.5 kV Output function 3-wire, NO contact, PNP Short-circuit protection yes/Cyclic Voltage drop at I _B ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Tests/approvals Approvals UL	Hysteresis	120 %
Ambient temperature -10+60 °C Electrical data Operating voltage U ₈ 1030 VDC Ripple U _{ss} ≤ 10 % U _{Brinax} DC rated operating current I _e No-load current ≤ 15 mA Residual current ≤ 0.1 mA Switching frequency 0.05 kHz Oscillation frequency According to EN 60947-5-2, 8.2.6.2 Table 9: 0.12.0 MHz Isolation test voltage 0.5 kV Output function 3-wire, NO contact, PNP Short-circuit protection yes/Cyclic Voltage drop at I _e Wire break/reverse polarity protection Tests/approvals Approvals UL	Temperature drift	Typical 20 %
Electrical data Operating voltage U _B 1030 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I _e ≤ 100 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Switching frequency 0.05 kHz Oscillation frequency According to EN 60947-5-2, 8.2.6.2 Table 9: 0.12.0 MHz Isolation test voltage 0.5 kV Output function 3-wire, NO contact, PNP Short-circuit protection Voltage drop at I _e ≤ 1.8 V Wire break/reverse polarity protection Tests/approvals Approvals UL	Repeat accuracy	≤ 5 % of full scale
Operating voltage U _B 1030 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I _e ≤ 100 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Switching frequency 0.05 kHz Oscillation frequency According to EN 60947-5-2, 8.2.6.2 Table 9: 0.12.0 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 Tests/approvals UL	Ambient temperature	-10+60 °C
Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I _e ≤ 100 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Switching frequency 0.05 kHz Oscillation frequency According to EN 60947-5-2, 8.2.6.2 Table 9: 0.12.0 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 Tests/approvals UL	Electrical data	
DC rated operating current I₀ ≤ 100 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Switching frequency 0.05 kHz Oscillation frequency According to EN 60947-5-2, 8.2.6.2 Table 9: 0.12.0 MHz Isolation test voltage 0.5 kV Output function 3-wire, NO contact, PNP Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Tests/approvals UL	Operating voltage U _B	1030 VDC
No-load current ≤ 15 mA Residual current ≤ 0.1 mA Switching frequency 0.05 kHz Oscillation frequency According to EN 60947-5-2, 8.2.6.2 Table 9: 0.12.0 MHz Isolation test voltage 0.5 kV Output function 3-wire, NO contact, PNP Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Tests/approvals UL	Ripple U _{ss}	≤ 10 % U _{Bmax}
Residual current ≤ 0.1 mA Switching frequency 0.05 kHz Oscillation frequency According to EN 60947-5-2, 8.2.6.2 Table 9: 0.12.0 MHz Isolation test voltage 0.5 kV Output function 3-wire, NO contact, PNP Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Tests/approvals UL	DC rated operating current I _e	≤ 100 mA
Switching frequency 0.05 kHz Oscillation frequency According to EN 60947-5-2, 8.2.6.2 Table 9: 0.12.0 MHz Isolation test voltage 0.5 kV Output function 3-wire, NO contact, PNP Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Tests/approvals UL	No-load current	≤ 15 mA
Oscillation frequency According to EN 60947-5-2, 8.2.6.2 Table 9: 0.12.0 MHz Isolation test voltage 0.5 kV Output function 3-wire, NO contact, PNP Short-circuit protection yes/Cyclic Voltage drop at I₀ Vire break/reverse polarity protection Tests/approvals Approvals UL	Residual current	≤ 0.1 mA
9: 0.12.0 MHz Isolation test voltage 0.5 kV Output function 3-wire, NO contact, PNP Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 1.8 V Wire break/reverse polarity protection Tests/approvals Approvals UL	Switching frequency	0.05 kHz
Output function 3-wire, NO contact, PNP Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 1.8 V Wire break/reverse polarity protection Tests/approvals Approvals UL	Oscillation frequency	According to EN 60947-5-2, 8.2.6.2 Table 9: 0.12.0 MHz
Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Tests/approvals Approvals UL	Isolation test voltage	0.5 kV
Voltage drop at I₀ ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Tests/approvals Approvals UL	Output function	3-wire, NO contact, PNP
Wire break/reverse polarity protection yes/Complete Tests/approvals Approvals UL	Short-circuit protection	yes/Cyclic
Tests/approvals Approvals UL	Voltage drop at I _e	≤ 1.8 V
Approvals UL	Wire break/reverse polarity protection	yes/Complete
	Tests/approvals	
UL registration number E210608	Approvals	UL
-	UL registration number	E210608

Features

- Rectangular, height 5.5 mm
- Large active face, marked for correct installation
- ■Plastic, PP
- Fine adjustment via potentiometer
- ■DC 3-wire, 10...30 VDC
- ■NO contact, PNP output
- Cable with connector, M12 × 1

Wiring diagram



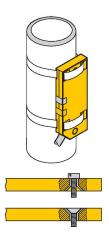


Functional principle

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

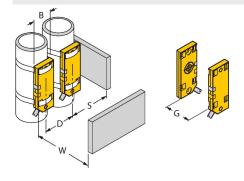
Technical data

Mechanical data	
Design	Rectangular, QF5,5
Dimensions	54 x 20.3 x 5.5 mm
Housing material	Plastic, PP
Active area material	PP
Electrical connection	Cable with connector, M12 × 1
Cable quality	Ø 3 mm, LifYY-11Y, PUR, 0.3 m
Core cross-section	3 x 0.14 mm²
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP65
MTTF	1080 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	LED, Green
Switching state	LED, Yellow



Mounting instructions

Product features



Distance D	40 mm
Distance W	30 mm
Distance S	30 mm
Distance G	60 mm
Diameter active area B	Ø 20 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.