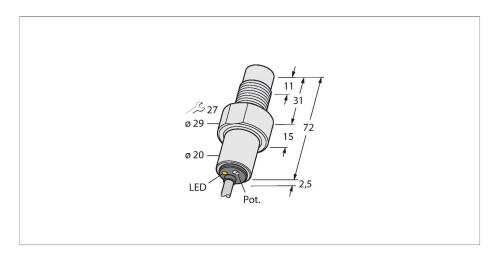


BC5-S185-AP4X-0.2-RS4T Capacitive Sensor



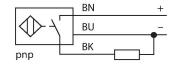
Technical data

ID 2503591 Rated switching distance (flush) 5 mm Rated switching distance (non-flush) 7.5 mm Secured operating distance ≤ (0.72 × Sn) mm Hysteresis 120 % Temperature drift Typical 20 % Repeat accuracy ≤ 2 % of full scale Ambient temperature -25+70 °C Electrical data Operating voltage U ₀ 65 VDC Ripple U ₀₀ 65 VDC Ripple U ₀₀ ≤ 10 % U ₀₀₀₀₀₀₀₀₀₀₀₀₀₀₀₀₀₀₀₀₀₀₀₀₀₀₀₀₀₀₀₀₀₀	Type	BC5-S185-AP4X-0.2-RS4T
Rated switching distance (non-flush) Secured operating distance ≤ (0.72 × Sn) mm Hysteresis 120 % Temperature drift Typical 20 % Repeat accuracy ≤ 2 % of full scale Ambient temperature -25+70 °C Electrical data Operating voltage U₀ Ripple U₅ Solution frequency Oscillation frequency Output function Tests/approvals Mechanical data Design Threaded barrel, M18 x 1	ID	2503591
Secured operating distance ≤ (0.72 × Sn) mm Hysteresis 120 % Temperature drift Typical 20 % Repeat accuracy ≤ 2 % of full scale Ambient temperature -25+70 °C Electrical data -25+70 °C Operating voltage Us 65 VDC Ripple Uss ≤ 10 % Usensx DC rated operating current Is ≤ 200 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Switching frequency 0.1 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 Is ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Tests/approvals Mechanical data Design Threaded barrel, M18 x 1	Rated switching distance (flush)	5 mm
Hysteresis 120 % Temperature drift Typical 20 % Repeat accuracy ≤ 2 % of full scale Ambient temperature -25+70 °C Electrical data Operating voltage U _B 65 VDC Ripple U _{SS} ≤ 10 % U _{Breax} DC rated operating current I _B ≤ 200 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Switching frequency 0.1 kHz Oscillation frequency 3.12.0 MHz Isolation test voltage 0.5 kV Output function 3-wire, NO contact, PNP Short-circuit protection Voltage drop at I _B ≤ 1.8 V Wire break/reverse polarity protection Tests/approvals Mechanical data Design Threaded barrel, M18 x 1	Rated switching distance (non-flush)	7.5 mm
Temperature drift Repeat accuracy Ambient temperature -25+70 °C Electrical data Operating voltage U _B 65 VDC Ripple U _{SS} ≤ 10 % U _{Broak} DC rated operating current I _B No-load current ≤ 15 mA Residual current Switching frequency Oscillation frequency Oscillation test voltage Output function Short-circuit protection Voltage drop at I _B Vire break/reverse polarity protection Tests/approvals Mechanical data Design Threaded barrel, M18 x 1	Secured operating distance	≤ (0.72 × Sn) mm
Repeat accuracy ≤ 2 % of full scale Ambient temperature -25+70 °C Electrical data Operating voltage U _B 65 VDC Ripple U _{SS} ≤ 10 % U _{Demax} DC rated operating current I _B ≤ 200 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Switching frequency 0.1 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 Tests/approvals Mechanical data Design Threaded barrel, M18 x 1	Hysteresis	120 %
Ambient temperature -25+70 °C Electrical data Operating voltage U _B 65 VDC Ripple U _{SS} ≤ 10 % U _{Bmax} DC rated operating current I _B × 200 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Switching frequency 0.1 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 Tests/approvals Mechanical data Design Threaded barrel, M18 x 1	Temperature drift	Typical 20 %
Electrical data Operating voltage U _B 65 VDC Ripple U _{ss} ≤ 10 % U _{Britax} DC rated operating current I _e × 200 mA No-load current Electrical data No-load current ≤ 15 mA Residual current Switching frequency 0.1 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 Short-circuit protection yes/Cyclic Voltage drop at I _e × 1.8 V Wire break/reverse polarity protection Tests/approvals Mechanical data Design Threaded barrel, M18 x 1	Repeat accuracy	≤ 2 % of full scale
Operating voltage U _B 65 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I _e ≤ 200 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Switching frequency 0.1 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 Mechanical data Design Threaded barrel, M18 x 1	Ambient temperature	-25+70 °C
Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I _e ≤ 200 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Switching frequency 0.1 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 Mechanical data Design Threaded barrel, M18 x 1	Electrical data	
DC rated operating current I₀ ≤ 200 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Switching frequency 0.1 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 Mechanical data Design Threaded barrel, M18 x 1	Operating voltage U _B	65 VDC
No-load current ≤ 15 mA Residual current ≤ 0.1 mA Switching frequency 0.1 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 Mechanical data Design Threaded barrel, M18 x 1	Ripple U _{ss}	≤ 10 % U _{Bmax}
Residual current ≤ 0.1 mA Switching frequency 0.1 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 Mechanical data Design Threaded barrel, M18 x 1	DC rated operating current I _o	≤ 200 mA
Switching frequency 0.1 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 Mechanical data Design Threaded barrel, M18 x 1	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 Output function Short-circuit protection Voltage drop at I₀ Wire break/reverse polarity protection Tests/approvals Mechanical data Design According to EN 60947-5-2, 8.2.6.2 Table 9: 0.12.0 MHz According to EN 60947-5-2, 8.2.6.2 Table 9: 0.12.0 MHz Short-circuit protection yes/Cyclic ≤ 1.8 V yes/Complete Threaded barrel, M18 x 1	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 Voltage drop at I₀ Vire break/reverse polarity protection Tests/approvals Mechanical data Design 9: 0.12.0 MHz 0.5 kV yes/Contact, PNP Short-circuit protection yes/Cyclic ✓ 1.8 V yes/Complete Threaded barrel, M18 x 1	Switching frequency	0.1 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 yes/Complete Tests/approvals Mechanical data Design Threaded barrel, M18 x 1	Oscillation frequency	
Short-circuit protection Voltage drop at I₀ Wire break/reverse polarity protection Tests/approvals Mechanical data Design Threaded barrel, M18 x 1	Isolation test voltage	0.5 kV
Voltage drop at I₀ ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Tests/approvals Mechanical data Design Threaded barrel, M18 x 1	Output function	3-wire, NO contact, PNP
Wire break/reverse polarity protection yes/Complete Tests/approvals Mechanical data Design Threaded barrel, M18 x 1	Short-circuit protection	yes/Cyclic
Tests/approvals Mechanical data Design Threaded barrel, M18 x 1	Voltage drop at I _e	≤ 1.8 V
Mechanical data Design Threaded barrel, M18 x 1	Wire break/reverse polarity protection	yes/Complete
Design Threaded barrel, M18 x 1	Tests/approvals	
	Mechanical data	
Dimensions 74.5 mm	Design	Threaded barrel, M18 x 1
	Dimensions	74.5 mm

Features

- ■M18 × 1 threaded barrel
- ■Plastic, PVDF
- Fine adjustment via potentiometer
- ■DC 3-wire, 10...65 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.

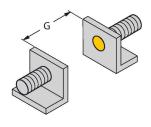


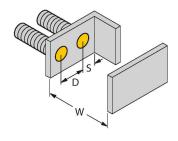
Technical data

Housing material	Plastic, PVDF
Active area material	PVDF, ecru
Max. tightening torque of housing nut	2 Nm
Electrical connection	Cable
Cable quality	Ø 5.2 mm, LifYY, PVC, 0.2 m
Core cross-section	3 x 0.34 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

Mounting instructions

Product features





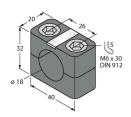
Distance D	36 mm
Distance W	15 mm
Distance S	27 mm
Distance G	30 mm
Diameter active area B	Ø 18 mm

The given minimum distances have been checked against the standard switching distance.

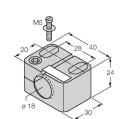
Should the sensitivity of the sensors be changed via potentiometer, the data sheet specifications no longer apply.

Accessories

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