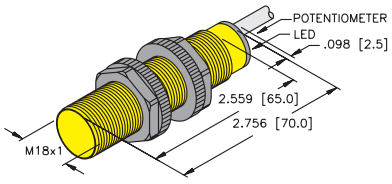
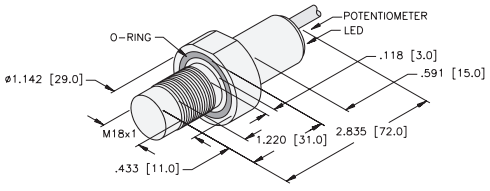
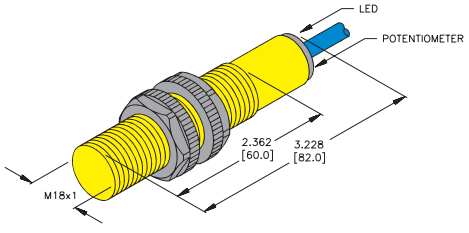
Capacitive Sensors - Barrels

Housing Style	Part Number	ID Number	Features	Embeddable Range (mm)	Nonembed. Range (mm)	Output
18 mm - Embeddable, Potted-In Cable 	BC 5-S18-AN4X	M2503100		5	7.5	**3-Wire DC NPN**
	BCF 5-S18-AN4X	M2503012	*Noise Immune*	5	7.5	
	BC 5-S18-AP4X	M2503000		5	7.5	**3-Wire DC PNP**
	BCF 5-S18-AP4X	M2503011	*Noise Immune*	5	7.5	
	BCF 5-S18-AP4X/S90	M2503014	*Noise Immune*	5	7.5	
	BC 5-S18-AZ3X	M2305500		5	7.5	**2-Wire AC**
18 mm - Embeddable, Potted-In Cable 	BC 5-S185-AN4X	M2503550	*Chemical Resistant*	5	7.5	**3-Wire DC NPN**
	BC 5-S185-AN4X/S100	M2503551	*High Temp. 100°C*	5	7.5	
	BC 5-S185-AP4X	M2503500	*Chemical Resistant*	5	7.5	**3-Wire DC PNP**
	BC 5-S185-AP4X/S100	M2503502	*High Temp. 100°C*	5	7.5	
18 mm - Embeddable, Potted-In Cable 	BC 5-S18-Y0X	M2006000		5	7.5	**2-Wire DC NAMUR**

"/S100" in part number designates high temperature sensor.

Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection Class	Housing	End Cap	Power LED	Output LED	Cable Length/ Material	Wiring Diagram #
10-65 VDC	100	≤200	-25 to +70	IP 67	PA 12	PUR	N/A	YE	2M/PVC	1
	100	≤200	-25 to +70	IP 67	PA 12	PUR	N/A	YE	2M/PVC	1
10-65 VDC	100	≤200	-25 to +70	IP 67	PA 12	PUR	N/A	YE	2M/PVC	2
	100	≤200	-25 to +70	IP 67	PA 12	PUR	N/A	YE	2M/PVC	2
	100	≤200	-25 to +70	IP 67	PA 12	PUR	N/A	YE	2M/PUR	2
20-250 VAC	20	≤500	-25 to +70	IP 67	PA 12	PA 12	N/A	YE	2M/PVC	3
10-65 VDC	100	≤200	-25 to +70	IP 67	PVDF	PUR	N/A	YE	2M/PVC	1
	100	≤200	-25 to +100	IP 67	PVDF	PUR	N/A	YE	2M/PVC	1
10-65 VDC	100	≤200	-25 to +70	IP 67	PVDF	PUR	N/A	YE	2M/PVC	2
	100	≤200	-25 to +100	IP 67	PVDF	PUR	N/A	YE	2M/PVC	2
5-30 VDC	100	Remote	-25 to +70	IP 67	PA 12	PUR	N/A	YE	2M/PVC	4

Wiring Diagrams

Diagram 1

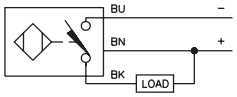


Diagram 2

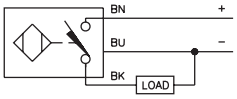


Diagram 3

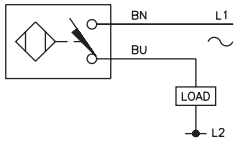
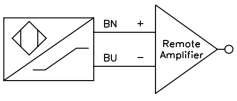


Diagram 4



2-Wire AC w/o Short-Circuit Protection

Line Frequency	40-60 Hz
Differential Travel (Hysteresis)	3-15% (5% typical)
Voltage Drop Across Conducting Sensor	≤6.0 V at 400 mA
	8 and 12 mm ≤6.0 V at 100 mA
Continuous Load Current	≤400 mA
	8 and 12 mm ≤100 mA
Off-State (Leakage) Current	≤1.7 mA
Minimum Load Current	≥5.0 mA
Inrush Current	≤8.0 A (≤10 ms, 5% Duty Cycle)
Power-On Effect	Per IEC 947-5-2
Transient Protection	Per EN 60947-5-2
Shock	30 g, 11 ms
Vibration	55 Hz, 1 mm Amplitude in all 3 Planes

2-Wire DC AS-Interface

Ripple	≤10%
Differential Travel (Hysteresis)	3-15% (5% typical)
Voltage Drop Across Conducting Sensor	≤1.8 V at 200 mA
Off-State (Leakage) Current	<100 µA
No-Load Current	<30 mA
Time Delay Before Availability	≤8 ms
Power-On Effect	Per IEC 947-5-2
Transient Protection	Per EN 60947-5-2
Shock	30 g, 11 ms
Vibration	55 Hz, 1 mm Amplitude in all 3 Planes
Repeatability	£2% of Rated Operating Distance
	Bi 2-Q8SE-Ap/AN..£5% of Rated Operating Distance
E/A Configuration	(HEX)/ID-Code (HEX) 1/1
I/O Matrix Input	0=Switching Signal
	1-3= Not Used
	0-3-3= Not Used

2-Wire AC/DC w/Short-Circuit Protection

Line Frequency	40-60 Hz
Differential Travel (Hysteresis)	3-15% (5% typical)
Voltage Drop Across Conducting Sensor	≤6.0 V at 400 mA
	8 and 12 mm ≤6.0 V at 100 mA
Trigger Current for Overload Protection	AC: ≥440 mA; DC: ≥330 mA
	8 and 12 mm AC: ≥120 mA; DC: ≥120 mA
Continuous Load Current	AC: ≤400 mA; DC: ≤300 mA
	8 and 12 mm AC: ≥100 mA; DC: ≥100 mA
Off-State (Leakage) Current	≤1.7 mA (AC)
	≤1.5 mA (DC)
Minimum Load Current	≥3.0 mA
Inrush Current	4.0 A (≤20 ms, 10% Duty Cycle)
Power-On Effect	Per IEC 947-5-2
Transient Protection	Per EN 60947-5-2
Shock	30 g, 11 ms
Vibration	55 Hz, 1 mm Amplitude in all 3 Planes
Repeatability	≤2% of Rated Operating Distance

3-Wire DC Capacitive

Ripple	≤10%
Differential Travel (Hysteresis)	2-20% (5% typical)
Voltage Drop Across Conducting Sensor	≤1.8 V at 200 mA
Trigger Current for Overload Protection	≥220 mA
Off-State (Leakage) Current	<100 µA
No-Load Current	≤15 mA
Power-On Effect	Per IEC 947-5-2
Reverse Polarity Protection	Yes
Wire-Break Protection	Yes
Transient Protection	Per EN 60947-5-2
Shock	30 g, 11 ms
Vibration	55 Hz, 1 mm Amplitude in all 3 Planes
Repeatability	≤2% of Rated Operating Distance
Temperature Drift	<±20% of Rated Operating Distance

4-Wire DC Capacitive

Ripple	≤10%
Differential Travel (Hysteresis)	2-20 (5% typical)
Voltage Drop Across Conducting Sensor	≤1.8 V at 200 mA
Trigger Current for Overload Protection	≥220 mA
Leakage (Off-State) Current	<100 µA
No-Load Current	≤15 mA
Power-On Effect	Per IEC 947-5-2
Reverse Polarity Protection	Incorporated
Wire-Break Protection	Incorporated
Transient Protection	Per EN 60947-5-2
Shock	30 g, 11 ms
Vibration	55 Hz, 1 mm Amplitude in all 3 Planes
Repeatability	≤2% of Rated Operating Distance
Temperature Drift	<±20% of Rated Operating Distance

2-Wire AC Capacitive

Line Frequency	50-60 Hz
Hysteresis (Differential Travel)	2-20% (5% typical)
Voltage Drop Across Conducting Sensor	≤7.0 V at 500 mA
Off-State (Leakage) Current	≤1.7 mA
Minimum Load Current	≥5.0 mA
Inrush Current	≤8.0 A (≤10 ms, 5% Duty Cycle)
Power-On Effect	Per IEC 947-5-2
Transient Protection	Per EN 60947-5-2
Shock	30 g, 11 ms
Vibration	55 Hz, 1 mm Amplitude in all 3 Planes
Repeatability	≤2% of Rated Operating Distance
Temperature Drift	<±20% of Rated Operating Distance