

Capacitive Sensor Selection Guide

Embeddable/Nonembeddable Rectangular

					
Housing	5.5 mm	8 mm	10 mm	14 mm	20 mm
Sensing Range	5 - 10 mm	5 mm	8 mm	10 - 15 mm	10 - 20 mm
Pages	E3	E5	E5	E7	E9

Embeddable/Nonembeddable Rectangular and Barrels

					
Housing	40 mm	80 mm	12 mm	12 mm	18 mm
Sensing Range	20 - 30 mm	50 mm	3 mm	3 - 4.5 mm	5 mm
Pages	E11	E11	E13	E13	E15

Embeddable/Nonembeddable Barrels

					
Housing	18 mm	18 mm BCT	30 mm BCT	30 mm	30 mm
Sensing Range	5 - 7.5 mm	5 - 7.5 mm	10 - 15 mm	10 mm	10 - 15 mm
Pages	E17	E19	E19	E21 - 24	E25 - 28

Embeddable/Nonembeddable Plastic Barrels

			
Housing	34 mm	40 mm	Variable
Sensing Range	15 - 23 mm	20 - 30 mm	5 - 10 mm
Pages	E29 - 34	E29 - 32	E35

We reserve the right to make technical alterations without prior notice.



Capacitive Sensor Part Number Key

B C 10			K 40 SR			F Z 3 X2 T			Wiring Options*	Special Option Codes**
Mounting B = embeddable N = nonembeddable									Teach Button	
Principle of Operation C = capacitive CC = capacitive (low dielectric targets) CF = capacitive (noise immune) CT = capacitive teach									Number of LEDs (blank) = no LEDs X = 1 LED X2 = 2 LEDs	
Rated Operating Distance (mm)									Voltage Range AC/DC: (No SCP**) 3 = 20-250 VAC DC: 4 = 10-65 VAC, polarity protected, pulsed SCP** 6 = 10-30 VAC, polarity protected, pulsed SCP DC: 4 = 10-65 VDC, polarity protected, pulsed SCP** 6 = 10-30 VDC, polarity protected, pulsed SCP **SCP = short-circuit and overload protection	
Housing Style Barrel - Metal M = partial threading, chrome plated brass Barrel - Plastic K = smooth KT = PVDF, smooth P = full threading PT = PVDF, full threading S = partial threading Rectangular Q = metal or plastic, various rectangular styles QF = plastic, Polypropylene rectangular style									Output N = NPN transistor (current sinking) P = PNP transistor (current sourcing) Z = 2-wire AC or 2-wire AC/DC	
Housing Diameter or Height (mm)									Output Function A = normally open (N.O.) F = connection programmable (N.O. or N.C.) R = normally closed (N.C.) V = complementary outputs: one N.O., one N.C. Y0 = NAMUR output, requires switching amplifier Y1 = NAMUR output, requires switching amplifier/ATEX approved	
NOTE: Part Number Keys are to assist in identification only. Verify new part numbers with factory; Some configurations are not possible.									Secondary Housing Modifier SR = straight terminal chamber	

Wiring Options*

A. Connectorized Sensor

Connector Family

- B1 = Minifast®, Metal, Male
- B2 = Minifast, Plastic, Male
- B3 = Microfast®, Metal, Male
- H1 = Eurofast®, Metal or Plastic, Male
- V1 = Picofast®, Metal, Male

Connector/Sensor Transition

- 1 = straight

BC10 - M30 - AP4X - H1 1 4 1

Wiring Configuration

Example:

- 1 = Standard
- 3 = N.C. DC Output on Pin 4 (for US)

Number of Pins

B. Potted Cable

BC5 - S18 - AP4X - 7M

Cable Length

- Blank = 2 Meter cable
- 7M = 7 Meter cable

Special Option Codes**

BC10 - Q14 - AN4X - /S250

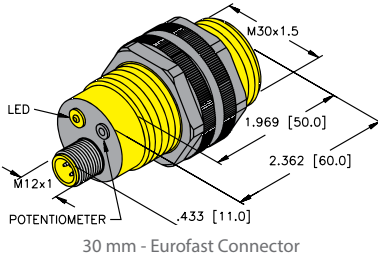
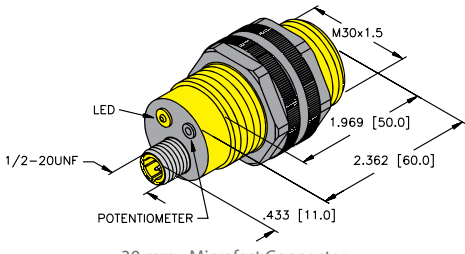
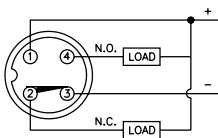
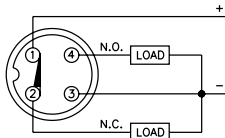
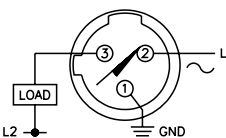
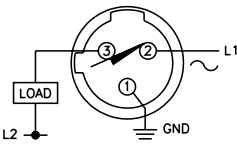
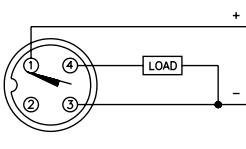
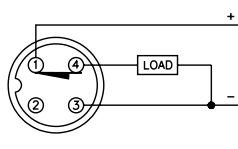
Option Code

Example:

- /S250 = No Potentiometer
- /S400 = Rear LEDs (for Q14 and Q20 only)

Capacitive Sensors | 30 mm

Plastic Threaded Barrels with Connectors and AC/DC Outputs

Housing Style		Dimension Drawings	
		A	 30 mm - Eurofast Connector
 30 mm - Microfast Connector		B	
Wiring Diagrams/Mating Cordsets			
1	 Mating Cordset: RK 4.4T-*	2	 Mating Cordset: RK 4.4T-*
3	 Mating Cordset: KB 3T-*	4	 Mating Cordset: KB 3T-*
5	 Mating Cordset: RK 4T-*	6	 Mating Cordset: RK 4T-*
A11 3 and 4-wire DC Capacitive - (AP, RP, AN, RN, VN, VP)			
Ripple: ≤10% Differential Travel (Hysteresis): 2-20% (5% typical) Voltage Drop Across Conducting Sensor: ≤1.8 V Trigger Current for Short Circuit Protection: ≥220 mA Off-State (Leakage) Current: ≤0.1 mA 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	
A12 2-wire AC Capacitive - (AZ, RZ)			
Line Frequency: ≥50... ≤60 Hz Differential Travel (Hysteresis): 2-20% (5% typical) Continuous Load Current: ≤500 mA Voltage Drop Across Conducting Sensor: ≤7.0 V Off-State (Leakage) Current: ≤1.7 mA Minimum Load Current: ≥5.0 mA		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	

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Capacitive Sensors | 30 mm

Plastic Threaded Barrels with Connectors and AC/DC Outputs

Part Number/ ID Number	Features	Embeddable Range (mm)	Nonembeddable Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing Material	End Cap Material	Power LED	Output LED	Dimension Drawings	Wiring Diagrams	Spec List
BCC10-S30-AP4X-H1141 2503038	Low Dielectric Targets	10	10	3-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	PA12- GF30	PA 66-GF25-V0	N/A	YE	A	5	A11
BCC10-S30-RP4X-H1143 1542562	Low Dielectric Targets	10	10	3-wire DC PNP N.C.	10-65 VDC	100	≤200	-25 to +70	IP67	PA12- GF30	PA 66-GF25-V0	N/A	YE	A	6	A11
BC10-S30-VN4X-H1141 2506010	Comp. Outputs	10	15	4-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PA12- GF30	PA 66-GF25-V0	N/A	YE	A	1	A11
BCF10-S30-VN4X-H1141 2506016	Noise Immune	10	15	4-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PA12- GF30	PA 66-GF25-V0	N/A	YE	A	1	A11
BC10-S30-VP4X-H1141 2506100	Comp. Outputs	10	15	4-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	PA12- GF30	PA 66-GF25-V0	N/A	YE	A	2	A11
BCC10-S30-VP4X-H1141 2503043	Low Dielectric Targets	10	10	4-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	PA12- GF30	PA 66-GF25-V0	N/A	YE	A	2	A11
BCF10-S30-VP4X-H1141 2506117	Noise Immune	10	15	4-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	PA12- GF30	PA 66-GF25-V0	N/A	YE	A	2	A11
BC10-S30-AZ3X-B3131 2310710		10	15	2-wire AC N.O.	20-250 VAC	20	≤500	-25 to +70	IP67	PA12- GF30	PA 66-GF25-V0	N/A	YE	B	3	A12
BCF10-S30-AZ3X-B3131 2506012	Noise Immune	10	15	2-wire AC N.O.	20-250 VAC	20	≤500	-25 to +70	IP67	PA12- GF30	PA 66-GF25-V0	N/A	YE	B	3	A12
BC10-S30-RZ3X-B3131 2310810		10	15	2-wire AC N.C.	20-250 VAC	20	≤500	-25 to +70	IP67	PA12- GF30	PA 66-GF25-V0	N/A	YE	B	4	A12
BCF10-S30-RZ3X-B3131 2506014	Noise Immune	10	15	2-wire AC N.C.	20-250 VAC	20	≤500	-25 to +70	IP67	PA12- GF30	PA 66-GF25-V0	N/A	YE	B	4	A12

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