




# 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

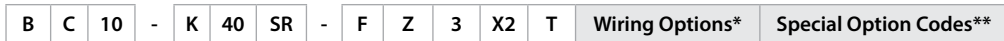
Embeddable/Nonembeddable Barrels					
					
Housing	18 mm	18 mm BCT	30 mm BCT	30 mm	30 mm
Sensing Range	5 - 7.5 mm	5 - 7.5 mm	10 - 15 mm	10 mm	10 - 15 mm
Pages	E17	E19	E19	E21 - 24	E25 - 28

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



**Mounting**

- B = embeddable
- N = nonembeddable

**Principle of Operation**

- C = capacitive
- CC = capacitive (low dielectric targets)
- CF = capacitive (noise immune)
- CT = capacitive teach

**Rated Operating Distance (mm)**

**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

**Housing Diameter or Height (mm)**

**NOTE:**

Part Number Keys are to assist in identification only.  
Verify new part numbers with factory;  
Some configurations are not possible.

**Teach Button**

**Number of LEDs**

- (blank) = no LEDs
- X = 1 LED
- X2 = 2 LEDs

**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

**Output**

- N = NPN transistor (current sinking)
- P = PNP transistor (current sourcing)
- Z = 2-wire AC or 2-wire AC/DC

**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

**Secondary Housing Modifier**

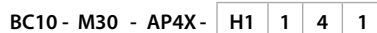
- SR = straight terminal chamber

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Capacitive Sensors

**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

**Wiring Configuration**

**Example:**

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

**Number of Pins**

**B. Potted Cable**



**Cable Length**

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

**Special Option Codes\*\***



**Option Code**


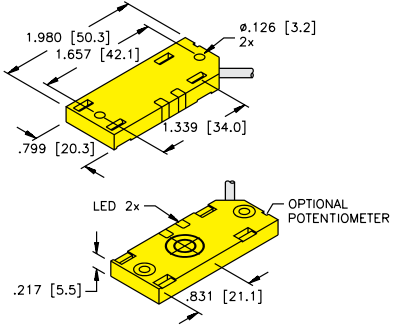
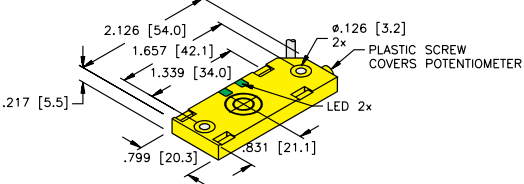
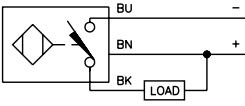
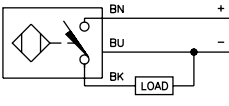
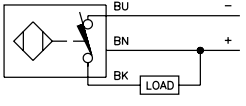
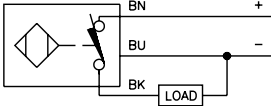
**Example:**

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



# Capacitive Sensors | QF5.5

## Top Sensing Thin Qpak Housing with DC Outputs

Housing Style	Dimension Drawings		
	<p><b>A</b></p>  <p>5.5 mm - Potted-In Cable</p>		
<p><b>B</b></p>  <p>5.5 mm - Potted-In Cable, w/Potentiometer Cover</p>			
Wiring Diagrams/Mating Cordsets			
<p>1</p> 	<p>2</p> 	<p>3</p> 	<p>4</p> 
A11 3 and 4-wire DC Capacitive - (AP, RP, AN, RN, VN, VP)			
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 2-20% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math></p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p> <p>No-Load Current: <math>\leq 15\text{ mA}</math></p> <p>Power-On Effect: Per IEC 947-5-2</p>	<p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p> <p>Temperature Drift: <math>&lt; \pm 20\%</math> of Rated Operating Distance</p>		

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



## Capacitive Sensors | QF5.5

### Top Sensing Thin Qpak Housing with 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	Front Cap/Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
BC5-QF5.5-AN6X2/S250 2620120		5	5	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	PP	PP	GN	YE	2M/TPU	A	1	A11
BC10-QF5.5-AN6X2 2620121		10	10	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	PP	PP	GN	YE	2M/TPU	A	1	A11
BC10-QF5.5-AN6X2/S250 2620119		10	10	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	PP	PP	GN	YE	2M/TPU	A	1	A11
BC10-QF5.5-RN6X2 2620128	Normally Closed	10	10	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	PP	PP	GN	YE	2M/TPU	A	3	A11
BC5-QF5.5-AP6X2/S250 2620116		5	5	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	PP	PP	GN	YE	2M/TPU	A	2	A11
BC5-QF5.5-RP6X2/S250 2620127	Normally Closed	5	5	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	PP	PP	GN	YE	2M/TPU	A	4	A11
BC10-QF5.5-AP6X2 2620117		10	10	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	PP	PP	GN	YE	2M/TPU	A	2	A11
BC10-QF5.5-AP6X2/S250 2620115		10	10	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	PP	PP	GN	YE	2M/TPU	A	2	A11
BC10-QF5.5-RP6X2 2620126	Normally Closed	10	10	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	PP	PP	GN	YE	2M/TPU	A	4	A11
BC10-QF5.5-RP6X2/S250 2620124	Normally Closed	10	10	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	PP	PP	GN	YE	2M/TPU	A	4	A11
BC10-QF5.5-AN6X2/S932 2620137		10	10	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	PP	PP	GN	YE	2M/TPU	B	1	A11
BC10-QF5.5-RN6X2/S932 2620140	Normally Closed	10	10	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	PP	PP	GN	YE	2M/TPU	B	3	A11
BC10-QF5.5-AP6X2/S932 2620109		10	10	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	PP	PP	GN	YE	2M/TPU	B	2	A11
BC10-QF5.5-RP6X2/S932 2620141	Normally Closed	10	10	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	PP	PP	GN	YE	2M/TPU	B	4	A11

**Notes:**

/S250: Without switch point adjustment potentiometer

/S932: Adjustment potentiometer with protective cover, and non-metallic mounting bushing


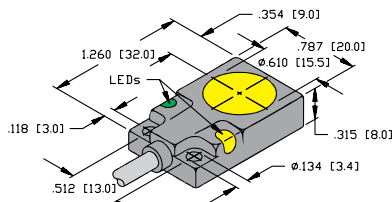
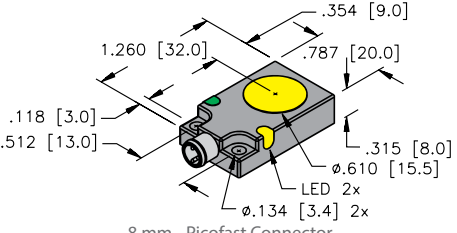
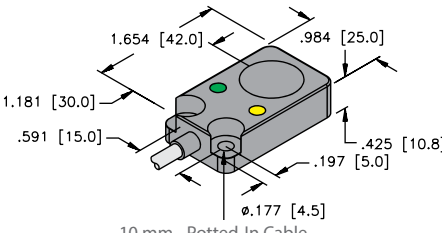
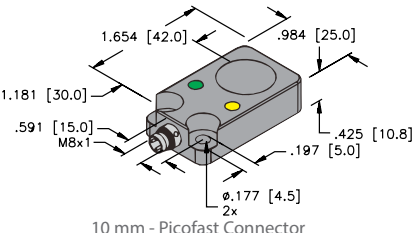
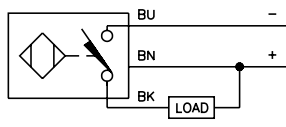
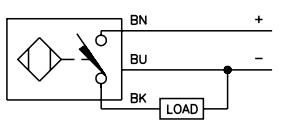
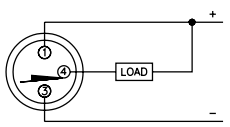
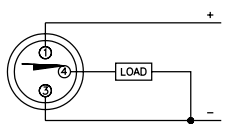
We reserve the right to make technical alterations without prior notice.

Capacitive Sensors



# Capacitive Sensors | Q08 & Q10

## Top Sensing Qpak Housing with DC Outputs

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>8 mm - Potted-In Cable</p>
<p><b>B</b></p>  <p>8 mm - Picofast Connector</p>	<p><b>C</b></p>  <p>10 mm - Potted-In Cable</p>
<p><b>D</b></p>  <p>10 mm - Picofast Connector</p>	
Wiring Diagrams/Mating Cordsets	
<p><b>1</b></p> 	<p><b>2</b></p> 
<p><b>3</b></p>  <p>Mating Cordset: PKG 3Z-*</p>	<p><b>4</b></p>  <p>Mating Cordset: PKG 3Z-*; PKG 3M-*</p>
A11 3 and 4-wire DC Capacitive - (AP, RP, AN, RN, VN, VP)	
<p>Ripple: ≤10%</p> <p>Differential Travel (Hysteresis): 2-20% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: ≤1.8 V</p> <p>Trigger Current for Short Circuit Protection: ≥220 mA</p> <p>Off-State (Leakage) Current: ≤0.1 mA</p> <p>No-Load Current: ≤15 mA</p> <p>Power-On Effect: Per IEC 947-5-2</p>	<p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: ≤2% of Rated Operating Distance</p> <p>Temperature Drift: &lt;±20% of Rated Operating Distance</p>

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# Capacitive Sensors | Q08 & Q10

## Top Sensing Qpak Housing with DC Outputs

Part Number/ ID Number	Embeddable Range (mm)		Output	Voltage	Switching Freq. (Hz)		Operating Current (mA)	Operating Temp. (°C)	Protection	Housing Material	Front Cap/Face	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
		Nonembeddable Range (mm)															
BC5-Q08-AN6X2/S250 26201	5	5	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	Zinc	PA 12	GN	YE	2M/TPU	A	1	A11	
BC5-Q08-AP6X2/S250 26200	5	5	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	Zinc	PA 12	GN	YE	2M/TPU	A	2	A11	
BC5-Q08-AN6X2-V1131/S250 26211	5	5	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	Zinc	PA 12	GN	YE	--	B	3	A11	
BC5-Q08-AP6X2-V1131/S250 26210	5	5	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	Zinc	PA 12	GN	YE	--	B	4	A11	
BC8-Q10-AN6X2/S250 2621203	8	8	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	PBT-GF30-V0	--	GN	YE	2M/PVC	C	1	A11	
BC8-Q10-AP6X2/S250 2621200	8	8	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	PBT-GF30-V0	--	GN	YE	2M/PVC	C	2	A11	
BC8-Q10-AP6X2-V1131/S250 2621201	8	8	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	PBT-GF30-V0	--	GN	YE	--	D	4	A11	

**Notes:**


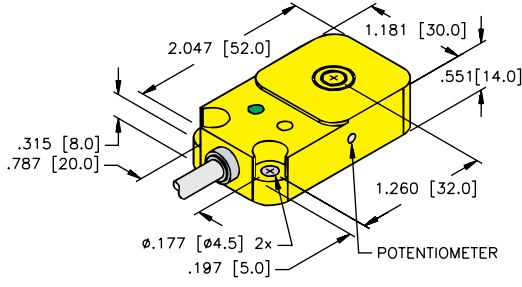
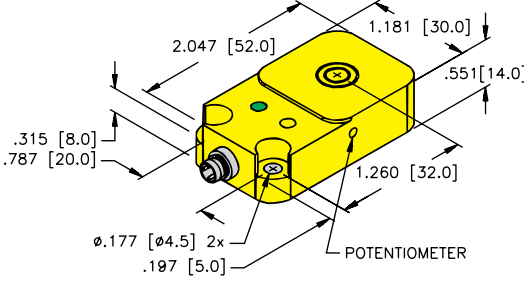
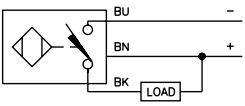
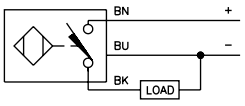
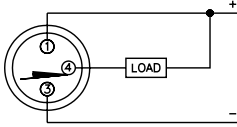
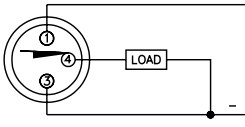
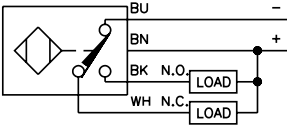
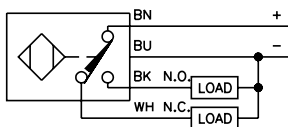
/S250: Without switch point adjustment potentiometer

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



# Capacitive Sensors | Q14

## Top Sensing Qpak Housing with DC Outputs

Housing Style	Dimension Drawings	
	<p>A</p>  <p>14 mm - Potted-In Cable</p>	
<p>B</p>  <p>14 mm - Picofast Connector</p>		
Wiring Diagrams/Mating Cordsets		
<p>1</p> 	<p>2</p> 	<p>3</p>  <p>Mating Cordset: PKG 3M-*</p>
<p>4</p>  <p>Mating Cordset: PKG 3M-*</p>	<p>5</p> 	<p>6</p> 
A11 3 and 4-wire DC Capacitive - (AP, RP, AN, RN, VN, VP)		
<p>Ripple: ≤10%</p> <p>Differential Travel (Hysteresis): 2-20% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: ≤1.8 V</p> <p>Trigger Current for Short Circuit Protection: ≥220 mA</p> <p>Off-State (Leakage) Current: ≤0.1 mA</p> <p>No-Load Current: ≤15 mA</p> <p>Power-On Effect: Per IEC 947-5-2</p>	<p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: ≤2% of Rated Operating Distance</p> <p>Temperature Drift: &lt;±20% of Rated Operating Distance</p>	

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# Capacitive Sensors | Q14

## Top Sensing Qpak Housing with 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	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
BC10-Q14-AN4X2 2530010		10	15	3-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PBT-GF30-V0	GN	YE	2M/ PVC	A	1	A11
BC10-Q14-AP4X2 2530001		10	15	3-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PBT-GF30-V0	GN	YE	2M/ PVC	A	2	A11
BC10-Q14-VN4X2 2530030	Comp. Outputs	10	15	4-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PBT-GF30-V0	GN	YE	2M/ PVC	A	5	A11
BC10-Q14-VP4X2 2530020	Comp. Outputs	10	15	4-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PBT-GF30-V0	GN	YE	2M/ PVC	A	6	A11
BC10-Q14-AN4X2-V1131 2530011		10	15	3-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PBT-GF30-V0	GN	YE	--	B	3	A11
BC10-Q14-AN4X2-V1131/S400 2530006	Rear LED	10	15	3-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PBT-GF30-V0	GN	YE	--	B	3	A11
BC10-Q14-AP4X2-V1131 2530002		10	15	3-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PBT-GF30-V0	GN	YE	--	B	4	A11
BC10-Q14-AP4X2-V1131/S400 2530004	Rear LED	10	15	3-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PBT-GF30-V0	GN	YE	--	B	4	A11

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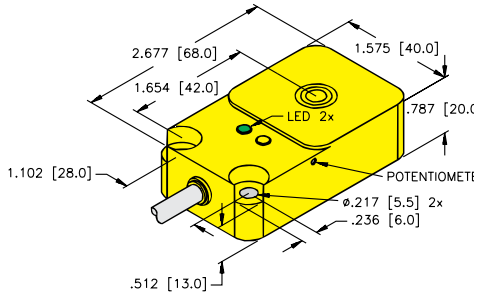
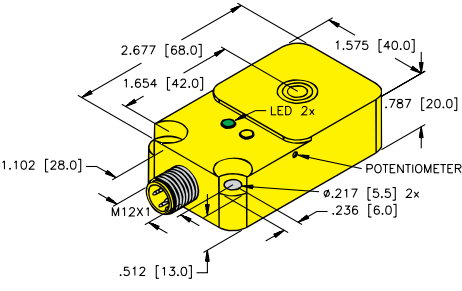
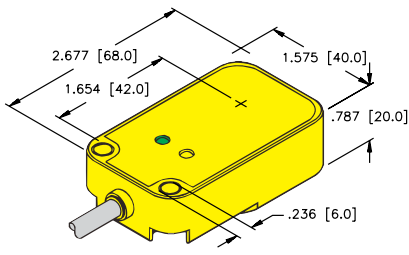
Capacitive Sensors

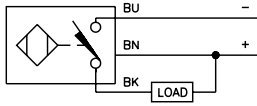
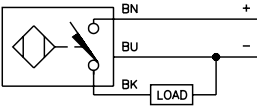
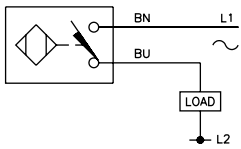
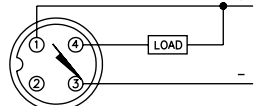
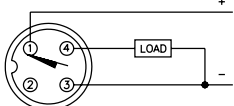
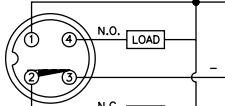
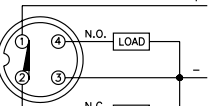




# Capacitive Sensors | Q20

## Top Sensing Qpak Housing with DC or AC Outputs

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>20 mm - Potted-In Cable</p>
<p><b>B</b></p>  <p>20 mm - Eurofast Connector</p>	<p><b>C</b></p>  <p>20 mm - Potted-In Cable</p>

Wiring Diagrams/Mating Cordsets			
<p>1</p> 	<p>2</p> 	<p>3</p> 	<p>4</p>  <p>Mating Cordset: RK 4T-*</p>
<p>5</p>  <p>Mating Cordset: RK 4T-*</p>	<p>6</p>  <p>Mating Cordset: RK 4.4T-*</p>	<p>7</p>  <p>Mating Cordset: RK 4.4T-*</p>	

A11 3 and 4-wire DC Capacitive - (AP, RP, AN, RN, VN, VP)	
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 2-20% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math></p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p> <p>No-Load Current: <math>\leq 15\text{ mA}</math></p> <p>Power-On Effect: Per IEC 947-5-2</p>	<p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p> <p>Temperature Drift: <math>&lt; \pm 20\%</math> of Rated Operating Distance</p>
A12 2-wire AC Capacitive - (AZ, RZ)	
<p>Line Frequency: <math>\geq 50\text{...} \leq 60\text{ Hz}</math></p> <p>Differential Travel (Hysteresis): 2-20% (5% typical)</p> <p>Continuous Load Current: <math>\leq 500\text{ mA}</math></p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 7.0\text{ V}</math></p> <p>Off-State (Leakage) Current: <math>\leq 1.7\text{ mA}</math></p> <p>Minimum Load Current: <math>\geq 5.0\text{ mA}</math></p>	<p>Power-On Effect: Per IEC 947-5-2</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p> <p>Temperature Drift: <math>&lt; \pm 20\%</math> of Rated Operating Distance</p>

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



# Capacitive Sensors | Q20

## Top Sensing Qpak Housing with DC or AC Outputs

Part Number/ ID Number	Features	Embeddable Range (mm)		Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing Material	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
BC20-Q20-AN4X2 2530110		20	30	3-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PBT-GF30-V0	GN	YE	2M/ PVC	A	1	A11
BC20-Q20-AN4X2/S400 2530104	Rear LED	20	30	3-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PBT-GF30-V0	GN	YE	2M/ PVC	C	1	A11
BC20-Q20-AP4X2 2530100		20	30	3-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	PBT-GF30-V0	GN	YE	2M/ PVC	A	2	A11
BC20-Q20-AZ3X2 4352000		20	30	2-wire AC	20-250 VAC	20	≤500	-25 to +70	IP67	PBT-GF30-V0	GN	YE	2M/ PVC	A	3	A12
BC20-Q20-AZ3X2/S400 2310005	Rear LED	20	30	2-wire AC	20-250 VAC	20	≤500	-25 to +70	IP67	PBT-GF30-V0	GN	YE	2M/ PVC	C	3	A12
BC20-Q20-AN4X2-H1141 2530111		20	30	3-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PBT-GF30-V0	GN	YE	--	B	4	A11
BC20-Q20-AP4X2-H1141 2530101		20	30	3-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	PBT-GF30-V0	GN	YE	--	B	5	A11
BC20-Q20-AP4X2-H1141/S400 2530103	Rear LED	20	30	3-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	PBT-GF30-V0	GN	YE	--	B	5	A11
BC20-Q20-VN4X2-H1141 2530131	Comp. Outputs	20	30	4-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PBT-GF30-V0	GN	YE	--	B	6	A11
BC20-Q20-VN4X2-H1141/S400 2530124	Rear LED, Comp. Outputs	20	30	4-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PBT-GF30-V0	GN	YE	--	B	6	A11
BC20-Q20-VP4X2-H1141 2530121	Comp. Outputs	20	30	4-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PBT-GF30-V0	GN	YE	--	B	7	A11

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

Capacitive Sensors





# Capacitive Sensors | CP40 & CP80

## Large Rectangular Housing with DC or AC Outputs


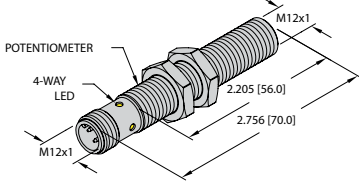
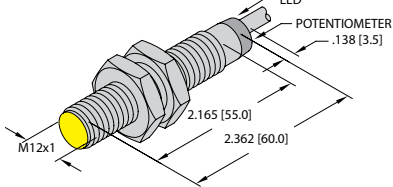
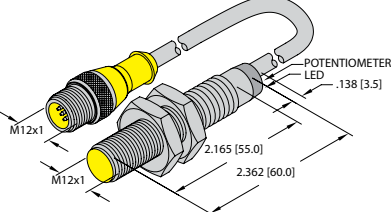
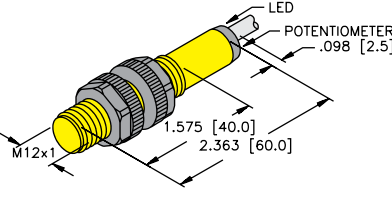
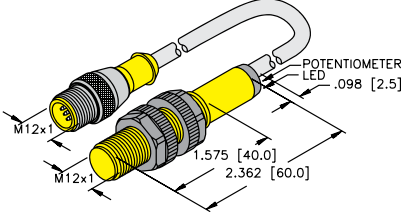
Part Number/ ID Number	Features	Embeddable Range (mm)	Nonembeddable Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing Material	Power LED	Output LED	Dimension Drawings	Wiring Diagrams	Spec List
BC20-CP40-VN4X2/S10 25157	Comp. Outputs	20	30	4-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PBT-GF30-V0	GN	YE	A	1	A11
BC20-CP40-VP4X2/S10 25156	Comp. Outputs	20	30	4-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	PBT-GF30-V0	GN	YE	A	2	A11
BC20-CP40-FZ3X2/S10 23115	Prog. Outputs	20	30	2-wire AC	20-250 VAC	20	≤500	-25 to +70	IP67	PBT-GF30-V0	GN	YE	A	3	A12
NC50-CP80-VN4X2/S10 2580112	Comp. Outputs	NA	50	4-wire DC NPN	10-65 VDC	200	≤200	-25 to +70	IP67	PBT-GF30-V0	GN	YE	B	1	A11
NC50-CP80-VP4X2/S10 2580212	Comp. Outputs	NA	50	4-wire DC PNP	10-65 VDC	200	≤200	-25 to +70	IP67	PBT-GF30-V0	GN	YE	B	2	A11
NC50-CP80-FZ3X2/S10 2310610	Prog. Outputs	NA	50	2-wire AC	20-250 VAC	20	≤500	-25 to +70	IP67	PBT-GF30-V0	GN	YE	B	3	A12

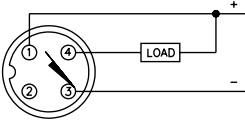
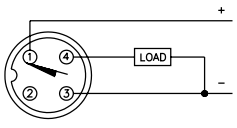
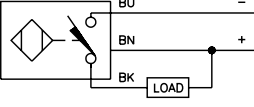
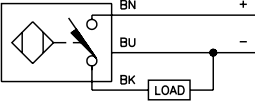
We reserve the right to make technical alterations without prior notice.



# Capacitive Sensors | 12 mm

## Threaded Barrel with DC Outputs

Housing Style	Dimension Drawings	
	<p><b>A</b></p>  <p>12 mm - Eurofast Connector</p>	<p><b>B</b></p>  <p>12 mm - Potted-In Cable</p>
<p><b>C</b></p>  <p>12 mm - Eurofast Connector</p>	<p><b>D</b></p>  <p>12 mm - Potted-In Cable</p>	<p><b>E</b></p>  <p>12 mm - Eurofast Connector</p>

Wiring Diagrams/Mating Cordsets			
<p><b>1</b></p>  <p>Mating Cordset: RK 4T-*</p>	<p><b>2</b></p>  <p>Mating Cordset: RK 4T-*</p>	<p><b>3</b></p> 	<p><b>4</b></p> 

A11 3 and 4-wire DC Capacitive - (AP, RP, AN, RN, VN, VP)	
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 2-20% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math></p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p> <p>No-Load Current: <math>\leq 15\text{ mA}</math></p> <p>Power-On Effect: Per IEC 947-5-2</p>	<p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p> <p>Temperature Drift: <math>&lt; \pm 20\%</math> of Rated Operating Distance</p>

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



## Capacitive Sensors | 12 mm

### Threaded Barrel with 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	Front Cap/Face	End Cap Material	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
BC3-M12-AP6X-H1141 2601011		3	3	3-wire DC PNP	10-30 VDC	100	≤200	-25 to +70	IP67	CPB	ABS	--	N/A	YE	--	A	2	A11
BC3-M12-AN6X 2601100		3	3	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	CPB	ABS	PA	N/A	YE	2M/ PVC	B	3	A11
BC3-M12-AP6X 2601000		3	3	3-wire DC PNP	10-30 VDC	100	≤200	-25 to +70	IP67	CPB	ABS	PA	N/A	YE	2M/ PVC	B	4	A11
BC3-M12-AN6X-0.2-RS4T 2601190		3	3	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	CPB	ABS	PA	N/A	YE	0.2M/ PVC	C	1	A11
BC3-M12-AP6X-0.2-RS4T 2601091		3	3	3-wire DC PNP	10-30 VDC	100	≤200	-25 to +70	IP67	CPB	ABS	PA	N/A	YE	0.2M/ PVC	C	2	A11
BC3-S12-AN6X 2601300		3	4.5	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	PA 12- GF30	PA 12- GF30	PA	N/A	YE	2M/ PVC	D	3	A11
BC3-S12-AP6X 2601200		3	4.5	3-wire DC PNP	10-30 VDC	100	≤200	-25 to +70	IP67	PA 12- GF30	PA 12- GF30	PA	N/A	YE	2M/ PVC	D	4	A11
BC3-S12-AP6X/S100 2601201	High Temp. 100 °C	3	4.5	3-wire DC PNP	10-30 VDC	100	≤200	-25 to +100	IP67	PA 12- GF30	PA 12- GF30	PA	N/A	YE	2M/ PVC	D	4	A11
BC3-S12-AN6X-0.2-RS4T 2601390		3	4.5	3-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	PA 12- GF30	PA 12- GF30	PA	N/A	YE	0.2M/ PVC	E	1	A11
BC3-S12-AP6X-0.2-RS4T 2601291		3	4.5	3-wire DC PNP	10-30 VDC	100	≤200	-25 to +70	IP67	PA 12- GF30	PA 12- GF30	PA	N/A	YE	0.2M/ PVC	E	2	A11


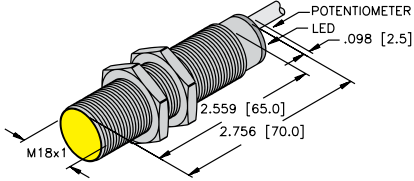
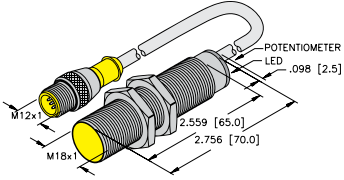
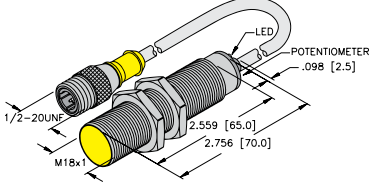
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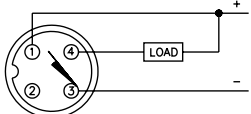
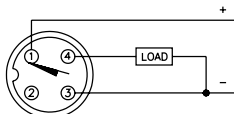
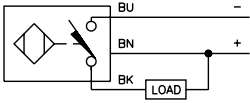
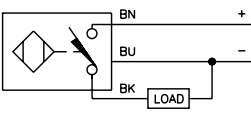
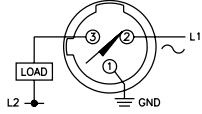
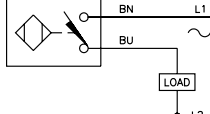
Capacitive Sensors



# Capacitive Sensors | 18 mm

## Metal Threaded Barrel with DC or AC Outputs

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>18 mm - Potted-In Cable</p>
<p><b>B</b></p>  <p>18 mm - Eurofast Connector</p>	<p><b>C</b></p>  <p>18 mm - Microfast Connector</p>

Wiring Diagrams/Mating Cordsets		
<p><b>1</b></p>  <p>Mating Cordset: RK 4T-*</p>	<p><b>2</b></p>  <p>Mating Cordset: RK 4T-*</p>	<p><b>3</b></p> 
<p><b>4</b></p> 	<p><b>5</b></p>  <p>Mating Cordset: KB 3T-*</p>	<p><b>6</b></p> 

A11 3 and 4-wire DC Capacitive - (AP, RP, AN, RN, VN, VP)	
<p>Ripple: ≤10%</p> <p>Differential Travel (Hysteresis): 2-20% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: ≤1.8 V</p> <p>Trigger Current for Short Circuit Protection: ≥220 mA</p> <p>Off-State (Leakage) Current: ≤0.1 mA</p> <p>No-Load Current: ≤15 mA</p> <p>Power-On Effect: Per IEC 947-5-2</p>	<p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: ≤2% of Rated Operating Distance</p> <p>Temperature Drift: &lt;±20% of Rated Operating Distance</p>
A12 2-wire AC Capacitive - (AZ, FZ, RZ)	
<p>Line Frequency: ≥50... ≤60 Hz</p> <p>Differential Travel (Hysteresis): 2-20% (5% typical)</p> <p>Continuous Load Current: ≤500 mA</p> <p>Voltage Drop Across Conducting Sensor: ≤7.0 V</p> <p>Off-State (Leakage) Current: ≤1.7 mA</p> <p>Minimum Load Current: ≥5.0 mA</p>	<p>Power-On Effect: Per IEC 947-5-2</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: ≤2% of Rated Operating Distance</p> <p>Temperature Drift: &lt;±20% of Rated Operating Distance</p>

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



# Capacitive Sensors | 18 mm

## Metal Threaded Barrel with DC or AC Outputs

Part Number/ ID Number	Embeddable Range (mm)	Nonembeddable Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing Material	Front Cap/Face	End Cap Material	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
BC5-M18-AN4X 2504002	5	5	3-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	CPB	PBT-G30-V0	PUR	N/A	YE	2M/PVC	A	3	A11
BC5-M18-AP4X 2504001	5	5	3-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	CPB	PBT-G30-V0	PUR	N/A	YE	2M/PVC	A	4	A11
BC5-M18-AZ3X 2305000	5	5	2-wire AC	20-250 VAC	20	≤500	-25 to +70	IP67	CPB	PBT-G30-V0	PUR	N/A	YE	2M/PVC	A	6	A12
BC5-M18-AN4X-0.2-RS4T 2504091	5	5	3-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	CPB	PBT-G30-V0	PUR	N/A	YE	0.2M/ PVC	B	1	A11
BC5-M18-AP4X-0.2-RS4T 2504090	5	5	3-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	CPB	PBT-G30-V0	PUR	N/A	YE	0.2M/ PVC	B	2	A11
BC5-M18-AZ3X-0.2-SB3T 2305090	5	5	2-wire AC	20-250 AC	20	≤500	-25 to +70	IP67	CPB	PBT-G30-V0	PUR	N/A	YE	0.2M/ PVC	C	5	A12


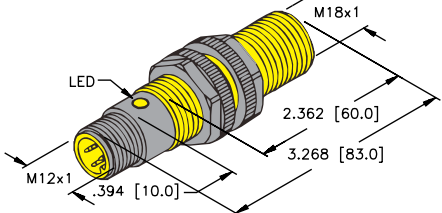
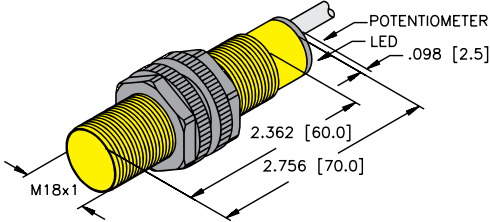
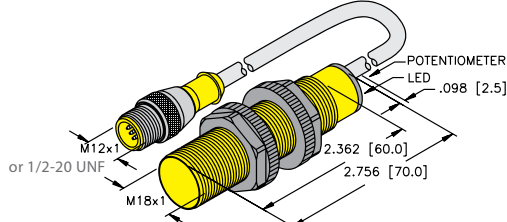
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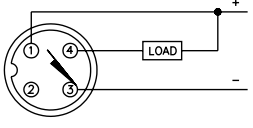
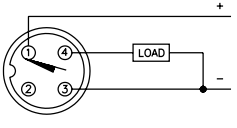
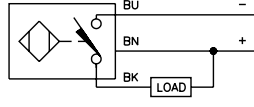
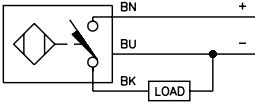
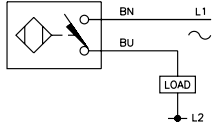
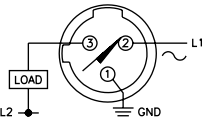




# Capacitive Sensors | 18 mm

## Metal Threaded Barrel with DC or AC Outputs

Housing Style	Dimension Drawings
	<p>A</p>  <p>18 mm - Eurofast Connector</p>
<p>B</p>  <p>18 mm - Potted-In Cable</p>	<p>C</p>  <p>18 mm - Molded Connector</p>

Wiring Diagrams/Mating Cordsets		
<p>1</p>  <p>Mating Cordset: RK 4T-*</p>	<p>2</p>  <p>Mating Cordset: RK 4T-*</p>	<p>3</p> 
<p>4</p> 	<p>5</p> 	<p>6</p>  <p>Mating Cordset: KB 3T-*</p>

A11	3 and 4-wire DC Capacitive - (AP, RP, AN, RN, VN, VP)	
<p>Ripple: ≤10%</p> <p>Differential Travel (Hysteresis): 2-20% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: ≤1.8 V</p> <p>Trigger Current for Short Circuit Protection: ≥220 mA</p> <p>Off-State (Leakage) Current: ≤0.1 mA</p> <p>No-Load Current: ≤15 mA</p> <p>Power-On Effect: Per IEC 947-5-2</p>	<p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: ≤2% of Rated Operating Distance</p> <p>Temperature Drift: &lt;±20% of Rated Operating Distance</p>	
A12	2-wire AC Capacitive - (AZ, FZ, RZ)	
<p>Line Frequency: ≥50... ≤60 Hz</p> <p>Differential Travel (Hysteresis): 2-20% (5% typical)</p> <p>Continuous Load Current: ≤500 mA</p> <p>Voltage Drop Across Conducting Sensor: ≤7.0 V</p> <p>Off-State (Leakage) Current: ≤1.7 mA</p> <p>Minimum Load Current: ≥5.0 mA</p>	<p>Power-On Effect: Per IEC 947-5-2</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: ≤2% of Rated Operating Distance</p> <p>Temperature Drift: &lt;±20% of Rated Operating Distance</p>	

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



# Capacitive Sensors | 18 mm

## Metal Threaded Barrel with DC or AC Outputs

Part Number/ ID Number	Features	Embeddable Range (mm)		Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing Material	End Cap Material	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
BC5-S18-AN4X-H1141/S250 2503108		5	7.5	3-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PA 12- GF30	PUR	N/A	YE	--	A	1	A11
BC5-S18-AP4X-H1141/S250 2503602		5	7.5	3-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	PA 12- GF30	PUR	N/A	YE	--	A	2	A11
BC5-S18-AN4X 25031		5	7.5	3-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PA 12- GF30	PUR	N/A	YE	2M/PVC	B	3	A11
BCF5-S18-AN4X 2503012	Noise Immune	5	7.5	3-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PA 12- GF30	PUR	N/A	YE	2M/PVC	B	3	A11
BC5-S18-AP4X 25030		5	7.5	3-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	PA 12- GF30	PUR	N/A	YE	2M/PVC	B	4	A11
BCF5-S18-AP4X 2503011	Noise Immune	5	7.5	3-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	PA 12- GF30	PUR	N/A	YE	2M/PVC	B	4	A11
BCF5-S18-AP4X/S90 2503014	Noise Immune	5	7.5	3-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	PA 12- GF30	PUR	N/A	YE	2M/PUR	B	4	A11
BC5-S18-AN4X-0.2-RS4T 2503192		5	7.5	3-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PA 12- GF30	PUR	N/A	YE	0.2M/PVC	C	1	A11
BCF5-S18-AN4X-0.2-RS4T 2503089	Noise Immune	5	7.5	3-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PA 12- GF30	PUR	N/A	YE	0.2M/PVC	C	1	A11
BC5-S18-AP4X-0.2-RS4T 2503492		5	7.5	3-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	PA 12- GF30	PUR	N/A	YE	0.2M/PVC	C	2	A11
BCF5-S18-AP4X-0.2-RS4T 2503099	Noise Immune	5	7.5	3-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	PA 12- GF30	PUR	N/A	YE	0.2M/PVC	C	2	A11
BC5-S18-AZ3X 2305500		5	7.5	2-wire AC	20-250 VAC	20	≤200	-25 to +70	IP67	PA 12- GF30	PUR	N/A	YE	2M/PVC	B	5	A12
BC5-S18-AZ3X-0.2-SB3T 2305590		5	7.5	2-wire AC	20-250 VAC	20	≤500	-25 to +70	IP67	PA12- GF30	PUR	N/A	YE	0.2M/PVC	C	6	A12

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


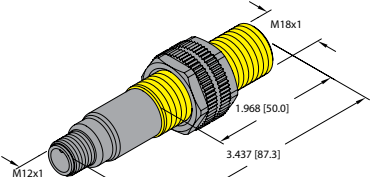
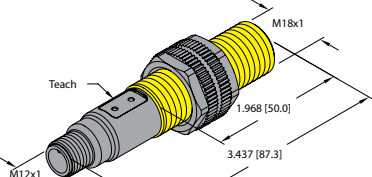
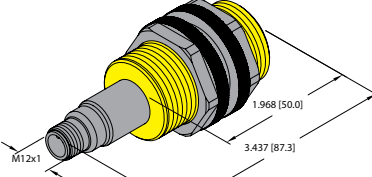
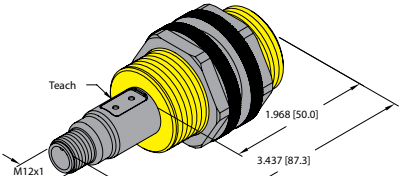
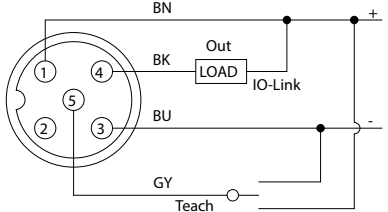
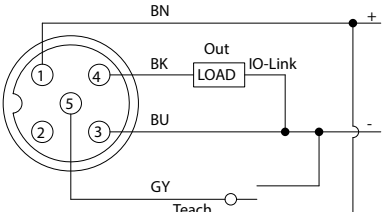
**Notes:**

/S250: Without switch point adjustment potentiometer



# Capacitive Sensors | 18 & 30 mm

## Plastic Threaded Barrels Configurable via IO-Link/Teach

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>18 mm - Teach-by-wire or IO-Link</p>
<p><b>B</b></p>  <p>18 mm - Teach button or IO-Link</p>	<p><b>C</b></p>  <p>30 mm - Teach-by-wire or IO-Link</p>
<p><b>D</b></p>  <p>30 mm - Teach button or IO-Link</p>	
Wiring Diagrams/Mating Cordsets	
<p><b>1</b></p>  <p>Mating Cordset: RK 4.5T-*</p>	<p><b>2</b></p>  <p>Mating Cordset: RK 4.5T-*</p>
A18	5-wire DC Teach Capacitive - (UP, UN)
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 2-20% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 2.4\text{ V}</math></p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p> <p>No-Load Current: <math>\leq 15\text{ mA}</math></p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p>	<p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p> <p>Temperature Drift: <math>\leq \pm 20\%</math> of Rated Operating Distance</p> <p>IO-Link: V1.1</p>

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



## Capacitive Sensors | 18 & 30 mm

### Plastic Threaded Barrels Configurable via IO-Link/Teach


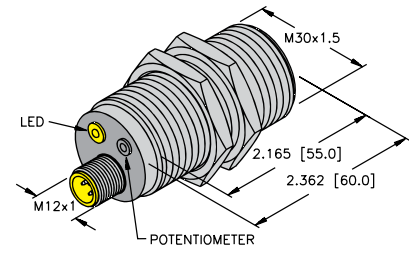
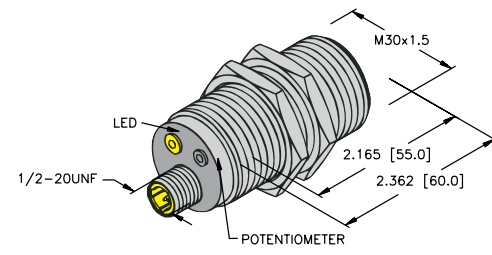
Part Number/ ID Number	Features	Embeddable Range (mm)		Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing Material	End Cap Material	Power LED	Output LED	Dimension Drawings	Wiring Diagrams	Spec List
BCT5-S18-UP6X2-H1151 2101300	Teach-by-wire or IO-Link	5	7.5	4-wire DC PNP	10-30 VDC	100	≤200	-25 to +70	IP67	PA12-GF30, PEI	PA	GN	YE	A	1	A18
BCT5-S18-UN6X2-H1151 2101400	Teach-by-wire or IO-Link	5	7.5	4-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	PA12-GF30, PEI	PA	GN	YE	A	2	A18
BCT5-S18-UP6X2T-H1151 2101100	Teach buttons or IO-Link	5	7.5	4-wire DC PNP	10-30 VDC	100	≤200	-25 to +70	IP67	PA12-GF30, PEI	PA	GN	YE	B	1	A18
BCT5-S18-UN6X2T-H1151 2101200	Teach buttons or IO-Link	5	7.5	4-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	PA12-GF30, PEI	PA	GN	YE	B	2	A18
BCT10-S30-UP6X2-H1151 2101700	Teach-by-wire or IO-Link	10	15	4-wire DC PNP	10-30 VDC	100	≤200	-25 to +70	IP67	PA12-GF30, PEI	PA	GN	YE	C	1	A18
BCT10-S30-UN6X2-H1151 2101800	Teach-by-wire or IO-Link	10	15	4-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	PA12-GF30, PEI	PA	GN	YE	C	2	A18
BCT10-S30-UP6X2T-H1151 2101500	Teach buttons or IO-Link	10	15	4-wire DC PNP	10-30 VDC	100	≤200	-25 to +70	IP67	PA12-GF30, PEI	PA	GN	YE	D	1	A18
BCT10-S30-UN6X2T-H1151 2101600	Teach buttons or IO-Link	10	15	4-wire DC NPN	10-30 VDC	100	≤200	-25 to +70	IP67	PA12-GF30, PEI	PA	GN	YE	D	2	A18

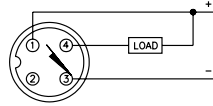
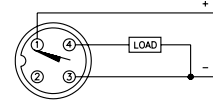
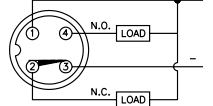
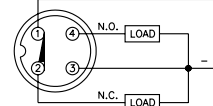
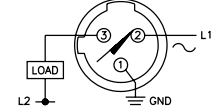
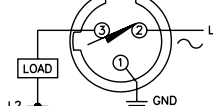
We reserve the right to make technical alterations without prior notice.



# Capacitive Sensors | 30 mm

## Metal Threaded Barrel with DC or AC Outputs

Housing Style	Dimension Drawings
	<p>A</p>  <p>30 mm - Eurofast Connector</p>
<p>B</p>  <p>30 mm - Microfast Connector</p>	

Wiring Diagrams/Mating Cordsets		
<p>1</p>  <p>Mating Cordset: RK 4T-*</p>	<p>2</p>  <p>Mating Cordset: RK 4T-*</p>	<p>3</p>  <p>Mating Cordset: RK 4.4T-*</p>
<p>4</p>  <p>Mating Cordset: RK 4.4T-*</p>	<p>5</p>  <p>Mating Cordset: KB 3T-*</p>	<p>6</p>  <p>Mating Cordset: KB 3T-*</p>

A11	3 and 4-wire DC Capacitive - (AP, RP, AN, RN, VN, VP)	
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 2-20% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math></p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p> <p>No-Load Current: <math>\leq 15\text{ mA}</math></p> <p>Power-On Effect: Per IEC 947-5-2</p>		<p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p> <p>Temperature Drift: <math>&lt; \pm 20\%</math> of Rated Operating Distance</p>
A12	2-wire AC Capacitive - (AZ, RZ)	
<p>Line Frequency: <math>\geq 50\text{ Hz}</math>... <math>\leq 60\text{ Hz}</math></p> <p>Differential Travel (Hysteresis): 2-20% (5% typical)</p> <p>Continuous Load Current: <math>\leq 500\text{ mA}</math></p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 7.0\text{ V}</math></p> <p>Off-State (Leakage) Current: <math>\leq 1.7\text{ mA}</math></p> <p>Minimum Load Current: <math>\geq 5.0\text{ mA}</math></p>		<p>Power-On Effect: Per IEC 947-5-2</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p> <p>Temperature Drift: <math>&lt; \pm 20\%</math> of Rated Operating Distance</p>

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



# Capacitive Sensors | 30 mm

## Metal Threaded Barrel with DC or AC Outputs

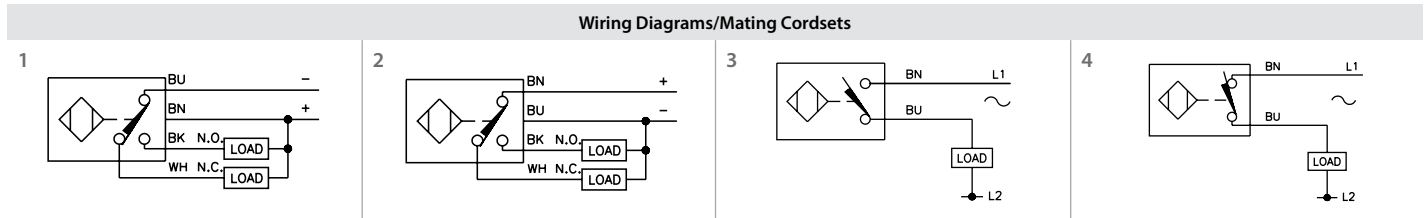
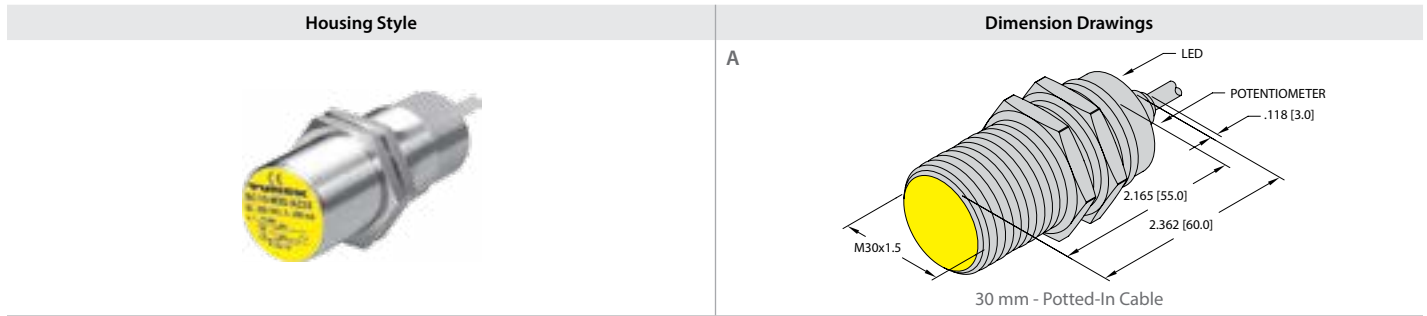
Part Number/ ID Number	Features	Embeddable Range (mm)	Nonembeddable Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing Material	Front Cap/Face	End Cap Material	Power LED	Output LED	Dimension Drawings	Wiring Diagrams	Spec List
BC10-M30K-AN4X-H1141 2503030		10	10	3-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	CPB	PA 12- GF30	PA 66-GF25-V0	N/A	YE	A	1	A11
BC10-M30K-AP4X-H1141 2503026		10	10	3-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	CPB	PA 12- GF30	PA 66-GF25-V0	N/A	YE	A	2	A11
BC10-M30K-VN4X-H1141 2503033	Comp. Outputs	10	10	4-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	CPB	PA 12- GF30	PA 66-GF25-V0	N/A	YE	A	3	A11
BC10-M30K-VP4X-H1141 2503035	Comp. Outputs	10	10	4-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	CPB	PA 12- GF30	PA 66-GF25-V0	N/A	YE	A	4	A11
BC10-M30K-AZ3X-B3131 2503034		10	10	2-wire AC N.O.	20-250 AC	20	≤500	-25 to +70	IP67	CPB	PA 12- GF30	PA 66-GF25-V0	N/A	YE	B	5	A12
BC10-M30K-RZ3X-B3131 2503023		10	10	2-wire AC N.C.	20-250 AC	20	≤500	-25 to +70	IP67	CPB	PA 12- GF30	PA 66-GF25-V0	N/A	YE	B	6	A12

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



# Capacitive Sensors | 30 mm

## Metal Threaded Barrel with DC or AC Outputs



A11	3 and 4-wire DC Capacitive - (AP, RP, AN, RN, VN, VP)	
<p data-bbox="402 871 539 892">Ripple: <math>\leq 10\%</math></p> <p data-bbox="217 898 643 919">Differential Travel (Hysteresis): 2-20% (5% typical)</p> <p data-bbox="133 926 545 947">Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p data-bbox="110 953 565 974">Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math></p> <p data-bbox="233 980 561 1001">Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p> <p data-bbox="321 1008 555 1029">No-Load Current: <math>\leq 15\text{ mA}</math></p> <p data-bbox="324 1035 613 1056">Power-On Effect: Per IEC 947-5-2</p>	<p data-bbox="915 871 1269 892">Reverse Polarity Protection: Incorporated</p> <p data-bbox="954 898 1269 919">Wire-Break Protection: Incorporated</p> <p data-bbox="967 926 1305 947">Transient Protection: Per EN 60947-5-2</p> <p data-bbox="1081 953 1253 974">Shock: 30 g, 11 ms</p> <p data-bbox="1055 980 1461 1001">Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p data-bbox="1023 1008 1425 1029">Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p> <p data-bbox="987 1035 1448 1056">Temperature Drift: <math>&lt; \pm 20\%</math> of Rated Operating Distance</p>	
A12	2-wire AC Capacitive - (AZ, RZ)	
<p data-bbox="331 1113 597 1134">Line Frequency: <math>\geq 50\text{...} \leq 60\text{ Hz}</math></p> <p data-bbox="217 1140 643 1161">Differential Travel (Hysteresis): 2-20% (5% typical)</p> <p data-bbox="253 1167 565 1188">Continuous Load Current: <math>\leq 500\text{ mA}</math></p> <p data-bbox="133 1194 545 1215">Voltage Drop Across Conducting Sensor: <math>\leq 7.0\text{ V}</math></p> <p data-bbox="233 1222 561 1243">Off-State (Leakage) Current: <math>\leq 1.7\text{ mA}</math></p> <p data-bbox="269 1249 555 1270">Minimum Load Current: <math>\geq 5.0\text{ mA}</math></p>	<p data-bbox="1000 1113 1289 1134">Power-On Effect: Per IEC 947-5-2</p> <p data-bbox="967 1140 1305 1161">Transient Protection: Per EN 60947-5-2</p> <p data-bbox="1081 1167 1253 1188">Shock: 30 g, 11 ms</p> <p data-bbox="1055 1194 1461 1215">Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p data-bbox="1023 1222 1425 1243">Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p> <p data-bbox="987 1249 1448 1270">Temperature Drift: <math>&lt; \pm 20\%</math> of Rated Operating Distance</p>	

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



## Capacitive Sensors | 30 mm

### Metal Threaded Barrel with DC or AC 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	Front Cap/Face	End Cap Material	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
BC10-M30K-VN4X 2503024	Comp. Outputs	10	10	4-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	CPB	PA 12-GF30	PA 66-GF25-V0	N/A	YE	2M/PVC	A	1	A11
BC10-M30K-VP4X 2503022	Comp. Outputs	10	10	4-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	CPB	PA 12-GF30	PA 66-GF25-V0	N/A	YE	2M/PVC	A	2	A11
BC10-M30K-AZ3X 2503031		10	10	2-wire AC N.O.	20-250 VAC	20	≤500	-25 to +70	IP67	CPB	PA 12-GF30	PA 66-GF25-V0	N/A	YE	2M/PVC	A	3	A12
BC10-M30K-RZ3X 2503025		10	10	2-wire AC N.C.	20-250 VAC	20	≤500	-25 to +70	IP67	CPB	PA 12-GF30	PA 66-GF25-V0	N/A	YE	2M/PVC	A	4	A12


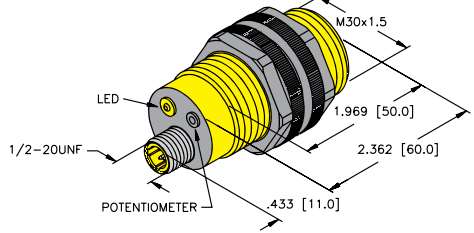
We reserve the right to make technical alterations without prior notice.





# Capacitive Sensors | 30 mm

## Plastic Threaded Barrels with Connectors and AC/DC Outputs

Housing Style	Dimension Drawings
	<p>A</p> <p>30 mm - Eurofast Connector</p>
<p>B</p>  <p>30 mm - Microfast Connector</p>	

Wiring Diagrams/Mating Cordsets		
<p>1</p> <p>Mating Cordset: RK 4.4T-*</p>	<p>2</p> <p>Mating Cordset: RK 4.4T-*</p>	<p>3</p> <p>Mating Cordset: KB 3T-*</p>
<p>4</p> <p>Mating Cordset: KB 3T-*</p>	<p>5</p> <p>Mating Cordset: RK 4T-*</p>	<p>6</p> <p>Mating Cordset: RK 4T-*</p>

A11 3 and 4-wire DC Capacitive - (AP, RP, AN, RN, VN, VP)		
<p>Ripple: <math>\leq 10\%</math></p> <p>Differential Travel (Hysteresis): 2-20% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math></p> <p>Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math></p> <p>Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math></p> <p>No-Load Current: <math>\leq 15\text{ mA}</math></p> <p>Power-On Effect: Per IEC 947-5-2</p>	<p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p> <p>Temperature Drift: <math>&lt; \pm 20\%</math> of Rated Operating Distance</p>	
A12 2-wire AC Capacitive - (AZ, RZ)		
<p>Line Frequency: <math>\geq 50\text{...} \leq 60\text{ Hz}</math></p> <p>Differential Travel (Hysteresis): 2-20% (5% typical)</p> <p>Continuous Load Current: <math>\leq 500\text{ mA}</math></p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 7.0\text{ V}</math></p> <p>Off-State (Leakage) Current: <math>\leq 1.7\text{ mA}</math></p> <p>Minimum Load Current: <math>\geq 5.0\text{ mA}</math></p>	<p>Power-On Effect: Per IEC 947-5-2</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p> <p>Temperature Drift: <math>&lt; \pm 20\%</math> of Rated Operating Distance</p>	

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



# 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


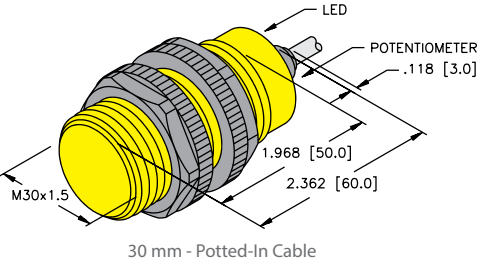
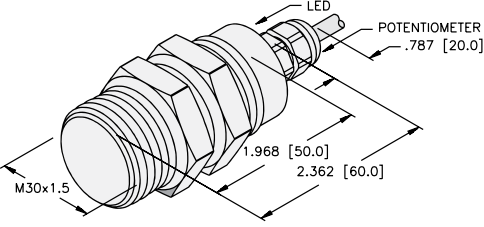
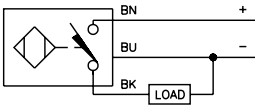
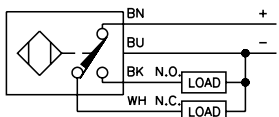
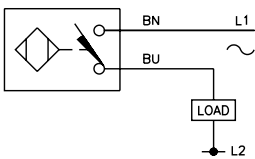
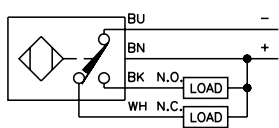
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Capacitive Sensors



# Capacitive Sensors | 30 mm

## Plastic Threaded Barrel with DC or AC Outputs

Housing Style	Dimension Drawings
	<p>A</p> 
<p>B</p> 	
Wiring Diagrams/Mating Cordsets	
<p>1</p> 	<p>2</p> 
<p>3</p> 	<p>4</p> 
A11 3 and 4-wire DC Capacitive - (AP, RP, AN, RN, VN, VP)	
<p>Ripple: <math>\leq 10\%</math>          Differential Travel (Hysteresis): 2-20% (5% typical)          Voltage Drop Across Conducting Sensor: <math>\leq 1.8\text{ V}</math>          Trigger Current for Short Circuit Protection: <math>\geq 220\text{ mA}</math>          Off-State (Leakage) Current: <math>\leq 0.1\text{ mA}</math>          No-Load Current: <math>\leq 15\text{ mA}</math>          Power-On Effect: Per IEC 947-5-2</p>	<p>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: <math>\leq 2\%</math> of Rated Operating Distance          Temperature Drift: <math>&lt; \pm 20\%</math> of Rated Operating Distance</p>
A12 2-wire AC Capacitive - (AZ, RZ)	
<p>Line Frequency: <math>\geq 50\text{...} \leq 60\text{ Hz}</math>          Differential Travel (Hysteresis): 2-20% (5% typical)          Continuous Load Current: <math>\leq 500\text{ mA}</math>          Voltage Drop Across Conducting Sensor: <math>\leq 7.0\text{ V}</math>          Off-State (Leakage) Current: <math>\leq 1.7\text{ mA}</math>          Minimum Load Current: <math>\geq 5.0\text{ mA}</math></p>	<p>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: <math>\leq 2\%</math> of Rated Operating Distance          Temperature Drift: <math>&lt; \pm 20\%</math> of Rated Operating Distance</p>

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



## Capacitive Sensors | 30 mm

### Plastic Threaded Barrel with DC or AC 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 2503038	Low Dielectric Targets	10	10	3-wire DC PNP	10-30 VDC	100	≤200	-25 to +70	IP67	PA 12-GF30	PA 66-GF25-V0	N/A	YE	A	1	A11
BC10-S30-VN4X 2506000	Comp. Outputs	10	15	4-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PA 12-GF30	PA 66-GF25-V0	N/A	YE	A	2	A11
BCF10-S30-VN4X 2506011	Noise Immune	10	15	4-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PA 12-GF30	PA 66-GF25-V0	N/A	YE	A	3	A11
BC10-S30-VP4X 2506110	Comp. Outputs	10	15	4-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	PA 12-GF30	PA 66-GF25-V0	N/A	YE	A	2	A11
BCF10-S30-VP4X 2506111	Noise Immune	10	15	4-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	PA 12-GF30	PA 66-GF25-V0	N/A	YE	A	2	A11
BC10-S30-AZ3X 2310700		10	15	2-wire AC	20-250 VAC	20	≤500	-25 to +70	IP67	PA 12-GF30	PA 66-GF25-V0	N/A	YE	A	4	A12
BCF10-S30-AZ3X 2506015	Noise Immune	10	15	2-wire AC	20-250 VAC	20	≤500	-25 to +70	IP67	PA 12-GF30	PA 66-GF25-V0	N/A	YE	A	4	A12
BC10-PT30-VN4X2 2507020	Chemical Resistant	10	15	4-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PVDF	PVDF	GN	YE	B	2	A11
BC10-PT30-VP4X2 2507010	Chemical Resistant	10	15	4-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	PVDF	PVDF	GN	YE	B	3	A11
BC10-PT30-AZ3X 2350001	Chemical Resistant	10	15	2-wire AC	20-250 VAC	20	≤500	-25 to +70	IP67	PVDF	PVDF	N/A	YE	B	4	A12


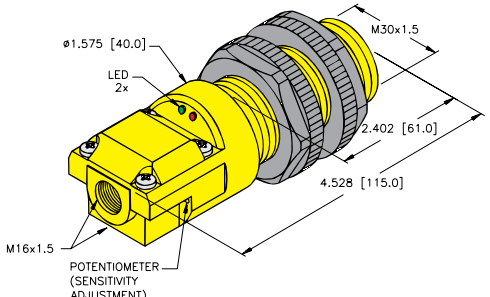
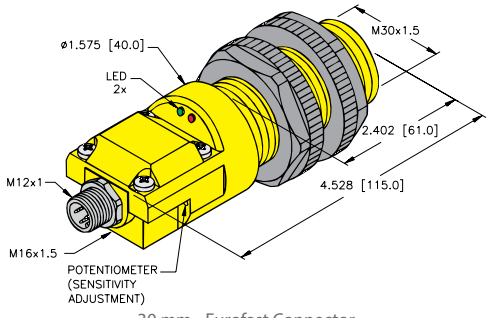
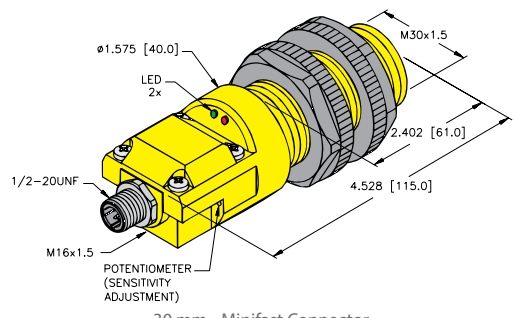
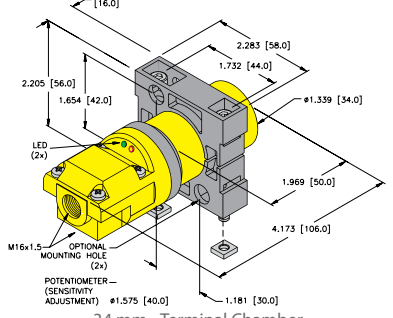
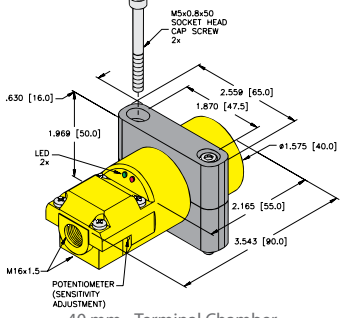
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Capacitive Sensors

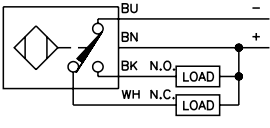
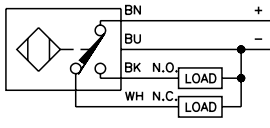
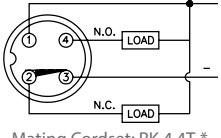
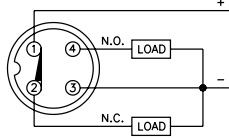
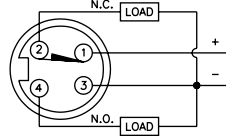


# Capacitive Sensors | 30, 34, & 40 mm

## Large Diameter Plastic Barrels with Terminal Chamber and 4-Wire DC Outputs

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>30 mm - Terminal Chamber</p>
<p><b>B</b></p>  <p>30 mm - Eurofast Connector</p>	<p><b>C</b></p>  <p>30 mm - Minifast Connector</p>
<p><b>D</b></p>  <p>34 mm - Terminal Chamber</p>	<p><b>E</b></p>  <p>40 mm - Terminal Chamber</p>

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

Wiring Diagrams/Mating Cordsets		
<p><b>1</b></p> 	<p><b>2</b></p> 	<p><b>3</b></p>  <p>Mating Cordset: RK 4.4T-*</p>
<p><b>4</b></p>  <p>Mating Cordset: RK 4.4T-*</p>	<p><b>5</b></p>  <p>Mating Cordset: RKM 40-*M</p>	

A11 3 and 4-wire DC Capacitive - (AP, RP, AN, RN, VN, VP)		
<p>Ripple: ≤10%</p> <p>Differential Travel (Hysteresis): 2-20% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: ≤1.8 V</p> <p>Trigger Current for Short Circuit Protection: ≥220 mA</p> <p>Off-State (Leakage) Current: ≤0.1 mA</p> <p>No-Load Current: ≤15 mA</p> <p>Power-On Effect: Per IEC 947-5-2</p>	<p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: ≤2% of Rated Operating Distance</p> <p>Temperature Drift: &lt;±20% of Rated Operating Distance</p>	



# Capacitive Sensors | 30, 34, & 40 mm

## Large Diameter Plastic Barrels with Terminal Chamber and 4-Wire 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
BC10-P30SR-VN4X2 25051	Comp. Outputs	10	15	4-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	ABS	ABS	GN	YE	A	1	A11
BC10-P30SR-VN4X2-H1141 2505192	Comp. Outputs	10	15	4-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	ABS	ABS	GN	YE	B	3	A11
BC10-P30SR-VP4X2 25050	Comp. Outputs	10	15	4-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	ABS	ABS	GN	YE	A	2	A11
BC10-P30SR-VP4X2-H1141 2505094	Comp. Outputs	10	15	4-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	ABS	ABS	GN	YE	B	4	A11
BC10-P30SR-VP4X2-B1141 2505092	Comp. Outputs	10	15	4-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	ABS	ABS	GN	YE	C	5	A11
BC15-K34SR-VN4X2 2502128	Comp. Outputs	15	23	4-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PBT-GF30-V0	ABS	GN	YE	D	1	A11
BC20-K40SR-VN4X2 25101	Comp. Outputs	20	30	4-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	ABS	ABS	GN	YE	E	1	A11
BC20-K40SR-VP4X2 25100	Comp. Outputs	20	30	4-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	ABS	ABS	GN	YE	E	2	A11


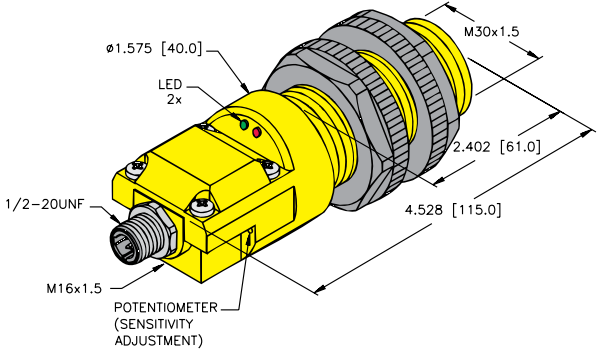
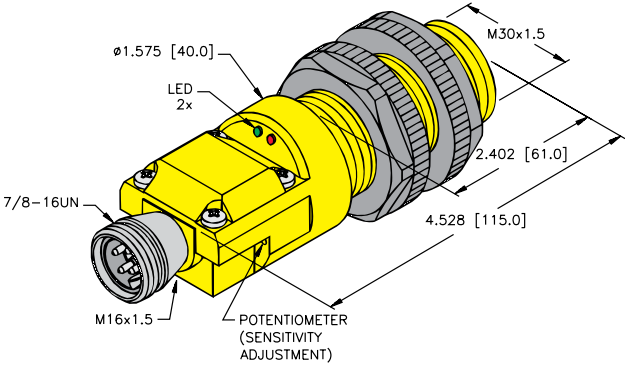
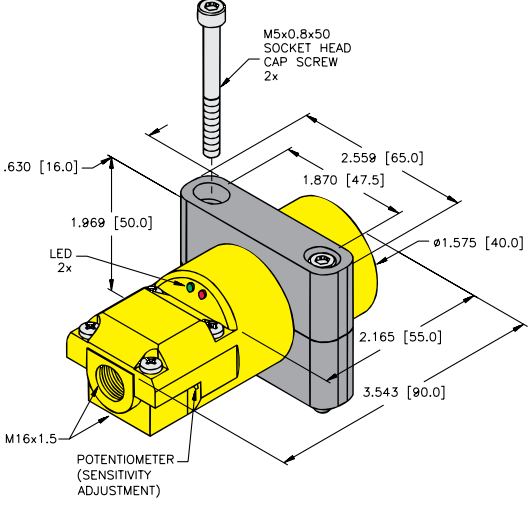
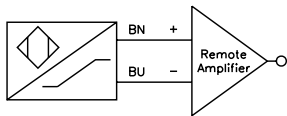
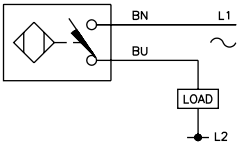
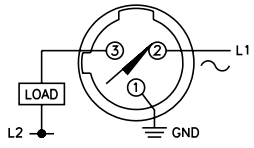
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Capacitive Sensors



# Capacitive Sensors | 30 & 40 mm

## Large Diameter Plastic Barrels with Terminal Chamber and AC Outputs

Housing Style	Dimension Drawings	
	<p><b>A</b></p>  <p>30 mm - Microfast Connector</p>	
<p><b>B</b></p>  <p>30 mm - Minifast Connector</p>	<p><b>C</b></p>  <p>40 mm - Terminal Chamber</p>	
Wiring Diagrams/Mating Cordsets		
<p><b>1</b></p> 	<p><b>2</b></p>  <p>Mating Cordset: KB 3T-*</p>	<p><b>3</b></p>  <p>Mating Cordset: RK 30-*M; RKM 30-*M</p>
A12 2-wire AC Capacitive - (AZ, RZ)		
<p>Line Frequency: <math>\geq 50 \dots \leq 60</math> Hz</p> <p>Differential Travel (Hysteresis): 2-20% (5% typical)</p> <p>Continuous Load Current: <math>\leq 500</math> mA</p> <p>Voltage Drop Across Conducting Sensor: <math>\leq 7.0</math> V</p> <p>Off-State (Leakage) Current: <math>\leq 1.7</math> mA</p> <p>Minimum Load Current: <math>\geq 5.0</math> mA</p>	<p>Power-On Effect: Per IEC 947-5-2</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p> <p>Temperature Drift: <math>&lt; \pm 20\%</math> of Rated Operating Distance</p>	

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



## Capacitive Sensors | 30 & 40 mm

### Large Diameter Plastic Barrels with Terminal Chamber and AC 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
BC10-P30SR-FZ3X2-B3131 2310491	Comp. Outputs	10	15	2-wire AC	20-250 AC	200	≤500	-25 to +70	IP67	ABS	ABS	GN	YE	A	2	A12
BC10-P30SR-FZ3X2-B1131 2310490	Comp. Outputs	10	15	2-wire AC	20-250 AC	20	≤500	-25 to +70	IP67	ABS	ABS	GN	YE	B	3	A12
BC10-P30SR-FZ3X2-B2131 2310493	Comp. Outputs	10	15	2-wire AC	20-250 AC	20	≤500	-25 to +70	IP67	ABS	ABS	GN	YE	B	3	A12
BC20-K40SR-FZ3X2 23103	Prog. Outputs	20	30	2-wire AC	20-250 VAC	20	≤500	-25 to +70	IP67	ABS	ABS	GN	YE	C	1	A12


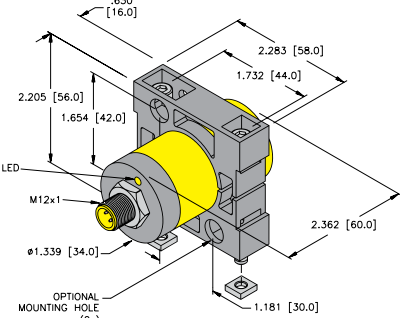
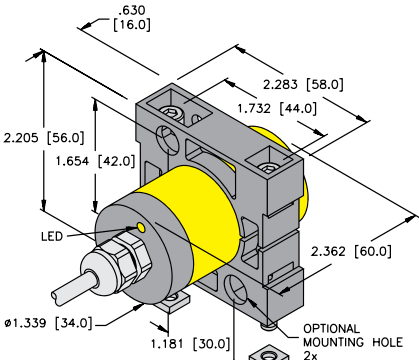
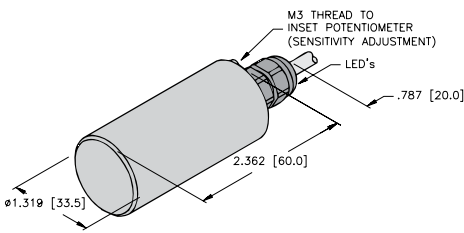
We reserve the right to make technical alterations without prior notice.

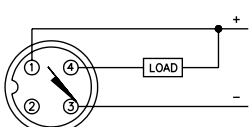
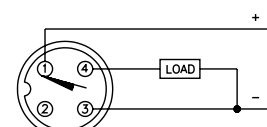
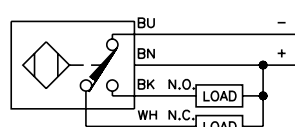
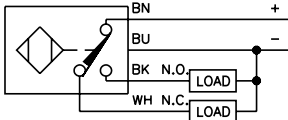
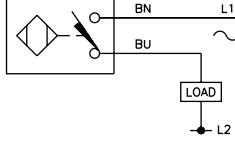




# Capacitive Sensors | K34

## Smooth Plastic Barrel with DC or AC Outputs

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>34 mm - Eurofast Connector</p>
<p><b>B</b></p>  <p>34 mm - Potted-In Cable</p>	<p><b>C</b></p>  <p>34 mm - Potted-In Cable</p>

Wiring Diagrams/Mating Cordsets		
<p><b>1</b></p>  <p>Mating Cordset: RK 4T-*</p>	<p><b>2</b></p>  <p>Mating Cordset: RK 4T-*</p>	<p><b>3</b></p> 
<p><b>4</b></p> 	<p><b>5</b></p> 	

A11	3 and 4-wire DC Capacitive - (AP, RP, AN, RN, VN, VP)	
<p>Ripple: ≤10%</p> <p>Differential Travel (Hysteresis): 2-20% (5% typical)</p> <p>Voltage Drop Across Conducting Sensor: ≤1.8 V</p> <p>Trigger Current for Short Circuit Protection: ≥220 mA</p> <p>Off-State (Leakage) Current: ≤0.1 mA</p> <p>No-Load Current: ≤15 mA</p> <p>Power-On Effect: Per IEC 947-5-2</p>	<p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Incorporated</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: ≤2% of Rated Operating Distance</p> <p>Temperature Drift: &lt;±20% of Rated Operating Distance</p>	
A12	2-wire AC Capacitive - (AZ, RZ)	
<p>Line Frequency: ≥50... ≤60 Hz</p> <p>Differential Travel (Hysteresis): 2-20% (5% typical)</p> <p>Continuous Load Current: ≤500 mA</p> <p>Voltage Drop Across Conducting Sensor: ≤7.0 V</p> <p>Off-State (Leakage) Current: ≤1.7 mA</p> <p>Minimum Load Current: ≥5.0 mA</p>	<p>Power-On Effect: Per IEC 947-5-2</p> <p>Transient Protection: Per EN 60947-5-2</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude, in all 3 Planes</p> <p>Repeatability: ≤2% of Rated Operating Distance</p> <p>Temperature Drift: &lt;±20% of Rated Operating Distance</p>	

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



# Capacitive Sensors | K34

## Smooth Plastic Barrel with DC or AC Outputs

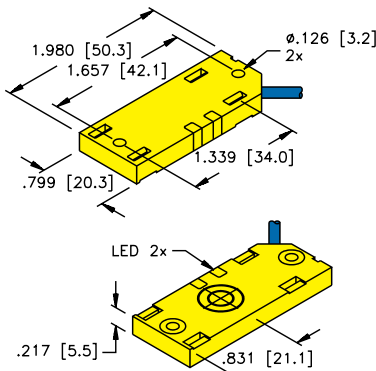
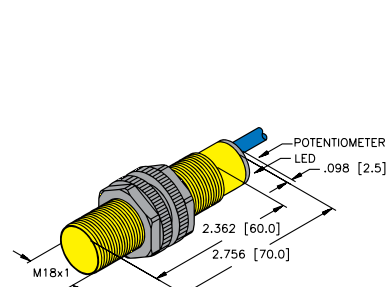
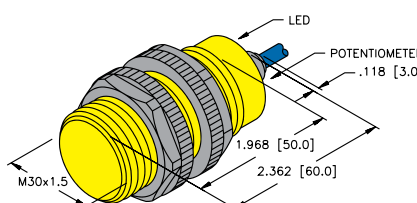
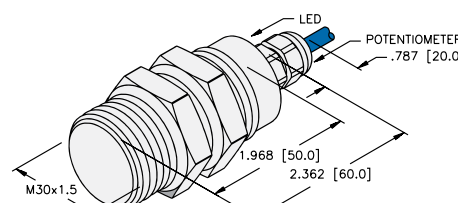
Part Number/ ID Number	Features	Embeddable Range (mm)	Nonembeddable Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing Material	End Cap Material	Power LED	Output LED	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
BC15-K34-AN4X-H1141 2502125		15	23	3-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PBT- GF30-V0	ABS	N/A	YE	--	A	1	A11
BC15-K34-AP4X-H1141 2502126		15	23	3-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	PBT- GF30-V0	ABS	N/A	YE	--	A	2	A11
BC15-K34-VN4X 2502127	Comp. Outputs	15	23	4-wire DC NPN	10-65 VDC	100	≤200	-25 to +70	IP67	PBT- GF30-V0	ABS	N/A	YE	2M/PVC	B	3	A11
BC15-K34-VP4X 2502124	Comp. Outputs	15	23	4-wire DC PNP	10-65 VDC	100	≤200	-25 to +70	IP67	PBT- GF30-V0	ABS	N/A	YE	2M/PVC	B	4	A11
BC15-K34-AZ3X 2310008		15	23	2-wire AC	20-250 VAC	20	≤500	-25 to +70	IP67	PBT- GF30-V0	ABS	N/A	YE	2M/PVC	B	5	A12
BCF15-K34-AZ3X 2502136	Noise Immune	15	23	2-wire AC	20-250 VAC	20	≤500	-25 to +70	IP67	PBT- GF30-V0	ABS	N/A	YE	2M/PVC	B	5	A12
NC20-KT34-VP4X2 2550300	Chemical Resistant Comp. Output	N/A	20	4-wire DC PNP	10-65 VDC	200	≤200	-25 to +70	IP67	PVDF	PVDF	GN	YE	2M/ PVDF	C	4	A11

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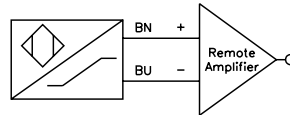
# Capacitive Sensors | Namur

Intrinsically Safe 

Housing Style	Dimension Drawings
<p><b>A</b></p>  <p>5.5 mm - Potted-In Cable</p>	<p><b>B</b></p>  <p>18 mm - Potted-In Cable</p>
<p><b>C</b></p>  <p>30 mm - Potted-In Cable</p>	<p><b>D</b></p>  <p>30 mm - Potted-In Cable</p>

## Wiring Diagrams/Mating Cordsets

1



A19

### 2-wire DC NAMUR Capacitive- (Y0 and Y1)

<p>Differential Travel (Hysteresis): 1-20%</p> <p>Nominal Voltage: 8.2 VDC (EN60947-5-6)</p> <p>Non-activated Current Consumption: <math>\leq 1.2</math> mA</p> <p>Activated Current Consumption: <math>\geq 2.1</math> mA</p> <p>Recommended Switching Point for Remote Amplifier: <math>&gt; 1.2</math> to <math>&lt; 2.1</math> mA, typ. 1.55 mA ON/1.75 mA OFF</p>	<p>Power-On Effect: Realized in Amplifier</p> <p>Reverse Polarity Protection: Incorporated</p> <p>Wire-Break Protection: Realized in Amplifier</p> <p>Transient Protection: Realized in Amplifier</p> <p>Shock: 30 g, 11 ms</p> <p>Vibration: 55 Hz, 1 mm Amplitude in all 3 Planes</p> <p>Repeatability: <math>\leq 2\%</math> of Rated Operating Distance</p>
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#### Amplifier Note:

Inductive sensors with Namur outputs are typically used in hazardous locations and the approval agencies require the use of an amplifier to regulate the signals in the hazardous area. Due to the wide variety of approvals, output options, and amplifier designs, it is not possible to incorporate all of the choices in this catalog. For the most up to date information, please either search for these products under our interface technology product category ([www.turck.us](http://www.turck.us)) or contact us by phone.

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# Capacitive Sensors | Namur

Intrinsically Safe

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	Cable Length/Jacket	Dimension Drawings	Wiring Diagrams	Spec List
BC5-QF5.5-Y1X/S250 2030000		5	5	2-wire DC NAMUR	5-30 VDC	100	Remote	-25 to +70	IP67	PP	--	N/A	YE	2M/TPU	A	1	A19
BC5-S18-Y1X 20060		5	7.5	2-wire DC NAMUR	5-30 VDC	100	Remote	-25 to +70	IP67	PA 12- GF30	PUR	N/A	YE	2M/PVC	B	1	A19
BC10-S30-Y1X 20100		10	15	2-wire DC NAMUR	5-30 VDC	100	Remote	-25 to +70	IP67	PA 12- GF30	PA 66-GF25-V0	N/A	YE	2M/PVC	C	1	A19
BC10-PT30-Y0X 2020000	Chemical Resistant	10	15	2-wire DC NAMUR	5-30 VDC	100	Remote	-25 to +70	IP67	PVDF	PVDF	N/A	YE	2M/ PVDF	D	1	A19

**Notes:**

/S250: Without switch point adjustment potentiometer

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# Notes

