





# Ultrasonics Sensor Selection Guide

Threaded Metal Barrel			
			
Housing	18 mm	18 mm	30 mm
Rated Operating Distance	40 - 130 cm	40 - 130 cm	40 - 600 cm
Pages	F3 - 6	F7 - 10	F11

	Hazardous ATEX and IECEx Approval	Rectangular	
			
Housing	18 and 30 mm	40 mm	40 mm
Rated Operating Distance	40 - 600 cm	200 cm	200 cm
Pages	F13	F15	F15

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



## Ultrasonic Sensors

The M18 and M30 ultrasonic sensors feature smooth transducer faces, short blind zones, adjustable sensing fields, and robust chrome plated brass barrels, along with multiple options for outputs and configurations that enable users to select the best design for their application.

Output configurations range from a single output with an adjustable set point to versions with configurable outputs either as dual set point, analog, window, retroreflective, or IO-Link. Sensors can be taught via wire, integral buttons, or IO-Link.

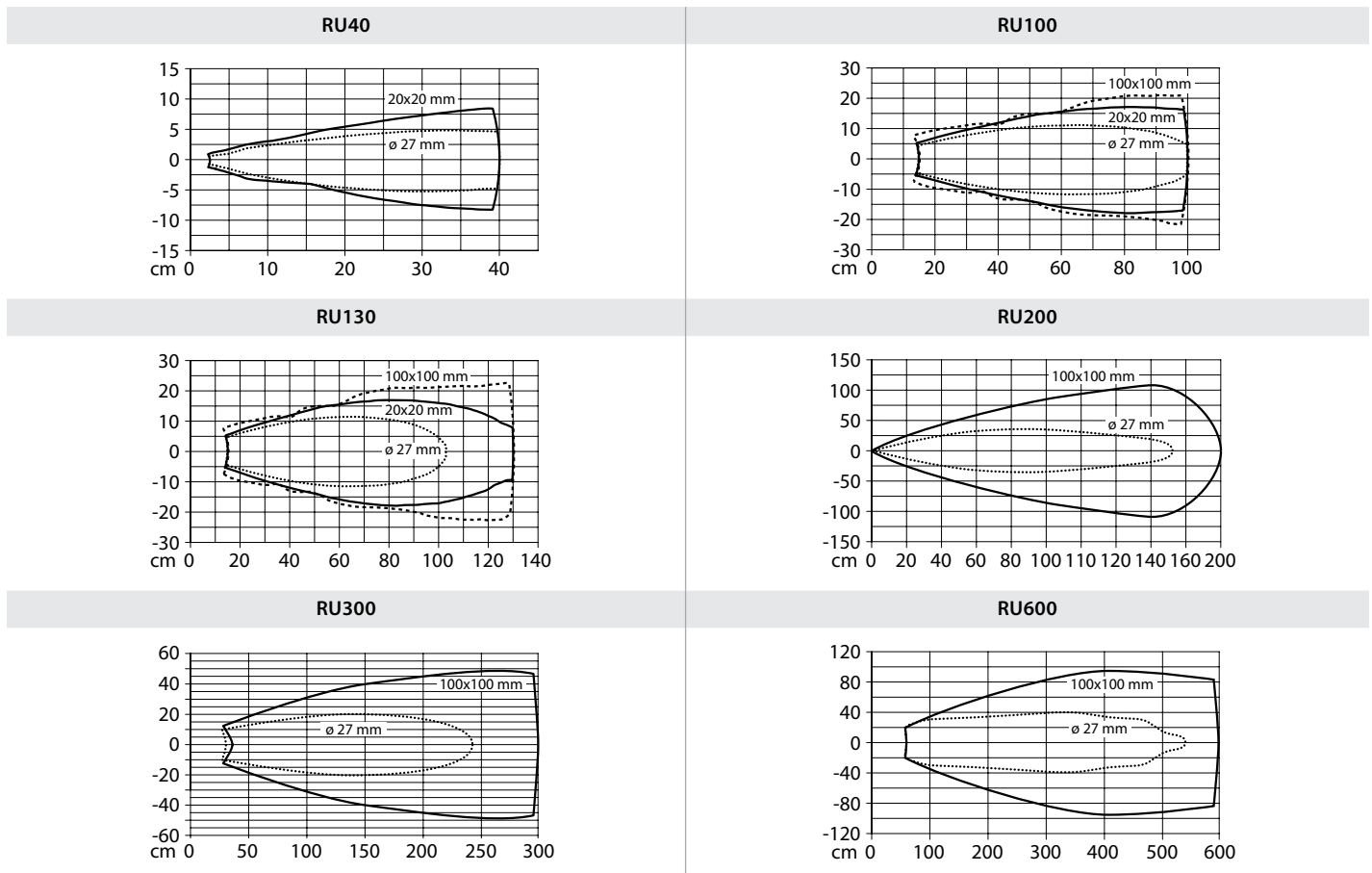
Certain M18 and M30 versions are available with ATEX and IECEx approvals for environments that have dust or gases which could be ignited and cause a fire or explosion.

The CK40 and CP40 rectangular ultrasonic sensor family uses separate transducers for the transmitter and receiver, giving these sensors a 60° sonic cone angle for detecting targets, which is much larger than what is possible with the M18 or M30 barrels.

### Performance Curves


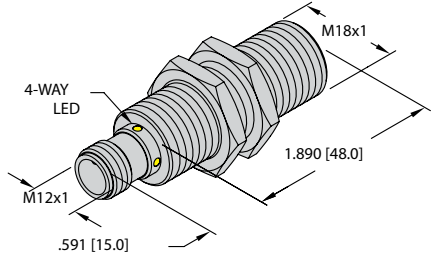
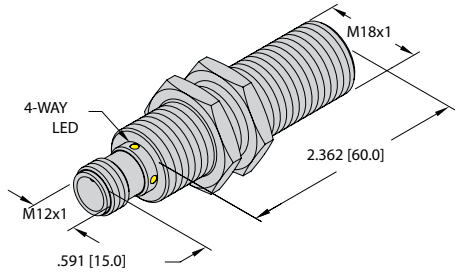
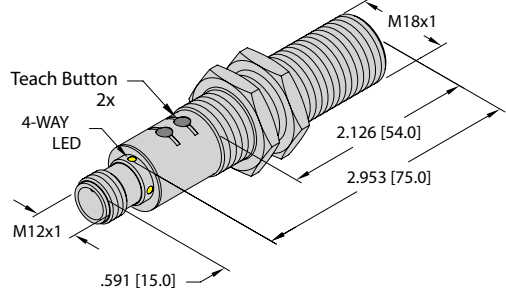
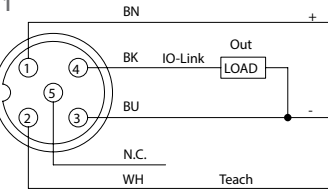
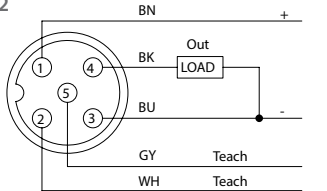
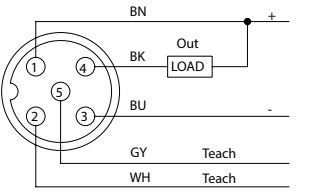
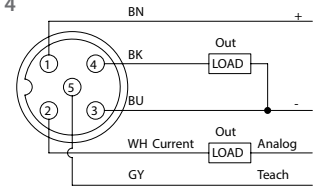
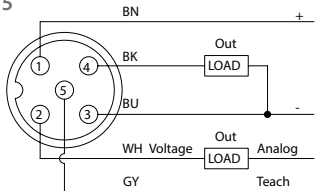
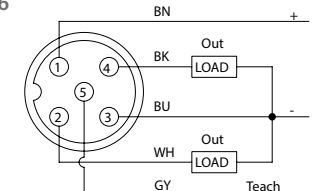
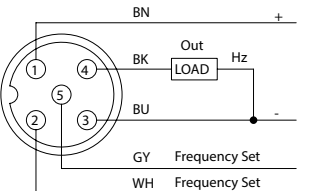
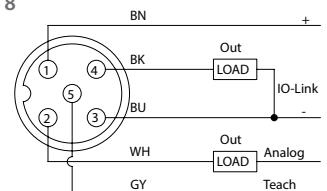
The diagrams show the detection ranges of the individual ultrasonic sensors, covering ranges of 40 to 600 cm. Different targets are used in sizes 20 x 20 mm, and 100 x 100 mm according to the EN standard 60947-5-2, as well as a round rod with a diameter of 27 mm in order to compare the detection ranges of different ultrasonic sensors. When using other targets than the standard ones, the detection ranges may vary due to different reflection properties and geometries.

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



# Ultrasonics Sensors | 18 mm

## Front Sensing Transducer

Housing Style	Dimension Drawings		
	<p><b>A</b></p>  <p>18 mm - Metal Barrel with M12 Eurofast Connection, Teach-by-Wire</p>		
<p><b>B</b></p>  <p>18 mm - Metal Barrel with M12 Eurofast Connection, Teach-by-Wire</p>	<p><b>C</b></p>  <p>18 mm - Metal Barrel with M12 Eurofast Connection, Teach-by-Wire or Button</p>		
Wiring Diagrams/Mating Cordsets			
<p><b>1</b></p>  <p>Mating Cordset: RK 4.4T-*</p>	<p><b>2</b></p>  <p>Mating Cordset: RK 4.5T-*</p>	<p><b>3</b></p>  <p>Mating Cordset: RK 4.5T-*</p>	<p><b>4</b></p>  <p>Mating Cordset: RK 4.5T-*</p>
<p><b>5</b></p>  <p>Mating Cordset: RK 4.5T-*</p>	<p><b>6</b></p>  <p>Mating Cordset: RK 4.5T-*</p>	<p><b>7</b></p>  <p>Mating Cordset: RK 4.5T-*</p>	<p><b>8</b></p>  <p>Mating Cordset: RK 4.5T-*</p>
A30 Ultrasonic Barrels			
<p>Operating Voltage: 15-30 VDC</p> <p>Voltage Drop Across Conducting Sensor: ≤2.5 V</p> <p>Continuous Switching Current: ≤150 mA</p> <p>No-Load Current: ≤50 mA</p> <p>Residual Current: ≤0.1 mA</p> <p>Load Resistance: ≤1000 Ω</p> <p>Readiness Delay: ≤300 ms</p> <p>Repeatability: 0.15% of full scale</p> <p>Switching Output: Programmable NO or NC</p>	<p>Frequency Output (where applicable): 240-1600 Hz or 0-400 Hz Selectable</p> <p>Short-Circuit Protection: Yes</p> <p>Reverse Polarity Protection: Yes</p> <p>Operating Temp: -25 to +70 °C</p> <p>Temperature Drift: 1.5% of full scale</p> <p>Internal Protection Rating: IP67</p> <p>Housing Material: CPB</p> <p>Transducer Material: PET/PU/Epoxy</p> <p>LED: Yellow/Green</p>		

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# Ultrasonics Sensors | 18 mm

## Front Sensing Transducer

Part Number/ ID Number	Rated Operating Distance (cm)	1 X PNP Output	1 X NPN Output	2 X PNP Output	2X PNP/NPN or Programmable 4-20 mA/0-10v Analog & 1 X PNP/NPN output	Analog 0-10v	Analog 4-20mA	Frequency Output	Retroreflective Programmable	Retroreflective Only	Window Mode Programmable	IO-Link V1.1 	Blind Zone (cm)	Sonic Cone Angle	Resolution (mm)	Switching Hyst. (mm)	Max Approach Speed	Max Pass Speed	Switching Freq. (Hz)	Dimension Drawings	Wiring Diagrams	Spec List
RU40U-M18M-AP8X2-H1151 1610094	40	●										●	2.5	9°	0.5	5	≤ 4 m/s	≤ 1.5 m/s	7	A	1	A30
RU40U-M18M-UP8X2-H1151 1610008	40	●											2.5	9°	0.5	5	≤ 4 m/s	≤ 1.5 m/s	7	A	2	A30
RU40U-M18M-UN8X2-H1151 1610080	40		●										2.5	9°	0.5	5	≤ 4 m/s	≤ 1.5 m/s	7	A	3	A30
RU40U-M18E-LI8X2-H1151 1610069	40	● <sup>1</sup>					●						2.5	9°	0.5	5	≤ 4 m/s	≤ 1.5 m/s	7	B	4	A30
RU40U-M18E-LU8X2-H1151 1610109	40	● <sup>1</sup>				●							2.5	9°	0.5	5	≤ 4 m/s	≤ 1.5 m/s	7	B	5	A30
RU40U-M18E-2UP8X2-H1151 1610012	40			●					●		●		2.5	9°	0.5	5	≤ 4 m/s	≤ 1.5 m/s	7	B	6	A30
RU40U-M18E-2UP8X2T-H1151 1610016	40			●					●		●		2.5	9°	0.5	5	≤ 4 m/s	≤ 1.5 m/s	7	C	6	A30
RU40U-M18M-LFX-H1151 1610021	40							●					2.5	9°	0.5	5	≤ 4 m/s	≤ 1.5 m/s	7	A	7	A30
RU40L-M18M-UP8X2-H1151 1610076	40	●								●			2.5	9°	0.5	5	≤ 4 m/s	≤ 1.5 m/s	7	A	2	A30
RU40L-M18M-UN8X2-H1151 1610084	40		●							●			2.5	9°	0.5	5	≤ 4 m/s	≤ 1.5 m/s	7	A	3	A30
RU40U-M18E-LIU2PN8X2T-H1151 1610024	40				●				●		● <sup>2</sup>		2.5	9°	0.5	5	≤ 4 m/s	≤ 1.5 m/s	7	C	8	A30

<sup>1</sup> Switching output is not adjustable

<sup>2</sup> Multiplexing and synchronization modes supported


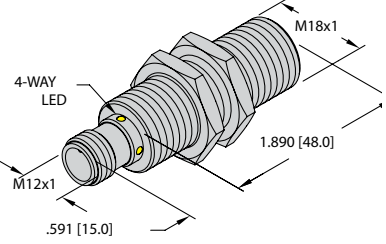
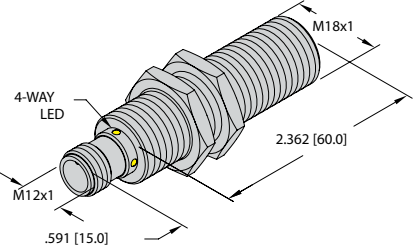
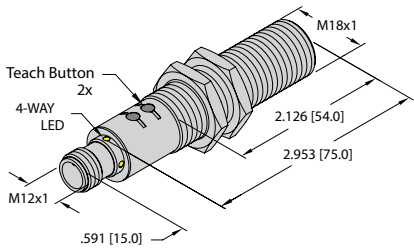
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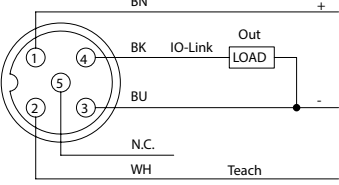
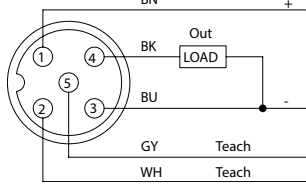
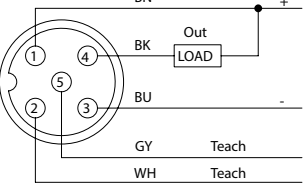
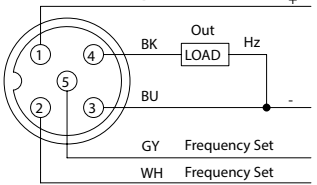
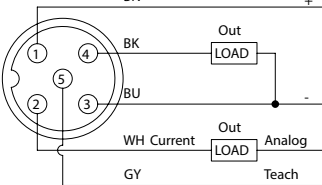
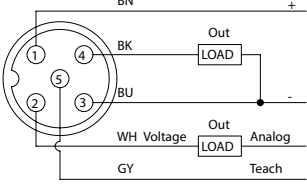
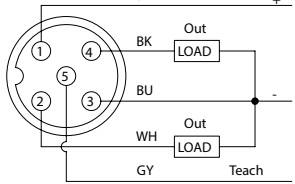
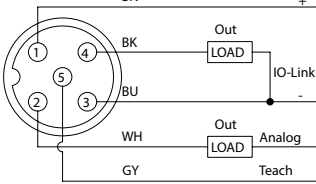
Ultrasonic Sensors



# Ultrasonics Sensors | 18 mm

## Front Sensing Transducer

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>18 mm - Metal Barrel with M12 Eurofast Connection, Teach-by-Wire</p>
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<p><b>4</b></p>  <p>Mating Cordset: RK 4.5T-*</p>	<p><b>5</b></p>  <p>Mating Cordset: RK 4.5T-*</p>	<p><b>6</b></p>  <p>Mating Cordset: RK 4.5T-*</p>
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A30 Ultrasonic Barrels	
<p>Operating Voltage: 15-30 VDC</p> <p>Voltage Drop Across Conducting Sensor: ≤2.5 V</p> <p>Continuous Switching Current: ≤150 mA</p> <p>No-Load Current: ≤50 mA</p> <p>Residual Current: ≤0.1 mA</p> <p>Load Resistance: ≤1000 Ω</p> <p>Readiness Delay: ≤300 ms</p> <p>Repeatability: 0.15% of full scale</p> <p>Switching Output: Programmable NO or NC</p>	<p>Frequency Output (where applicable): 240-1600 Hz or 0-400 Hz Selectable</p> <p>Short-Circuit Protection: Yes</p> <p>Reverse Polarity Protection: Yes</p> <p>Operating Temp: -25 to +70 °C</p> <p>Temperature Drift: 1.5% of full scale</p> <p>Internal Protection Rating: IP67</p> <p>Housing Material: CPB</p> <p>Transducer Material: PET/PU/Epoxy</p> <p>LED: Yellow/Green</p>

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# Ultrasonics Sensors | 18 mm

## Front Sensing Transducer

Part Number/ ID Number	Rated Operating Distance (cm)	1 X PNP Output	1 X NPN Output	2 X PNP Output	2X PNP/NPN or Programmable 4-20 mA/0-10v Analog & 1 X PNP/NPN output	Analog 0-10v	Analog 4-20mA	Frequency Output	Retroreflective Programmable	Retroreflective Only	Window Mode Programmable	IO-Link V1.1	Blind Zone (cm)	Sonic Cone Angle	Resolution (mm)	Switching Hyst. (mm)	Max Approach Speed	Max Pass Speed	Switching Freq. (Hz)	Dimension Drawings	Wiring Diagrams	Spec List
RU100U-M18M-AP8X2-H1151 1610095	100	●										●	15	16°	1	10	≤ 8 m/s	≤ 1.5 m/s	8	A	1	A30
RU100U-M18M-UP8X2-H1151 1610010	100	●											15	16°	1	10	≤ 8 m/s	≤ 1.5 m/s	8	A	2	A30
RU100U-M18M-UN8X2-H1151 1610081	100		●										15	16°	1	10	≤ 8 m/s	≤ 1.5 m/s	8	A	3	A30
RU100U-M18M-LFX-H1151 1610022	100						●						15	16°	1	10	≤ 8 m/s	≤ 1.5 m/s	8	A	4	A30
RU100L-M18M-UP8X2-H1151 1610077	100	●								●			15	16°	1	10	≤ 8 m/s	≤ 1.5 m/s	8	A	2	A30
RU100L-M18M-UN8X2-H1151 1610085	100		●							●			15	16°	1	10	≤ 8 m/s	≤ 1.5 m/s	8	A	3	A30
RU130U-M18E-LI8X2-H1151 1610089	130	● <sup>1</sup>					●						15	16°	1	10	≤ 8 m/s	≤ 1.5 m/s	8	B	5	A30
RU130U-M18E-LU8X2-H1151 1610110	130	● <sup>1</sup>				●							15	16°	1	10	≤ 8 m/s	≤ 1.5 m/s	8	B	6	A30
RU130U-M18E-2UP8X2-H1151 1610014	130			●					●		●		15	16°	1	10	≤ 8 m/s	≤ 1.5 m/s	8	B	7	A30
RU130U-M18E-2UP8X2T-H1151 1610018	130			●					●		●		15	16°	1	10	≤ 8 m/s	≤ 1.5 m/s	8	C	7	A30
RU130U-M18E-LIU2PN8X2T-H1151 1610026	130				●				●		●	● <sup>2</sup>	15	16°	1	10	≤ 8 m/s	≤ 1.5 m/s	8	C	8	A30

<sup>1</sup> Switching output is not adjustable

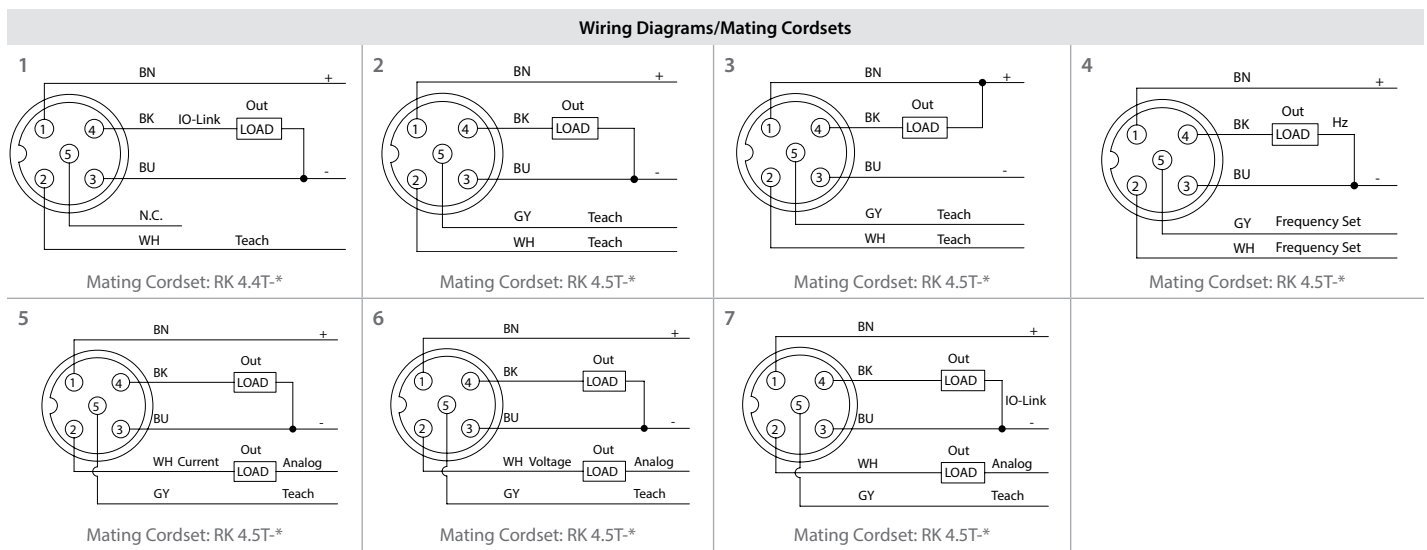
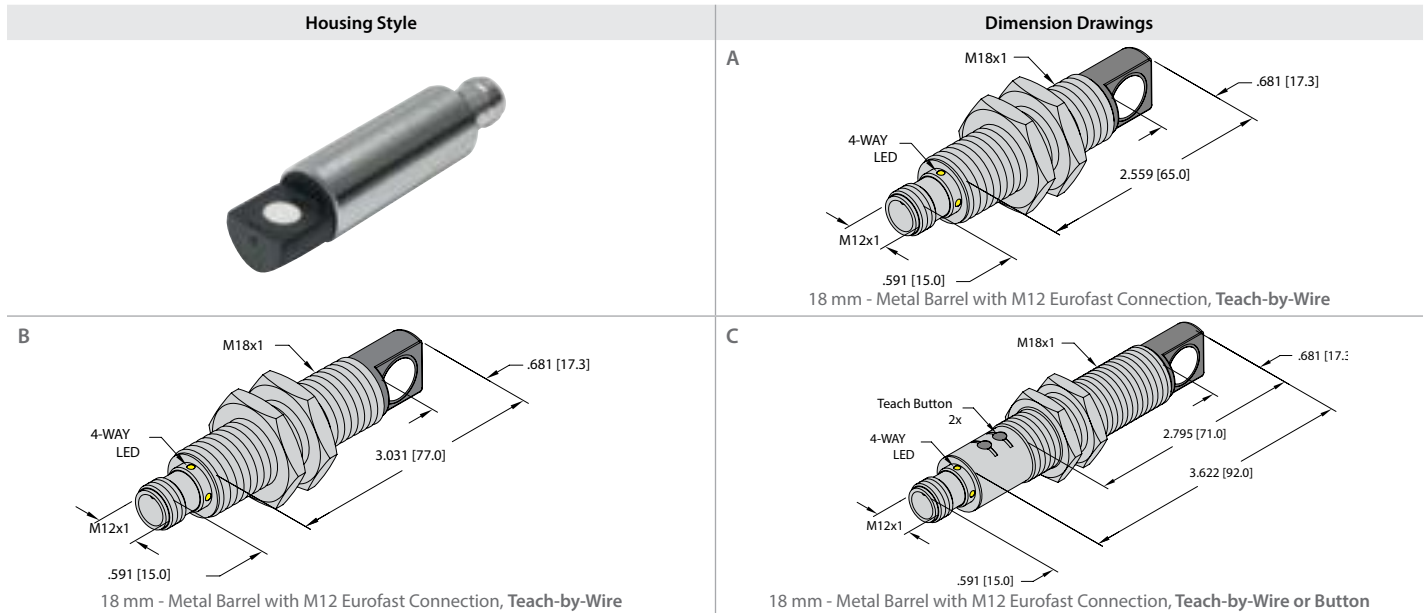
<sup>2</sup> Multiplexing and synchronization modes supported

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# Ultrasonics Sensors | 18 mm

## Side Sensing Transducer



A30 Ultrasonic Barrels		Ultrasonic Barrels	
<p>Operating Voltage: 15-30 VDC</p> <p>Voltage Drop Across Conducting Sensor: ≤2.5 V</p> <p>Continuous Switching Current: ≤150 mA</p> <p>No-Load Current: ≤50 mA</p> <p>Residual Current: ≤0.1 mA</p> <p>Load Resistance: ≤1000 Ω</p> <p>Readiness Delay: ≤300 ms</p> <p>Repeatability: 0.15% of full scale</p> <p>Switching Output: Programmable NO or NC</p>	<p>Frequency Output (where applicable): 240-1600 Hz or 0-400 Hz Selectable</p> <p>Short-Circuit Protection: Yes</p> <p>Reverse Polarity Protection: Yes</p> <p>Operating Temp: -25 to +70 °C</p> <p>Temperature Drift: 1.5% of full scale</p> <p>Internal Protection Rating: IP67</p> <p>Housing Material: CPB</p> <p>Transducer Material: PET/PU/Epoxy</p> <p>LED: Yellow/Green</p>		

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# Ultrasonics Sensors | 18 mm

## Side Sensing Transducer

Part Number/ ID Number	Rated Operating Distance (cm)	1 X PNP Output	1 X NPN Output	2X PNP/NPN or Programmable 4-20 mA/0-10 v Analog & 1 X PNP/NPN output	Analog 0-10v	Analog 4-20mA	Frequency Output	Retroreflective Programmable	Retroreflective Only	Window Mode Programmable	IO-Link V1.1	Blind Zone (cm)	Sonic Cone Angle	Resolution (mm)	Switching Hyst. (mm)	Max Approach Speed	Max Pass Speed	Switching Freq. (Hz)	Dimension Drawings	Wiring Diagrams	Spec List
RU40U-M18MS-AP8X2-H1151 1610105	40	●									●	2.5	9°	0.5	5	≤ 4 m/s	≤ 1.5 m/s	7	A	1	A30
RU40U-M18MS-UP8X2-H1151 1610009	40	●										2.5	9°	0.5	5	≤ 4 m/s	≤ 1.5 m/s	7	A	2	A30
RU40U-M18MS-UN8X2-H1151 1610082	40		●									2.5	9°	0.5	5	≤ 4 m/s	≤ 1.5 m/s	7	A	3	A30
RU40U-M18MS-LFX-H1151 1610019	40						●					2.5	9°	0.5	5	≤ 4 m/s	≤ 1.5 m/s	7	A	4	A30
RU40U-M18ES-LI8X2-H1151 1610097	40	● <sup>1</sup>				●						2.5	9°	0.5	5	≤ 4 m/s	≤ 1.5 m/s	7	B	5	A30
RU40U-M18ES-LU8X2-H1151 1610111	40	● <sup>1</sup>			●							2.5	9°	0.5	5	≤ 4 m/s	≤ 1.5 m/s	7	B	6	A30
RU40L-M18MS-UP8X2-H1151 1610078	40	●							●			2.5	9°	0.5	5	≤ 4 m/s	≤ 1.5 m/s	7	A	2	A30
RU40L-M18MS-UN8X2-H1151 1610086	40		●						●			2.5	9°	0.5	5	≤ 4 m/s	≤ 1.5 m/s	7	A	3	A30
RU40U-M18ES-LIU2PN8X2T-H1151 1610025	40			●				●		● <sup>2</sup>		2.5	9°	0.5	5	≤ 4 m/s	≤ 1.5 m/s	7	C	7	A30

<sup>1</sup> Switching output is not adjustable

<sup>2</sup> Multiplexing and synchronization modes supported


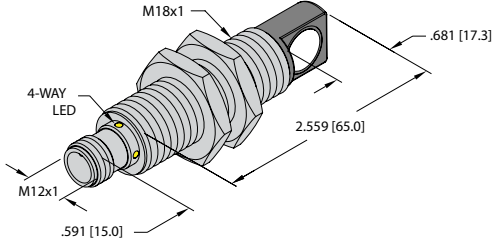
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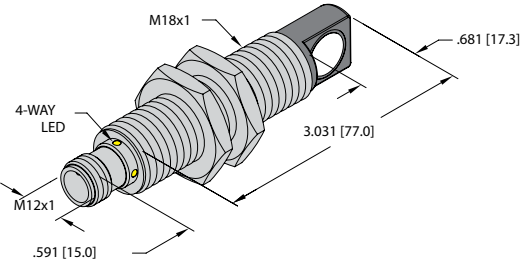
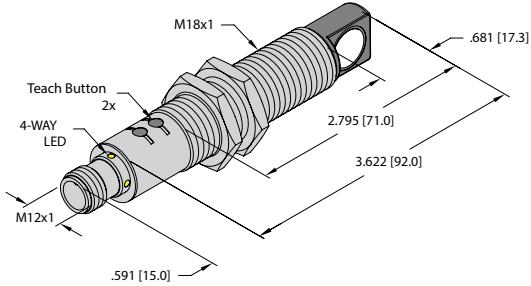


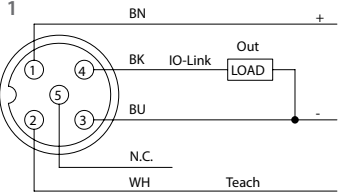
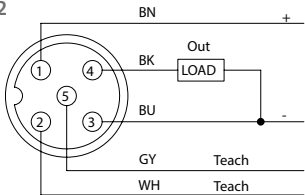
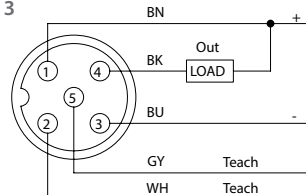
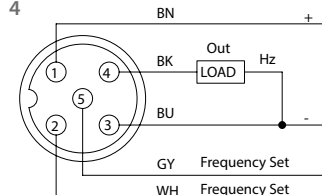
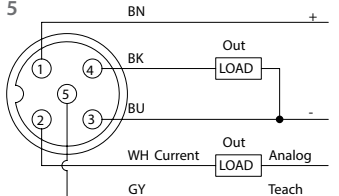
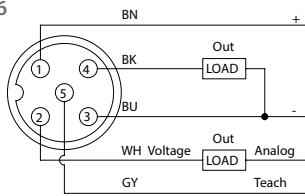
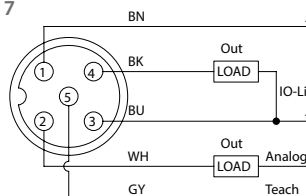


# Ultrasonics Sensors | 18 mm

## Side Sensing Transducer

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>18 mm - Metal Barrel with M12 Eurofast Connection, Teach-by-Wire</p>

<p><b>B</b></p>  <p>18 mm - Metal Barrel with M12 Eurofast Connection, Teach-by-Wire</p>	<p><b>C</b></p>  <p>18 mm - Metal Barrel with M12 Eurofast Connection, Teach-by-Wire or Button</p>
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Wiring Diagrams/Mating Cordsets			
<p><b>1</b></p>  <p>Mating Cordset: RK 4.4T-*</p>	<p><b>2</b></p>  <p>Mating Cordset: RK 4.5T-*</p>	<p><b>3</b></p>  <p>Mating Cordset: RK 4.5T-*</p>	<p><b>4</b></p>  <p>Mating Cordset: RK 4.5T-*</p>
<p><b>5</b></p>  <p>Mating Cordset: RK 4.5T-*</p>	<p><b>6</b></p>  <p>Mating Cordset: RK 4.5T-*</p>	<p><b>7</b></p>  <p>Mating Cordset: RK 4.5T-*</p>	

A30 Ultrasonic Barrels			
<p>Operating Voltage: 15-30 VDC</p> <p>Voltage Drop Across Conducting Sensor: ≤2.5 V</p> <p>Continuous Switching Current: ≤150 mA</p> <p>No-Load Current: ≤50 mA</p> <p>Residual Current: ≤0.1 mA</p> <p>Load Resistance: ≤1000 Ω</p> <p>Readiness Delay: ≤300 ms</p> <p>Repeatability: 0.15% of full scale</p> <p>Switching Output: Programmable NO or NC</p>	<p>Frequency Output (where applicable): 240-1600 Hz or 0-400 Hz Selectable</p> <p>Short-Circuit Protection: Yes</p> <p>Reverse Polarity Protection: Yes</p> <p>Operating Temp: -25 to +70 °C</p> <p>Temperature Drift: 1.5% of full scale</p> <p>Internal Protection Rating: IP67</p> <p>Housing Material: CPB</p> <p>Transducer Material: PET/PU/Epoxy</p> <p>LED: Yellow/Green</p>		

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



# Ultrasonics Sensors | 18 mm

## Side Sensing Transducer

Part Number/ ID Number	Rated Operating Distance (cm)	1 X PNP Output	1 X NPN Output	2X PNP/NPN or Programmable 4-20 mA/0-10 V Analog & 1 X PNP/NPN output	Analog 0-10v	Analog 4-20mA	Frequency Output	Retroreflective Programmable	Retroreflective Only	Window Mode Programmable	IO-Link V1.1	Blind Zone (cm)	Sonic Cone Angle	Resolution (mm)	Switching Hyst. (mm)	Max Approach Speed	Max Pass Speed	Switching Freq. (Hz)	Dimension Drawings	Wiring Diagrams	Spec List
RU100U-M18MS-AP8X2-H1151 1610106	100	●									●	15	16°	1	10	≤ 8 m/s	≤ 1.5 m/s	8	A	1	A30
RU100U-M18MS-UP8X2-H1151 1610011	100	●										15	16°	1	10	≤ 8 m/s	≤ 1.5 m/s	8	A	2	A30
RU100U-M18MS-UN8X2-H1151 1610083	100		●									15	16°	1	10	≤ 8 m/s	≤ 1.5 m/s	8	A	3	A30
RU100U-M18MS-LFX-H1151 1610020	100					●						15	16°	1	10	≤ 8 m/s	≤ 1.5 m/s	8	A	4	A30
RU100L-M18MS-UP8X2-H1151 1610079	100	●							●			15	16°	1	10	≤ 8 m/s	≤ 1.5 m/s	8	A	2	A30
RU100L-M18MS-UN8X2-H1151 1610087	100		●						●			15	16°	1	10	≤ 8 m/s	≤ 1.5 m/s	8	A	3	A30
RU130U-M18ES-LI8X2-H1151 1610098	130	● <sup>1</sup>				●						15	16°	1	10	≤ 8 m/s	≤ 1.5 m/s	8	B	5	A30
RU130U-M18ES-LU8X2-H1151 1610112	130	● <sup>1</sup>			●							15	16°	1	10	≤ 8 m/s	≤ 1.5 m/s	8	B	6	A30
RU130U-M18ES-LIU2PN8X2T-H1151 1610027	130			●			●		●	● <sup>2</sup>		15	16°	1	10	≤ 8 m/s	≤ 1.5 m/s	8	C	7	A30

<sup>1</sup> Switching output is not adjustable


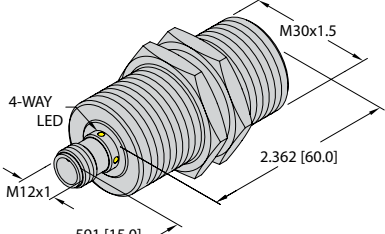
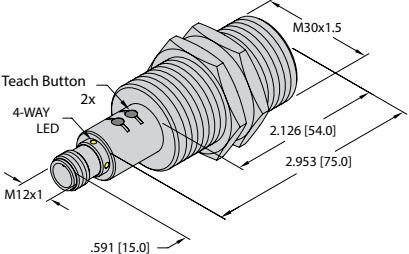
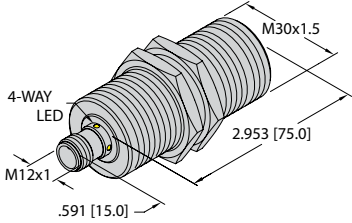
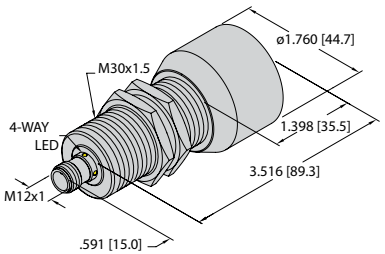
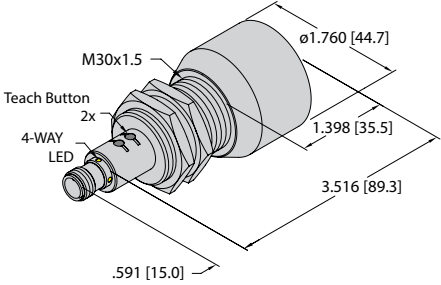
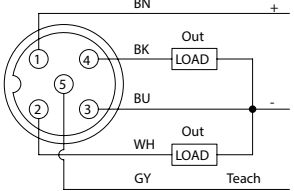
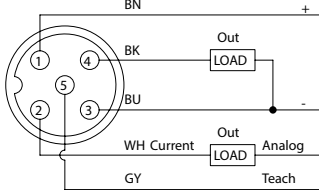
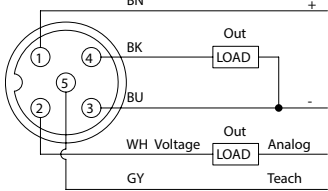
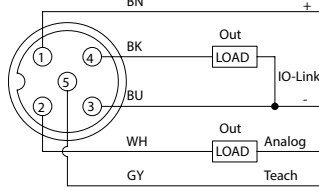
<sup>2</sup> Multiplexing and synchronization modes supported

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



# Ultrasonics Sensors | 30 mm

## Front Sensing Transducer

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>30 mm - Metal Barrel with M12 Eurofast Connection, Teach-by-Wire</p>
<p><b>B</b></p>  <p>30 mm - Metal Barrel with M12 Eurofast Connection, Teach-by-Wire or Button</p>	<p><b>C</b></p>  <p>30 mm - Metal Barrel with M12 Eurofast Connection, Teach-by-Wire</p>
<p><b>D</b></p>  <p>30 mm - Metal Barrel with M12 Eurofast Connection, Teach-by-Wire</p>	<p><b>E</b></p>  <p>30 mm - Metal Barrel with M12 Eurofast Connection, Teach-by-Wire or Button</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>
<p><b>3</b></p>  <p>Mating Cordset: RK 4.5T-*</p>	<p><b>4</b></p>  <p>Mating Cordset: RK 4.5T-*</p>
A30 Ultrasonic Barrels	
<p>Operating Voltage: 15-30 VDC</p> <p>Voltage Drop Across Conducting Sensor: ≤2.5 V</p> <p>Continuous Switching Current: ≤150 mA</p> <p>No-Load Current: ≤50 mA</p> <p>Residual Current: ≤0.1 mA</p> <p>Load Resistance: ≤1000 Ω</p> <p>Readiness Delay: ≤300 ms</p> <p>Repeatability: 0.15% of full scale</p> <p>Switching Output: Programmable NO or NC</p>	<p>Frequency Output (where applicable): 240-1600 Hz or 0-400 Hz Selectable</p> <p>Short-Circuit Protection: Yes</p> <p>Reverse Polarity Protection: Yes</p> <p>Operating Temp: -25 to +70 °C</p> <p>Temperature Drift: 1.5% of full scale</p> <p>Internal Protection Rating: IP67</p> <p>Housing Material: CPB</p> <p>Transducer Material: PET/PU/Epoxy</p> <p>LED: Yellow/Green</p>

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



# Ultrasonics Sensors | 30 mm

## Front Sensing Transducer

Part Number/ ID Number	Rated Operating Distance (cm)	1 X PNP Output	2 X PNP Output	2X PNP/NPN or Programmable 4-20 mA/0-10 V Analog & 1 X PNP/NPN output	Analog 0-10v	Analog 4-20mA	Retroreflective Programmable	Window Mode Programmable	IO-Link V1.1	Blind Zone (cm)	Sonic Cone Angle	Resolution (mm)	Switching Hyst. (mm)	Max Approach Speed	Max Pass Speed	Switching Freq. (Hz)	Dimension Drawings	Wiring Diagrams	Spec List
RU40U-M30M-2UP8X2-H1151 1610032	40		●				●	●		2.5	9°	0.5	5	≤ 4 m/s	≤ 1.5 m/s	7	A	1	A30
RU130U-M30M-2UP8X2-H1151 1610034	130		●				●	●		15	16°	1	10	≤ 8 m/s	≤ 1.5 m/s	8	A	1	A30
RU130U-M30E-2UP8X2T-H1151 1610038	130		●				●	●		15	16°	1	10	≤ 8 m/s	≤ 1.5 m/s	8	B	1	A30
RU130U-M30E-LIU2PN8X2T-H1151 1610046	130			●			●	●	● <sup>2</sup>	15	16°	1	10	≤ 8 m/s	≤ 1.5 m/s	8	B	4	A30
RU300U-M30M-2UP8X2-H1151 1610036	300		●				●	●		30	15°	1	25	≤ 8 m/s	≤ 1.5 m/s	4	C	1	A30
RU300U-M30E-LI8X2-H1151 1610099	300	● <sup>1</sup>				●				30	15°	1	25	≤ 8 m/s	≤ 1.5 m/s	4	A	2	A30
RU300U-M30E-LU8X2-H1151 1610113	300	● <sup>1</sup>			●					30	15°	1	25	≤ 8 m/s	≤ 1.5 m/s	4	A	3	A30
RU300U-M30E-2UP8X2T-H1151 1610040	300		●				●	●		30	15°	1	25	≤ 8 m/s	≤ 1.5 m/s	4	B	1	A30
RU300U-M30E-LIU2PN8X2T-H1151 1610048	300			●			●	●	● <sup>2</sup>	30	15°	1	25	≤ 8 m/s	≤ 1.5 m/s	4	B	4	A30
RU600U-M30M-2UP8X2-H1151 1610037	600		●				●	●		60	15°	1	50	≤ 9 m/s	≤ 3 m/s	1.6	D	1	A30
RU600U-M30E-LI8X2-H1151 1610100	600	● <sup>1</sup>				●				60	15°	1	50	≤ 9 m/s	≤ 3 m/s	1.6	D	2	A30
RU600U-M30E-LU8X2-H1151 1610114	600	● <sup>1</sup>			●					60	15°	1	50	≤ 9 m/s	≤ 3 m/s	1.6	D	3	A30
RU600U-M30E-2UP8X2T-H1151 1610041	600		●				●	●		60	15°	1	50	≤ 9 m/s	≤ 3 m/s	1.6	E	1	A30
RU600U-M30E-LIU2PN8X2T-H1151 1610049	600			●			●	●	● <sup>2</sup>	60	15°	1	50	≤ 9 m/s	≤ 3 m/s	1.6	E	4	A30

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


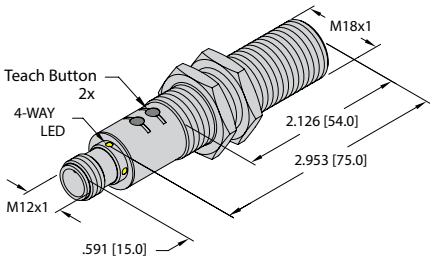
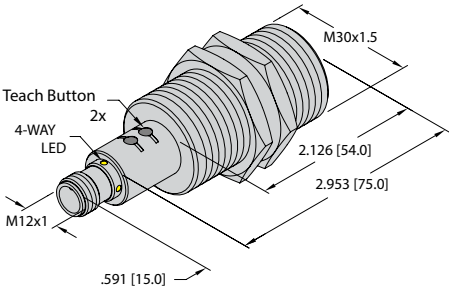
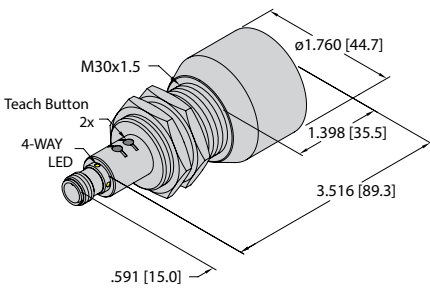
<sup>1</sup> Switching output is not adjustable

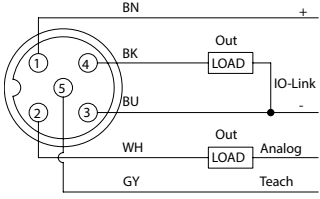
<sup>2</sup> Multiplexing and synchronization modes supported



# Ultrasonics Sensors | Hazardous Area

## ATEX and IECEx Approval

Housing Style	Dimension Drawings
	<p><b>A</b></p>  <p>18 mm - Metal Barrel with M12 Eurofast Connection, Teach-by-Wire or Button</p>
<p><b>B</b></p>  <p>30 mm - Metal Barrel with M12 Eurofast Connection, Teach-by-Wire or Button</p>	<p><b>C</b></p>  <p>30 mm - Metal Barrel with M12 Eurofast Connection, Teach-by-Wire or Button</p>

Wiring Diagrams/Mating Cordsets	
<p><b>1</b></p>  <p>Mating Cordset: RK 4.5T-*</p>	

A31 Ultrasonic Barrel w/ ATEX Approval	
<p>Operating Voltage: 15-30 VDC</p> <p>Voltage Drop Across Conducting Sensor: ≤2.5 V</p> <p>Continuous Switching Current: ≤150 mA</p> <p>No-Load Current: ≤50 mA</p> <p>Residual Current: ≤0.1 mA</p> <p>Load Resistance: ≤1000 Ω</p> <p>Readiness Delay: ≤300 ms</p> <p>Repeatability: 0.15% of full scale</p> <p>Switching Output: Programmable NO or NC</p> <p>Short-Circuit Protection: Yes</p> <p>Reverse Polarity Protection: Yes</p>	<p>Operating Temp: -25 to +70 °C</p> <p>Temperature Drift: 1.5% of full scale</p> <p>Internal Protection Rating: IP67</p> <p>Housing Material: SS</p> <p>Transducer Material: PET/PU/Epoxy</p> <p>LED: Yellow/Green</p> <p>Approval with Teach Button: II 3G Ex nA nC IIC T6 Gc II 3D Ex tc IIIC T70°C Dc</p> <p>Approval without Teach Button: II 3G Ex nA IIC T6 Gc II 3D Ex tc IIIC T70°C Dc</p>

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



# Ultrasonics Sensors | Hazardous Area

## ATEX and IECEx Approval

Part Number/ ID Number	Rated Operating Distance (cm)	2X PNP/NPN or Programmable 4-20 mA/0-10 V Analog & 1 X PNP/NPN output	Retroreflective Programmable	Window Mode Programmable	IO-Link V1.1	Blind Zone (cm)	Sonic Cone Angle	Resolution (mm)	Switching Hyst. (mm)	Max Approach Speed	Max Pass Speed	Switching Freq. (Hz)	Dimension Drawings	Wiring Diagrams	Spec List
RU40U-EM18E-LIU2PN8X2T-H1151/3GD 1610071	40	●	●	●	● <sup>1</sup>	2.5	9°	0.5	5	≤ 4 m/s	≤ 1.5 m/s	7	A	1	A31
RU130U-EM18E-LIU2PN8X2T-H1151/3GD 1610072	130	●	●	●	● <sup>1</sup>	15	16°	1	10	≤ 8 m/s	≤ 1.5 m/s	8	A	1	A31
RU130U-EM30E-LIU2PN8X2T-H1151/3GD 1610073	130	●	●	●	● <sup>1</sup>	15	16°	1	10	≤ 8 m/s	≤ 1.5 m/s	8	B	1	A31
RU300U-EM30E-LIU2PN8X2T-H1151/3GD 1610074	300	●	●	●	● <sup>1</sup>	30	15°	1	25	≤ 8 m/s	≤ 1.5 m/s	4	B	1	A31
RU600U-EM30E-LIU2PN8X2T-H1151/3GD 1610075	600	●	●	●	● <sup>1</sup>	60	15°	1	50	≤ 9 m/s	≤ 3 m/s	1.6	C	1	A31


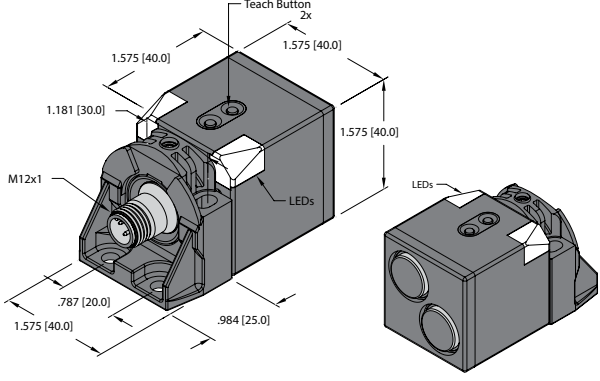
<sup>1</sup> Multiplexing and synchronization modes supported.

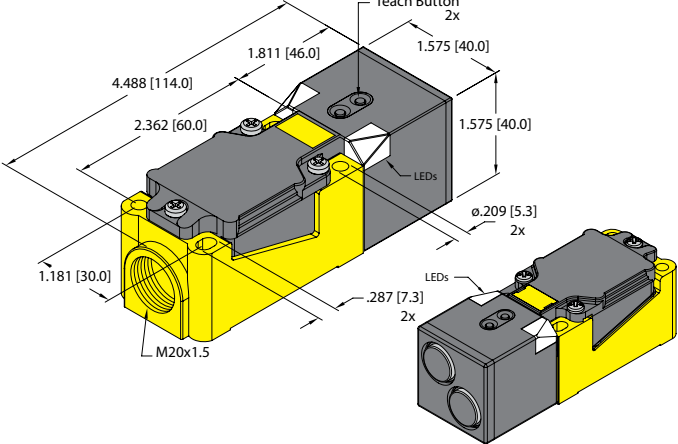
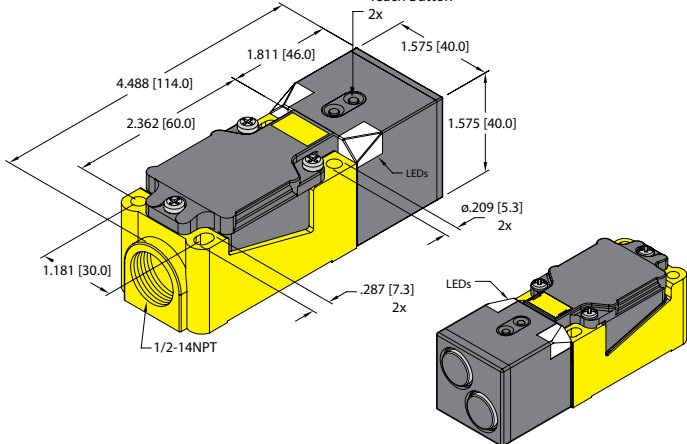
We reserve the right to make technical alterations without prior notice.



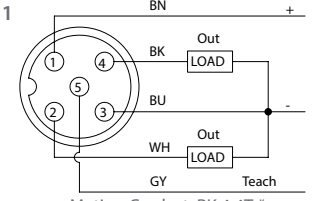
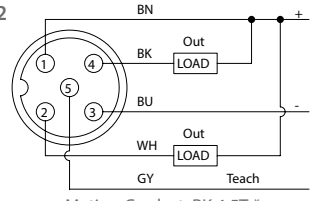
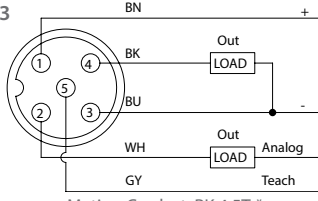
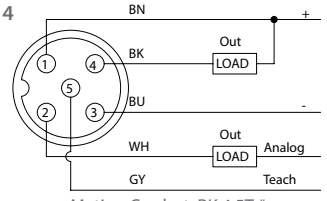
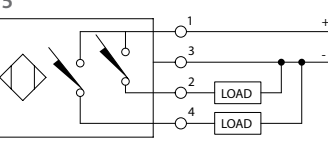
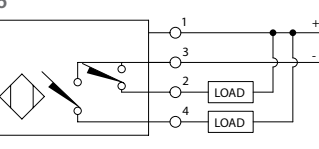
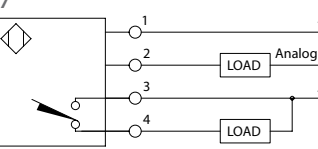
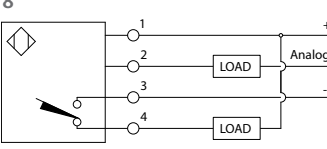
# Ultrasonics Sensors | CK40 & CP40

## 5 Way Rotatable Sensing Head

Housing Style	Dimension Drawings
	 <p>CK40 - M12 Eurofast Connection, Teach-by-Wire or Button</p>

 <p>CP40 - Terminal Chamber with M20x1.5 Conduit Connection, Teach-by-Button</p>	 <p>CP40 - Terminal Chamber with 1/2 NPT Conduit Connection, Teach-by-Button</p>
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### Wiring Diagrams/Mating Cordsets

 <p>Mating Cordset: RK 4.4T-*</p>	 <p>Mating Cordset: RK 4.5T-*</p>	 <p>Mating Cordset: RK 4.5T-*</p>	 <p>Mating Cordset: RK 4.5T-*</p>
			

A32 Ultrasonic Rectangular			
<p>Operating Voltage: 15-30 VDC</p> <p>Voltage Drop Across Conducting Sensor: ≤2.5 V</p> <p>Continuous Switching Current: ≤150 mA</p> <p>No-Load Current: ≤50 mA</p> <p>Residual Current: ≤0.1 mA</p> <p>Load Resistance: ≤1000 Ω</p> <p>Readiness Delay: ≤300 ms</p> <p>Repeatability: 0.25% of full scale</p> <p>Switching Output: Programmable NO or NC</p>		<p>Analog Output: 4-20 mA or 0-10 V Programmable</p> <p>Short Circuit Protection: Yes</p> <p>Reverse Polarity Protection: Yes</p> <p>Operating Temp: 0 to +70 °C</p> <p>Temperature Drift: 1.5% of full scale</p> <p>Internal Protection Rating: IP40</p> <p>Housing Material: PBT-GF30</p> <p>Transducer Material: AL/Ceramic</p> <p>LED: Yellow/Green</p>	

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



# Ultrasonics Sensors | CK40 & CP40

## 5 Way Rotatable Sensing Head

Part Number/ ID Number	Rated Operating Distance (cm)	2 X PNP Output	2 X NPN Output	Programmable 4-20 mA/0-10 v Analog & 1 X PNP output	Programmable 4-20 mA/0-10 v Analog & 1 X NPN output	Retroreflective Programmable	Window Mode Programmable	Blind Zone (cm)	Sonic Cone Angle	Resolution (mm)	Switching Hyst. (mm)	Max Approach Speed	Max Pass Speed	Switching Freq. (Hz)	Dimension Drawings	Wiring Diagrams	Spec List
RU200-CK40-2UP8X2T-H1151 1610051	200	●				●	●	5	60°	1	20	≤ 1 m/s	≤ 2 m/s	3	A	1	A32
RU200-CK40-2UN8X2T-H1151 1610057	200		●			●	●	5	60°	1	20	≤ 1 m/s	≤ 2 m/s	3	A	2	A32
RU200-CK40-LIU2P8X2T-H1151 1610053	200			●		●	●	5	60°	1	20	≤ 1 m/s	≤ 2 m/s	3	A	3	A32
RU200-CK40-LIU2N8X2T-H1151 1610058	200				●	●	●	5	60°	1	20	≤ 1 m/s	≤ 2 m/s	3	A	4	A32
RU200-CP40-2UP8X2T 1610052	200	●				●	●	5	60°	1	20	≤ 1 m/s	≤ 2 m/s	3	B	5	A32
RU200-CP40-2UN8X2T 1610055	200		●			●	●	5	60°	1	20	≤ 1 m/s	≤ 2 m/s	3	B	6	A32
RU200-CP40-2UP8X2T/S10 1610092	200	●				●	●	5	60°	1	20	≤ 1 m/s	≤ 2 m/s	3	C	5	A32
RU200-CP40-2UN8X2T/S10 1610090	200		●			●	●	5	60°	1	20	≤ 1 m/s	≤ 2 m/s	3	C	6	A32
RU200-CP40-LIU2P8X2T 1610054	200			●		●	●	5	60°	1	20	≤ 1 m/s	≤ 2 m/s	3	B	7	A32
RU200-CP40-LIU2N8X2T 1610056	200				●	●	●	5	60°	1	20	≤ 1 m/s	≤ 2 m/s	3	B	8	A32
RU200-CP40-LIU2P8X2T/S10 1610093	200			●		●	●	5	60°	1	20	≤ 1 m/s	≤ 2 m/s	3	C	7	A32
RU200-CP40-LIU2NP8X2T/S10 1610091	200				●	●	●	5	60°	1	20	≤ 1 m/s	≤ 2 m/s	3	C	8	A32

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

Ultrasonic Sensors





# Notes

