Turck updated the housing on its CP40 sensors to include highly-visible LEDs and sealed programming buttons. The housing maintains its limit-switch style mounting with a two-piece design that features a sensing head that can be moved and oriented as needed. The sensor is ideal for wide areas of coverage, with a 60-degree cone angle and range of 2 meters. The CK40 is a new design for this line that builds on the CP40 technology with a more compact housing and an M12 connector.

Please see the following pages for the data sheets for the product included in this extension.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>ID Number</th>
<th>Standard</th>
<th>High End</th>
<th>Teach By Wire</th>
<th>Teach by Button</th>
<th>Teach via IO-Link</th>
<th>Sensing Range</th>
<th>Housing</th>
<th>Output</th>
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<tbody>
<tr>
<td>RU200-CP40-2UP8X2T</td>
<td>M1610051</td>
<td>X</td>
<td>X</td>
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<td>RU200-CP40-2UN8X2T/S10</td>
<td>M1610057</td>
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<td>X</td>
<td></td>
<td></td>
<td>200cm</td>
<td>CP40</td>
<td>NPN, Analog</td>
</tr>
</tbody>
</table>
Ultrasonic sensor
diffuse mode sensor
RU200-CK40-2UP8X2T-H1151

- Separate transducers for transmitter and receiver
- Rectangular housing 40 x 40 mm
- Connection via M12 x 1 male
- Teach range adjustable via button
- Blind zone: 5 cm
- Range: 200 cm
- Resolution: 1 mm
- Sonic cone angle: 60°
- 2 x switching outputs, PNP
- NO/NC programmable

Type code: RU200-CK40-2UP8X2T-H1151
Ident-No.: 1610051

Pass speed:
- ≤ 2 m/s

Repeatability:
- ≤ 0.25 % of full scale

Edge lengths of the nominal actuator:
- 100 mm

Hysteresis:
- ≤ 20 mm

Ambient temperature:
- 0…+70 °C

Operating voltage:
- 15…30 VDC

Residual ripple:
- ≤ 10 % Ue

DC rated operational current:
- ≤ 150 mA

No-load current I0:
- ≤ 50 mA

Short-circuit protection:
- yes/cyclic

Voltage drop at I0:
- ≤ 2.5 V

Wire breakage / Reverse polarity protection:
- yes/yes

Output function:
- 5-wire, NO/NC, PNP

Output 1:
- Switching output

Readiness delay:
- ≤ 300 ms

Construction:
- Rectangular, CK40

Dimensions:
- 67 x 40 x 40 mm

Housing material:
- Plastic, PBT-GF30-V0

Electrical connection:
- Flange connector, M12 x 1

Protection class:
- IP40

Switching state:
- LED yellow

Wiring Diagram

Functional principle
Ultrasonic sensors capture a multitude of objects contactless and wear-free with ultrasonic waves. It does not matter whether the object is transparent or opaque, metallic or non-metallic, firm, liquid or powdery. Even environmental conditions such as spray, dust or rain hardly affect their function.

Sonic Cone
Ultrasonic sensor
diffuse mode sensor
RU200-CK40-2UP8X2T-H1151

Setting the limits
The ultrasonic sensor features two switching outputs with teachable switching range. The range is either set via Easy-Teach or via the buttons on the housing. The green and yellow LED indicate whether the sensor has detected an object.
Various functions such as single switchpoint, window mode or reflection mode to a fixed target can be taught. Further information is described in the operating instructions. How to set the window mode is described below. The limits of the window may be selected freely within the detection range.

Easy-Teach
- Connect teach adapter TX1-Q20L60 between sensor and connection cable
- For the first limit value, place object accordingly
  - Press and hold the select button for output 1 or 2 for 2 or 8 s against Gnd
  - Press and hold the select button for 8 s against Gnd to teach the first limit value.
- For the second limit value, place object accordingly
  - Press and hold button for at least 2 s against Gnd

Teach-Button
- For the first limit value, place object accordingly
  - Press and hold button 1 to select output 1 or 2 for 2 or 8 s against Gnd
  - Press and hold button 1 for at least 8 s
  - For the second limit value, place object accordingly
  - Press and hold button 1 for at least 2 s

After successful teaching, the sensor automatically runs in normal operating mode. Unsuccessful teach-in is signalled by the LED flashing slowly at a frequency of 5Hz.

LED response
Successful teaching is indicated by a fast flashing green LED. Thereafter, the sensor automatically runs in normal operating mode. Unsuccessful teaching is indicated by the LED flashing alternately green and yellow. In normal operating mode both LEDs signal the switching state of output 1.
- green: object is in the detection range but not in the switching range
- yellow: object is in the switching range
- off: object is outside the switching range
Ultrasonic sensor
diffuse mode sensor
RU200-CP40-2UP8X2T

- Separate transducers for transmitter and receiver
- Rectangular housing 40 x 40 x 166 mm
- Connection via screw terminals
- Terminal chamber for M20 x 1.5 cable gland
- Teach range adjustable via button
- Blind zone: 5 cm
- Range: 200 cm
- Resolution: 1 mm
- Sonic cone angle: 60°
- 2 x switching outputs, PNP
- NO/NC programmable

Wiring Diagram

Functional principle
Ultrasonic sensors capture a multitude of objects contactless and wear-free with ultrasonic waves. It does not matter whether the object is transparent or opaque, metallic or non-metallic, firm, liquid or powdery. Even environmental conditions such as spray, dust or rain hardly affect their function.

Sonic Cone

<table>
<thead>
<tr>
<th>cm</th>
<th>0</th>
<th>20</th>
<th>40</th>
<th>60</th>
<th>80</th>
<th>100</th>
<th>110</th>
<th>120</th>
<th>140</th>
<th>160</th>
<th>200</th>
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<tr>
<td>0</td>
<td>-150</td>
<td>-100</td>
<td>-50</td>
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<td>0</td>
<td>27 mm</td>
<td>100x100 mm</td>
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</table>
Setting the limits

The ultrasonic sensor features two switching outputs with teachable switching range. Teaching via buttons on the housing. The green and yellow LED indicate whether the sensor has detected an object. Various functions such as single switchpoint, window mode or reflection mode to a fixed target can be taught. Further information is described in the operating instructions. How to set the window mode is described below. The limits of the window may be selected freely within the detection range.

- For the first limit value, place object accordingly
- Press and hold button 1 to select output 1 or 2 for 2 or 8 s against Gnd
- Press and hold button 1 for at least 8 s
- For the second limit value, place object accordingly
- Press and hold button 1 for at least 2 s

After successful teaching, the sensor automatically runs in normal operating mode. Unsuccessful teach-in is signalled by the LED flashing slowly at a frequency of 5Hz.

LED response

Successful teaching is indicated by a fast flashing green LED. Thereafter, the sensor automatically runs in normal operating mode. Unsuccessful teaching is indicated by the LED flashing alternately green and yellow. In normal operating mode both LEDs signal the switching state of output 1.

- green: object is in the detection range but not in the switching range
- yellow: object is in the switching range
- off: object is outside the switching range
Ultrasonic sensor
diffuse mode sensor
RU200-CK40-LIU2P8X2T-H1151

- Separate transducers for transmitter and receiver
- Rectangular housing 40 x 40 mm
- Connection via M12 x 1 male
- Teach range adjustable via button
- Blind zone: 5 cm
- Range: 200 cm
- Resolution: 1 mm
- Sonic cone angle: 60°
- 1 x switching output, PNP
- NO/NC programmable
- 1 x analog output, 4..20mA/0..10 V

![Functional principle](#)

Ultrasonic sensors capture a multitude of objects contactless and wear-free with ultrasonic waves. It does not matter whether the object is transparent or opaque, metallic or nonmetallic, firm, liquid or powdery. Even environmental conditions such as spray, dust or rain hardly affect their function.

### Wiring Diagram

![Wiring Diagram](#)

### Sonic Cone

![Sonic Cone](#)
Ultrasonic sensor
diffuse mode sensor
RU200-CK40-LIU2P8X2T-H1151

Setting the limits
The ultrasonic sensor has an analog and a switching output with teachable measuring and switching range. Teaching is possible via Easy-Teach adapter or with the buttons at the sensor. The green and yellow LED indicate whether the sensor has detected an object.

Various functions such as single switchpoint, window mode or reflection mode to a fixed target can be taught. Further information is described in the operating instructions. How to set the window mode is described below. The limits of the window may be selected freely within the detection range.

Easy-Teach
- Connect teach adapter TX1-Q20L60 between sensor and connection cable
- For the first limit value, place object accordingly
- Press and hold the select button for output 1 or 2 for 2 or 8 s against Gnd
- Press and hold the select button for 8 s against Gnd to teach the first limit value.
- For the second limit value, place object accordingly
- Press and hold button for at least 2 s against Gnd

Teach-Button
- For the first limit value, place object accordingly
- Press and hold button 1 to select output 1 or 2 for 2 or 8 s against Gnd
- Press and hold button 1 for at least 8 s
- For the second limit value, place object accordingly
- Press and hold button 1 for at least 2 s

LED response
Successful teaching is indicated by a fast flashing green LED. Thereafter, the sensor automatically runs in normal operating mode. Unsuccessful teaching is indicated by the LED flashing alternately green and yellow. In normal operating mode both LEDs signal the switching state of output 1.
- green: object is in the detection range but not in the switching range
- yellow: object is in the switching range
- off: object is outside the detection range or signal loss
Ultrasonic sensor
diffuse mode sensor
RU200-CP40-LIU2P8X2T

- Separate transducers for transmitter and receiver
- Rectangular housing 40 x 40 x 166 mm
- Connection via screw terminals
- Terminal chamber for M20 x 1.5 cable gland
- Teach range adjustable via button
- Blind zone: 5 cm
- Range: 200 cm
- Resolution: 1 mm
- Sonic cone angle: 60°
- 1 x switching output, PNP
- NO/NC programmable
- 1 x analog output, 4..20mA / 0..10 V

Wiring Diagram

Functional principle
Ultrasonic sensors capture a multitude of objects contactless and wear-free with ultrasonic waves. It does not matter whether the object is transparent or opaque, metallic or non-metallic, firm, liquid or powdery. Even environmental conditions such as spray, dust or rain hardly affect their function.

Sonic Cone

Construction
- Rectangular, CP40
- Dimensions: 166 x 40 x 40 mm
- Housing material: Plastic, PBT-GF30-V0
- Electrical connection: terminal chamber, Terminal box with cable gland
- Protection class: IP40

Switching state
- LED yellow
Setting the limits

The ultrasonic sensor has an analog and a switching output with teachable measuring and switching range. Teaching via buttons on the housing. The green and yellow LED indicate whether the sensor has detected an object.

Various functions such as single switchpoint, window mode or reflection mode to a fixed target can be taught. Further information is described in the operating instructions. How to set the window mode is described below. The limits of the window may be selected freely within the detection range.

- For the first limit value, place object accordingly
- Press and hold button 1 to select output 1 or 2 for 2 or 8 s against Gnd
- Press and hold button 1 for at least 8 s
- For the second limit value, place object accordingly
- Press and hold button 1 for at least 2 s

LED response

Successful teaching is indicated by a fast flashing green LED. Thereafter, the sensor automatically runs in normal operating mode. Unsuccessful teaching is indicated by the LED flashing alternately green and yellow. In normal operating mode both LEDs signal the switching state of output 1.

- green: object is in the detection range but not in the switching range
- yellow: object is in the switching range
- off: object is outside the detection range or signal loss
Ultrasonic sensor
diffuse mode sensor
RU200-CP40-2UN8X2T

- Separate transducers for transmitter and receiver
- Rectangular housing 40 x 40 x 166 mm
- Connection via screw terminals
- Terminal chamber for M20 x 1.5 cable gland
- Teach range adjustable via button
- Blind zone: 5 cm
- Range: 200 cm
- Resolution: 1 mm
- Sonic cone angle: 60°
- 2 x switching outputs, NPN
- NO/NC programmable

Wiring Diagram

Functional principle
Ultrasonic sensors capture a multitude of objects contactless and wear-free with ultrasonic waves. It does not matter whether the object is transparent or opaque, metallic or non-metallic, firm, liquid or powdery. Even environmental conditions such as spray, dust or rain hardly affect their function.

Sonic Cone

Type code | RU200-CP40-2UN8X2T
Ident-No.   | 1610055

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<tr>
<th>Pass speed</th>
<th>≤ 2 m/s</th>
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<tr>
<td>Repeatability</td>
<td>≤ 0.25 % of full scale</td>
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<tr>
<td>Edge lengths of the nominal actuator</td>
<td>100 mm</td>
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<tr>
<td>Hysteresis</td>
<td>≤ 20 mm</td>
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<tr>
<td>Ambient temperature</td>
<td>0…+70 °C</td>
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</table>

<table>
<thead>
<tr>
<th>Operating voltage</th>
<th>15… 30VDC</th>
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<tr>
<td>Residual ripple</td>
<td>≤ 10 % U.</td>
</tr>
<tr>
<td>DC rated operational current</td>
<td>≤ 150 mA</td>
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<td>No-load current I</td>
<td>≤ 50 mA</td>
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<tr>
<td>Short-circuit protection</td>
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<td>Voltage drop at I</td>
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<td>Wire breakage / Reverse polarity protection</td>
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<td>Output function</td>
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<tr>
<td>Output 1</td>
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<td>Readiness delay</td>
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</table>

<table>
<thead>
<tr>
<th>Construction</th>
<th>Rectangular, CP40</th>
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<tbody>
<tr>
<td>Dimensions</td>
<td>166 x 40 x 40 mm</td>
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<td>Housing material</td>
<td>Plastic, PBT-GF30-V0</td>
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<tr>
<td>Electrical connection</td>
<td>terminal chamber, Terminal box with cable gland</td>
</tr>
<tr>
<td>Protection class</td>
<td>IP40</td>
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</table>

Switching state | LED yellow
Setting the limits
The ultrasonic sensor features two switching outputs with teachable switching range. Teaching via buttons on the housing. The green and yellow LED indicate whether the sensor has detected an object. Various functions such as single switchpoint, window mode or reflection mode to a fixed target can be taught. Further information is described in the operating instructions. How to set the window mode is described below. The limits of the window may be selected freely within the detection range.

- For the first limit value, place object accordingly
- Press and hold button 1 to select output 1 or 2 for 2 or 8 s against Gnd
- Press and hold button 1 for at least 8 s
- For the second limit value, place object accordingly
- Press and hold button 1 for at least 2 s

After successful teaching, the sensor automatically runs in normal operating mode. Unsuccessful teach-in is signalled by the LED flashing slowly at a frequency of 5Hz.

LED response
Successful teaching is indicated by a fast flashing green LED. Thereafter, the sensor automatically runs in normal operating mode. Unsuccessful teaching is indicated by the LED flashing alternately green and yellow. In normal operating mode both LEDs signal the switching state of output 1.

- green: object is in the detection range but not in the switching range
- yellow: object is in the switching range
- off: object is outside the switching range
Ultrasonic sensor
diffuse mode sensor
RU200-CP40-LIU2N8X2T

- Separate transducers for transmitter and receiver
- Rectangular housing 40 x 40 x 166 mm
- Connection via screw terminals
- Terminal chamber for M20 x 1.5 cable gland
- Teach range adjustable via button
- Blind zone: 5 cm
- Range: 200 cm
- Resolution: 1 mm
- Sonic cone angle: 60°
- 1 x switching output, NPN
- NO/NC programmable
- 1 x analog output, 4.20mA/ 0..10 V

Wiring Diagram

Functional principle
Ultrasonic sensors capture a multitude of objects contactless and wear-free with ultrasonic waves. It does not matter whether the object is transparent or opaque, metallic or non-metallic, firm, liquid or powdery. Even environmental conditions such as spray, dust or rain hardly affect their function.

Sonic Cone

<table>
<thead>
<tr>
<th>cm</th>
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<th>40</th>
<th>60</th>
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<th>120</th>
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<th>160</th>
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<td>-200</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

View of the directional sensitivity of the sensor.

Type code | RU200-CP40-LIU2N8X2T
Ident-No. | 1610056

Pass speed | ≤ 2 m/s
Repeatability | ≤ 0.25 % of full scale
Edge lengths of the nominal actuator | 100 mm
Hysteresis | ≤ 20 mm
Ambient temperature | 0…+70 °C

Operating voltage | 15… 30VDC
Residual ripple | ≤ 10 % U
DC rated operational current | ≤ 150 mA
No-load current I0 | ≤ 50 mA
Short-circuit protection | yes/ cyclic
Voltage drop at I0 | ≤ 2.5 V
Wire breakage / Reverse polarity protection | yes/ yes
Output function | 4-wire, NO/NC , NPN
Output 1 | Switching output
Voltage output | 0…10VDC
Current output | 4…20mA
Readiness delay | ≤ 300 ms

Construction
Rectangular, CP40
Dimensions | 166 x 40 x 40 mm
Housing material | Plastic, PBT-GF30-V0
Electrical connection | terminal chamber, Terminal box with cable gland
Protection class | IP40

Switching state | LED yellow
Setting the limits
The ultrasonic sensor has an analog and a switching output with teachable measuring and switching range. Teaching via buttons on the housing. The green and yellow LED indicate whether the sensor has detected an object.
Various functions such as single switchpoint, window mode or reflection mode to a fixed target can be taught. Further information is described in the operating instructions. How to set the window mode is described below. The limits of the window may be selected freely within the detection range.

- For the first limit value, place object accordingly
- Press and hold button 1 to select output 1 or 2 for 2 or 8 s against Gnd
- Press and hold button 1 for at least 8 s
- For the second limit value, place object accordingly
- Press and hold button 1 for at least 2 s

LED response
Successful teaching is indicated by a fast flashing green LED. Thereafter, the sensor automatically runs in normal operating mode. Unsuccessful teaching is indicated by the LED flashing alternately green and yellow. In normal operating mode both LEDs signal the switching state of output 1.
- Green: object is in the detection range but not in the switching range
- Yellow: object is in the switching range
- Off: object is outside the detection range or signal loss
Ultrasonic sensor
diffuse mode sensor
RU200-CK40-2UN8X2T-H1151

- Separate transducers for transmitter and receiver
- Rectangular housing 40 x 40 mm
- Connection via M12 x 1 male
- Teach range adjustable via button
- Blind zone: 5 cm
- Range: 200 cm
- Resolution: 1 mm
- Sonic cone angle: 60°
- 2 x switching outputs, NPN
- NO/NC programmable

Wiring Diagram

Functional principle
Ultrasonic sensors capture a multitude of objects contactless and wear-free with ultrasonic waves. It does not matter whether the object is transparent or opaque, metallic or non-metallic, firm, liquid or powdery. Even environmental conditions such as spray, dust or rain hardly affect their function.

Sonic Cone
Setting the limits
The ultrasonic sensor features two switching outputs with teachable switching range. The range is either set via Easy-Teach or via the buttons on the housing. The green and yellow LED indicate whether the sensor has detected an object. Various functions such as single switchpoint, window mode or reflection mode to a fixed target can be taught. Further information is described in the operating instructions. How to set the window mode is described below. The limits of the window may be selected freely within the detection range.

Easy-Teach
• Connect teach adapter TX1-Q20L60 between sensor and connection cable
• For the first limit value, place object accordingly
• Press and hold the select button for output 1 or 2 for 2 or 8 s against Gnd
• Press and hold the select button for 8 s against Gnd to teach the first limit value.
• For the second limit value, place object accordingly
• Press and hold button for at least 2 s against Gnd

Teach-Button
• For the first limit value, place object accordingly
• Press and hold button 1 to select output 1 or 2 for 2 or 8 s against Gnd
• Press and hold button 1 for at least 8 s
• For the second limit value, place object accordingly
• Press and hold button 1 for at least 2 s

After successful teaching, the sensor automatically runs in normal operating mode. Unsuccessful teach-in is signalled by the LED flashing slowly at a frequency of 5Hz.

LED response
Successful teaching is indicated by a fast flashing green LED. Thereafter, the sensor automatically runs in normal operating mode. Unsuccessful teaching is indicated by the LED flashing alternately green and yellow. In normal operating mode both LEDs signal the switching state of output 1.
• green: object is in the detection range but not in the switching range
• yellow: object is in the switching range
• off: object is outside the switching range
Ultrasonic sensor

diffuse mode sensor

RU200-CK40-LIU2N8X2T-H1151

- Separate transducers for transmitter and receiver
- Rectangular housing 40 x 40 mm
- Connection via M12 x 1 male
- Teach range adjustable via button
- Blind zone: 5 cm
- Range: 200 cm
- Resolution: 1 mm
- Sonic cone angle: 60°
- 1 x switching output, NPN
- NO/NC programmable
- 1 x analog output, 4..20mA/ 0..10 V

Type code
RU200-CK40-LIU2N8X2T-H1151

Ident-No.
1610058

Pass speed
≤ 2 m/s

Repeatability
≤ 0.25 % of full scale

Edge lengths of the nominal actuator
100 mm

Hysteresis
≤ 20 mm

Ambient temperature
0…+70 °C

Operating voltage
15…30VDC

Residual ripple
≤ 10 % U_{ss}

DC rated operational current
≤ 150 mA

No-load current I_{0}
≤ 50 mA

Short-circuit protection
yes/ cyclic

Voltage drop at I_{0}
≤ 2.5 V

Wire breakage / Reverse polarity protection
yes/ yes

Output function
5-wire, NO/NC , NPN

Output 1
Switching output

Voltage output
0…10VDC

Current output
4…20mA

Readiness delay
≤ 300 ms

Construction
Rectangular, CK40

Dimensions
67 x 40 x 40 mm

Housing material
Plastic, PBT-GF30-V0

Electrical connection
Flange connector, M12 x 1

Protection class
IP40

Switching state
LED yellow

Wiring Diagram

Functional principle

Ultrasonic sensors capture a multitude of objects contactless and wear-free with ultrasonic waves. It does not matter whether the object is transparent or opaque, metallic or non-metallic, firm, liquid or powdery. Even environmental conditions such as spray, dust or rain hardly affect their function.

Sonic Cone
Setting the limits

The ultrasonic sensor has an analog and a switching output with teachable measuring and switching range. Teaching is possible via Easy-Teach adapter or with the buttons at the sensor. The green and yellow LED indicate whether the sensor has detected an object.

Various functions such as single switchpoint, window mode or reflection mode to a fixed target can be taught. Further information is described in the operating instructions. How to set the window mode is described below. The limits of the window may be selected freely within the detection range.

Easy-Teach

- Connect teach adapter TX1-Q20L60 between sensor and connection cable
- For the first limit value, place object accordingly
- Press and hold the select button for output 1 or 2 for 2 or 8 s against Gnd
- Press and hold the select button for 8 s against Gnd to teach the first limit value.
- For the second limit value, place object accordingly
- Press and hold button for at least 2 s against Gnd

Teach-Button

- For the first limit value, place object accordingly
- Press and hold button 1 to select output 1 or 2 for 2 or 8 s against Gnd
- Press and hold button 1 for at least 8 s
- For the second limit value, place object accordingly
- Press and hold button 1 for at least 2 s

LED response

Successful teaching is indicated by a fast flashing green LED. Thereafter, the sensor automatically runs in normal operating mode. Unsuccessful teaching is indicated by the LED flashing alternately green and yellow. In normal operating mode both LEDs signal the switching state of output 1.

- green: object is in the detection range but not in the switching range
- yellow: object is in the switching range
- off: object is outside the detection range or signal loss
Ultrasonic sensor
diffuse mode sensor
RU200-CP40-2UN8X2T/S10

- Separate transducers for transmitter and receiver
- Rectangular housing 40 x 40 x 166 mm
- Connection via screw terminals
- Terminal chamber for cable gland NPT
- Teach range adjustable via button
- Blind zone: 5 cm
- Range: 200 cm
- Resolution: 1 mm
- Sonic cone angle: 60°
- 2 x switching outputs, NPN
- NO/NC programmable

Type code
RU200-CP40-2UN8X2T/S10
Ident-No.
1610090

Pass speed
≤ 2 m/s
Repeatability
≤ 0.25 % of full scale
Edge lengths of the nominal actuator
100 mm
Hysteresis
≤ 20 mm
Ambient temperature
0…+70 °C

Operating voltage
15…30VDC
Residual ripple
≤ 10 % U_{ss}
DC rated operational current
≤ 150 mA
No-load current I
≤ 50 mA
Short-circuit protection
yes/ cyclic
Voltage drop at I
≤ 2.5 V
Wire breakage / Reverse polarity protection
yes/ yes
Output function
4-wire, NO/NC , NPN
Output 1
Switching output
Readiness delay
≤ 300 ms

Construction
Rectangular, CP40
Dimensions
166 x 40 x 40 mm
Housing material
Plastic, PBT-GF30-V0
Electrical connection
terminal chamber, Terminal box with cable gland
Protection class
IP40

Switching state
LED yellow

Wiring Diagram

Functional principle
Ultrasonic sensors capture a multitude of objects contactless and wear-free with ultrasonic waves. It does not matter whether the object is transparent or opaque, metallic or non-metallic, firm, liquid or powdery. Even environmental conditions such as spray, dust or rain hardly affect their function.

Sonic Cone

- Separate transducers for transmitter and receiver
- Rectangular housing 40 x 40 x 166 mm
- Connection via screw terminals
- Terminal chamber for cable gland NPT
- Teach range adjustable via button
- Blind zone: 5 cm
- Range: 200 cm
- Resolution: 1 mm
- Sonic cone angle: 60°
- 2 x switching outputs, NPN
- NO/NC programmable

Wiring Diagram

Functional principle
Ultrasonic sensors capture a multitude of objects contactless and wear-free with ultrasonic waves. It does not matter whether the object is transparent or opaque, metallic or non-metallic, firm, liquid or powdery. Even environmental conditions such as spray, dust or rain hardly affect their function.

Sonic Cone
Setting the limits
The ultrasonic sensor features two switching outputs with teachable switching range. Teaching via buttons on the housing. The green and yellow LED indicate whether the sensor has detected an object. Various functions such as single switchpoint, window mode or reflection mode to a fixed target can be taught. Further information is described in the operating instructions. How to set the window mode is described below. The limits of the window may be selected freely within the detection range.

- For the first limit value, place object accordingly
- Press and hold button 1 to select output 1 or 2 for 2 or 8 s against Gnd
- Press and hold button 1 for at least 8 s
- For the second limit value, place object accordingly
- Press and hold button 1 for at least 2 s

After successful teaching, the sensor automatically runs in normal operating mode. Unsuccessful teach-in is signalled by the LED flashing slowly at a frequency of 5Hz.

LED response
Successful teaching is indicated by a fast flashing green LED. Thereafter, the sensor automatically runs in normal operating mode. Unsuccessful teaching is indicated by the LED flashing alternately green and yellow. In normal operating mode both LEDs signal the switching state of output 1.

- green: object is in the detection range but not in the switching range
- yellow: object is in the switching range
- off: object is outside the switching range
Ultrasonic sensor
diffuse mode sensor
RU200-CP40-LIU2N8X2T/S10

- Separate transducers for transmitter and receiver
- Rectangular housing 40 x 40 x 166 mm
- Connection via screw terminals
- Terminal chamber for cable gland NPT
- Teach range adjustable via button
- Blind zone: 5 cm
- Range: 200 cm
- Resolution: 1 mm
- Sonic cone angle: 60°
- 1 x switching output, NPN
- NO/NC programmable
- 1 x analog output, 4..20mA / 0..10 V

Wiring Diagram

Functional principle
Ultrasonic sensors capture a multitude of objects contactless and wear-free with ultrasonic waves. It does not matter whether the object is transparent or opaque, metallic or non-metallic, firm, liquid or powdery. Even environmental conditions such as spray, dust or rain hardly affect their function.

Sonic Cone
Setting the limits
The ultrasonic sensor has an analog and a switching output with teachable measuring and switching range. Teaching via buttons on the housing. The green and yellow LED indicate whether the sensor has detected an object. Various functions such as single switchpoint, window mode or reflection mode to a fixed target can be taught. Further information is described in the operating instructions. How to set the window mode is described below. The limits of the window may be selected freely within the detection range.

- For the first limit value, place object accordingly
- Press and hold button 1 to select output 1 or 2 for 2 or 8 s against Gnd
- Press and hold button 1 for at least 8 s
- For the second limit value, place object accordingly
- Press and hold button 1 for at least 2 s

LED response
Successful teaching is indicated by a fast flashing green LED. Thereafter, the sensor automatically runs in normal operating mode. Unsuccessful teaching is indicated by the LED flashing alternately green and yellow. In normal operating mode both LEDs signal the switching state of output 1.
- green: object is in the detection range but not in the switching range
- yellow: object is in the switching range
- off: object is outside the detection range or signal loss
Ultrasonic sensor
diffuse mode sensor
RU200-CP40-2UP8X2T/S10

- Separate transducers for transmitter and receiver
- Rectangular housing 40 x 40 x 166 mm
- Connection via screw terminals
- Terminal chamber for cable gland NPT
- Teach range adjustable via button
- Blind zone: 5 cm
- Range: 200 cm
- Resolution: 1 mm
- Sonic cone angle: 60°
- 2 x switching outputs, PNP
- NO/NC programmable

Type code: RU200-CP40-2UP8X2T/S10
Ident-No.: 1610092

- Pass speed: ≤ 2 m/s
- Repeatability: ≤ 0.25 % of full scale
- Edge lengths of the nominal actuator: 100 mm
- Hysteresis: ≤ 20 mm
- Ambient temperature: 0...+70 °C

- Operating voltage: 15...30VDC
- Residual ripple: ≤ 10 % Uss
- DC rated operational current: ≤ 150 mA
- No-load current I0: ≤ 50 mA
- Short-circuit protection: yes/cyclic
- Voltage drop at I0: ≤ 2.5 V
- Wire breakage / Reverse polarity protection: yes/yes
- Output function: 4-wire, NO/NC , PNP
- Output 1: Switching output
- Readiness delay: ≤ 300 ms

Construction
- Dimensions: 166 x 40 x 40 mm
- Housing material: Plastic, PBT-GF30-V0
- Electrical connection: terminal chamber, Terminal box with cable gland
- Protection class: IP40

Switching state: LED yellow

Wiring Diagram

Functional principle
Ultrasonic sensors capture a multitude of objects contactless and wear-free with ultrasonic waves. It does not matter whether the object is transparent or opaque, metallic or non-metallic, firm, liquid or powdery. Even environmental conditions such as spray, dust or rain hardly affect their function.

Sonic Cone
Ultrasonic sensor
diffuse mode sensor
RU200-CP40-2UP8X2T/S10

Setting the limits
The ultrasonic sensor features two switching outputs with teachable switching range. Teaching via buttons on the housing. The green and yellow LED indicate whether the sensor has detected an object. Various functions such as single switchpoint, window mode or reflection mode to a fixed target can be taught. Further information is described in the operating instructions. How to set the window mode is described below. The limits of the window may be selected freely within the detection range.

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- Press and hold button 1 to select output 1 or 2 for 2 or 8 s against Gnd
- Press and hold button 1 for at least 8 s
- For the second limit value, place object accordingly
- Press and hold button 1 for at least 2 s

After successful teaching, the sensor automatically runs in normal operating mode. Unsuccessful teach-in is signalled by the LED flashing slowly at a frequency of 5Hz.

LED response
Successful teaching is indicated by a fast flashing green LED. Thereafter, the sensor automatically runs in normal operating mode. Unsuccessful teaching is indicated by the LED flashing alternately green and yellow. In normal operating mode both LEDs signal the switching state of output 1.
- green: object is in the detection range but not in the switching range
- yellow: object is in the switching range
- off: object is outside the switching range
Ultrasonic sensor
diffuse mode sensor
RU200-CP40-LIU2P8X2T/S10

- Separate transducers for transmitter and receiver
- Rectangular housing 40 x 40 x 166 mm
- Connection via screw terminals
- Terminal chamber for cable gland NPT
- Teach range adjustable via button
- Blind zone: 5 cm
- Range: 200 cm
- Resolution: 1 mm
- Sonic cone angle: 60°
- 1 x switching output, PNP
- NO/NC programmable
- 1 x analog output, 4..20mA/ 0..10 V

Wiring Diagram

Functional principle
Ultrasonic sensors capture a multitude of objects contactless and wear-free with ultrasonic waves. It does not matter whether the object is transparent or opaque, metallic or non-metallic, firm, liquid or powdery. Even environmental conditions such as spray, dust or rain hardly affect their function.

Sonic Cone
Setting the limits
The ultrasonic sensor has an analog and a switching output with teachable measuring and switching range. Teaching via buttons on the housing. The green and yellow LED indicate whether the sensor has detected an object. Various functions such as single switchpoint, window mode or reflection mode to a fixed target can be taught. Further information is described in the operating instructions. How to set the window mode is described below. The limits of the window may be selected freely within the detection range.

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- Press and hold button 1 to select output 1 or 2 for 2 or 8 s against Gnd
- Press and hold button 1 for at least 8 s
- For the second limit value, place object accordingly
- Press and hold button 1 for at least 2 s

LED response
Successful teaching is indicated by a fast flashing green LED. Thereafter, the sensor automatically runs in normal operating mode. Unsuccessful teaching is indicated by the LED flashing alternately green and yellow. In normal operating mode both LEDs signal the switching state of output 1.
- green: object is in the detection range but not in the switching range
- yellow: object is in the switching range
- off: object is outside the detection range or signal loss