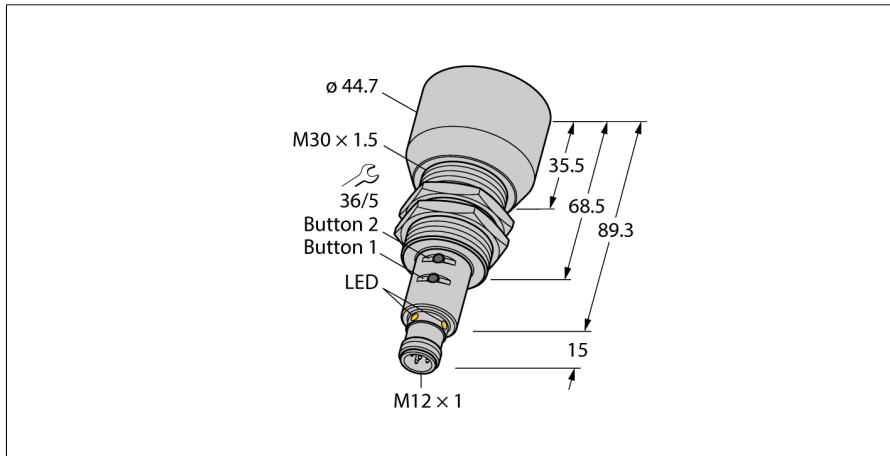


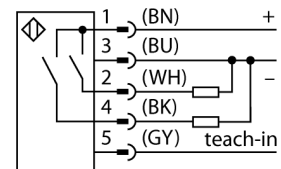
**Ultrasonic Sensor**  
**Diffuse Mode Sensor**  
**RU600U-M30E-2UP8X2T-H1151**



- Smooth sonic transducer face
- Cylindrical housing M30, potted
- Connection via M12 x 1 male
- Measuring range adjustable via teach button/Easy-Teach
- Temperature compensation
- Blind zone: 60 cm
- Range: 600 cm
- Resolution: 1 mm
- Sonic cone angle: 15°
- 2 x switching outputs, PNP
- NO/NC programmable

<b>Type designation</b>	RU600U-M30E-2UP8X2T-H1151
Ident-No.	1610041
<b>Function</b>	Ultrasonic diffuse mode sensor
Range	600...6000 mm
Resolution	1 mm
minimum measuring range	500 mm
minimum switching range	50 mm
Ultrasound frequency	75 kHz
Repeat accuracy	0.15 % of full scale
Temperature drift	1.5% of full scale
Linearity error	≤ ± 0.5 %
Edge lengths of the nominal actuator	100 mm
Approach speed	≤ 11 m/s
Pass speed	≤ 3.7 m/s
<b>Operating voltage</b>	15...30 VDC
Residual ripple	10 % U <sub>s</sub>
DC rated operational current	≤ 150 mA
No-load current I <sub>0</sub>	≤ 50 mA
Load resistance	≤ 1000 Ω
Residual current	≤ 0.1 mA
Response time typical	380 ms
Readiness delay	300 ms
Output function	NO/NC, PNP
Output 1	Switching output
Output 2	Switching output
Switching frequency	1.6 Hz
Hysteresis	≤ 50 mm
Voltage drop at I <sub>L</sub>	≤ 2.5 V
Short-circuit protection	yes/ Cyclic
Reverse polarity protection	yes
Wire breakage protection	yes
<b>Design</b>	Threaded barrel, M30
Radiation direction	straight
Dimensions	104.3 x Ø 44.7 mm
Housing material	Metal, CuZn, Nickel-plated
Transducer material	Plastic, Epoxyd resin and PU foam
Electrical connection	Connector, M12 x 1, 5-wire
Protection class	IP67
Ambient temperature	-25...+50 °C
Storage temperature	-40...+80 °C
Declaration of conformity EN ISO/IEC	EN 60947-5-2
Vibration resistance	IEC 60068-2
MTTF	193 years
MTTF note	acc. to SN 29500 (Ed. 99) 40 °C
<b>Switching state</b>	LED, Yellow
Object detected	LED, Green

**Wiring Diagram**



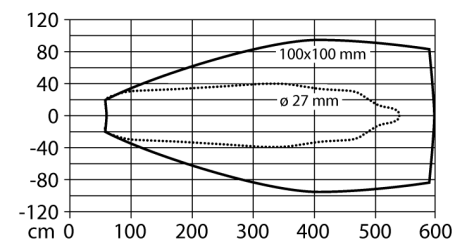
**Functional principle**

Ultrasonic sensors capture a multitude of objects contactlessly 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.

The sonic cone diagram indicates the detection range of the sensor. In accordance with standard EN 60947-5-2, quadratic targets in a range of sizes (20 x 20 mm, 100 x 100 mm) and a round rod with a diameter of 27 mm are used.

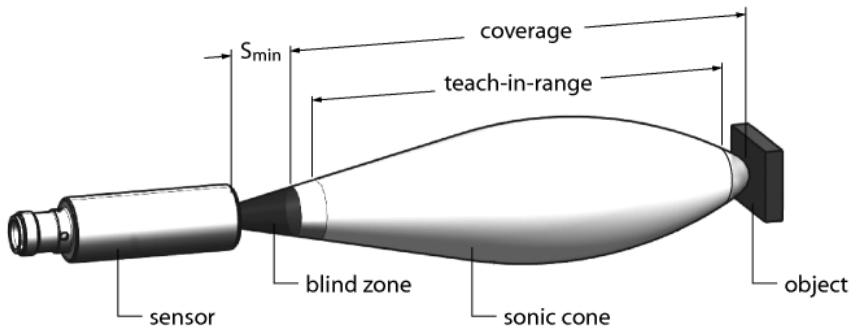
Important: The detection ranges for other targets may differ from those for standard targets due to the different reflection properties and geometries.

**Sonic Cone**



**Ultrasonic Sensor  
Diffuse Mode Sensor  
RU600U-M30E-2UP8X2T-H1151**

**Mounting instructions/Description**



**Settings**

The ultrasonic sensor features two switching outputs with adjustable switching range. The adjustments can either be made via Easy-Teach adapter or via buttons (please note, only the RU...U-M...E-2UP8X2T-H1151 types have buttons!). Object presence is signalled by the green and yellow LED.

Two switchpoints are taught. They mark the limits of the switching range and may be selected freely within the detection range.

**Via Easy-Teach adapter**

- Connect the teach adapter TX1-Q20L60 between sensor and connection cable
- For the first limit value, place object accordingly
- Press and hold button for at least 2 to 7 s against Gnd
- For the second limit value, place object accordingly
- Press and hold button for at least 2 to 7 s against Ub

**Teach button (please note, only the RU...U-M...E-2UP8X2T-H1151 types have buttons!)**

- For the first limit value, place object accordingly
- Press and hold button 2 for at least 2 to 7 s
- For the second limit value, place object accordingly
- Press and hold button 1 for at least 2 to 7 s

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

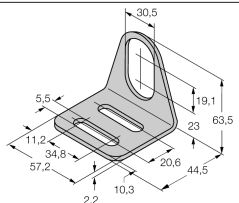
**LED response**

In standard operating mode both LEDs signal the switching states of the sensor.

- 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

**Ultrasonic Sensor  
Diffuse Mode Sensor  
RU600U-M30E-2UP8X2T-H1151**

**Accessories**

Type code	Ident-No.	Description	Dimension drawing
MW-30	6945005	Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)	

**Function accessories**

Type code	Ident-No.	Description	Dimension drawing
TX1-Q20L60	6967114	Teach adapter for inductive encoders, linear position, angle, ultrasonic and capacitive sensors	