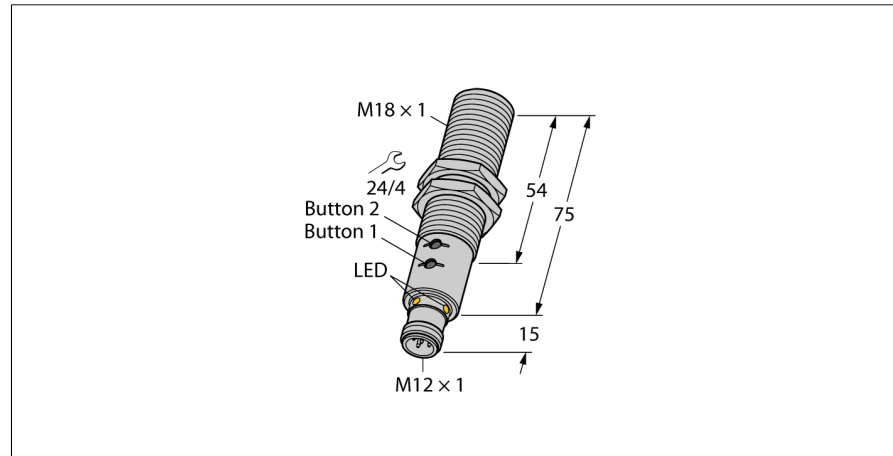


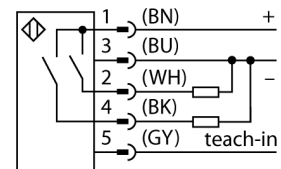
**Ultrasonic sensor
diffuse mode sensor
RU130U-M18E-2UP8X2T-H1151**



- Smooth sonic transducer face
- Cylindrical housing M18
- Connection via male M12 x 1
- Measuring range adjustable via teach button/Easy-Teach
- Temperature compensation
- Blind zone: 15 cm
- Range: 130 cm
- Resolution: 1 mm
- Aperture angle of sonic cone: 16 °
- 2 x switching outputs, PNP
- NO/NC programmable

| | |
|--------------------------------------|---------------------------------|
| Type code | RU130U-M18E-2UP8X2T-H1151 |
| Ident no. | 1610018 |
| Design | cylindrical/threaded, M18 |
| Dimensions | Ø18 x 90 mm |
| Housing material | metal, CuZn, nickel-plated |
| Sonic converter material | plastic, PBT |
| Connection | male, M12 x 1, 5-wire |
| Protection class | IP67 |
| Ambient temperature | -25...+70 °C |
| Storage temperature | -40...+80 °C |
| Declaration of conformity EN ISO/IEC | EN 60947-5-2 |
| Vibration resistance | IEC 60068-2 |
| MTTF | 195 years |
| MTTF note | acc. to SN 29500 (Ed. 99) 40 °C |
| Switching state | LED green / yellow |
| Residual ripple | 10 % U _s |
| Operating voltage | 15...30VDC |
| DC rated operational current | ≤ 150 mA |
| No-load current I ₀ | ≤ 50 mA |
| Load resistance | ≤ 1000 Ω |
| Response time | 65 ms |
| Readiness delay | 300 ms |
| Output function | NO/NC , PNP |
| Output 1 | switching output |
| Output 2 | switching output |
| Switching frequency | 8 Hz |
| Hysteresis | ≤ 5 % of full scale |
| Voltage drop at I _s | ≤ 2.5 V |
| Short-circuit protection | yes/ cyclic |
| Reverse polarity protection | yes |
| Wire breakage protection | yes |
| Operating mode | diffuse mode ultrasonic sensor |
| Range | 15...130 cm |
| Resolution | 1 mm |
| minimum switching range | 10 mm |
| Ultrasound frequency | 200 kHz |
| Repeatability | 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 | ≤ 8 m/s |
| Pass speed | ≤ 1.5 m/s |

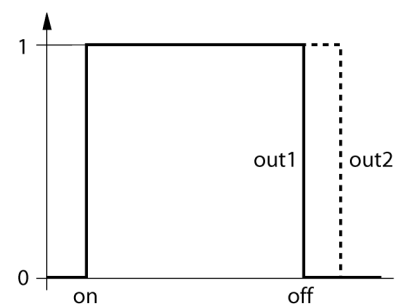
Wiring diagram



Functional principle

Ultrasonic sensors use ultrasonic waves for non-contact and wear-free detection of many objects. Regardless of whether the object is transparent or opaque, metallic or non-metallic, or of liquid, solid or powdery consistency. Even environmental conditions such as spray, dust or rain hardly affect their function.

Characteristic

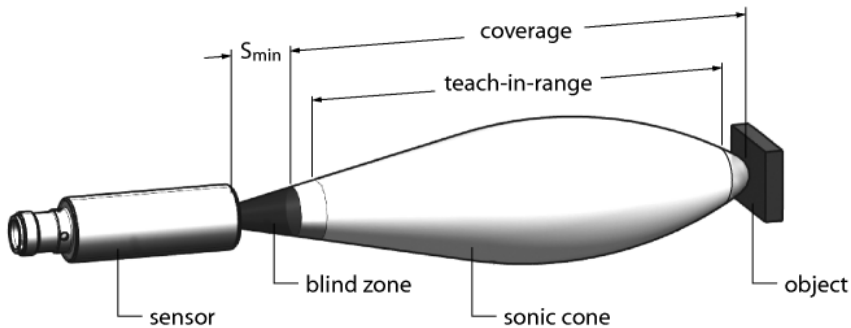


**Ultrasonic sensor
diffuse mode sensor
RU130U-M18E-2UP8X2T-H1151**

TURCK

Industrial
Automation

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.

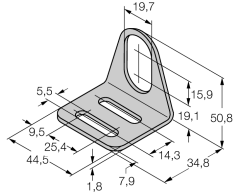
LED response

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

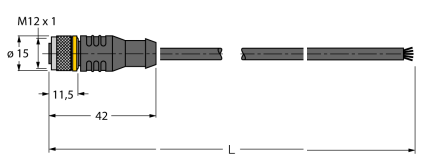
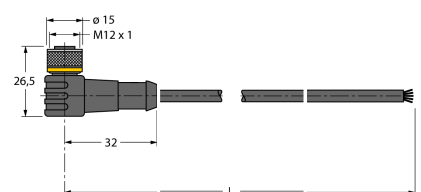
- green: Object is in the detection range but not in the switching range
- yellow: Object is in the switching range
- off: Object is outside the detection range

**Ultrasonic sensor
diffuse mode sensor
RU130U-M18E-2UP8X2T-H1151**

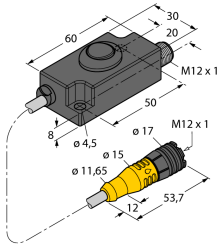
Accessories

| Type code | Ident no. | Description | Dimension drawing |
|-----------|-----------|--|---|
| MW-18 | 6945004 | Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304) |  |

Wiring accessories

| Type code | Ident no. | Description | Dimension drawing |
|---------------|-----------|---|---|
| RKC4.5T-2/TEL | 6625016 | Connection cable, female M12, straight, 5-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com |  |
| WKC4.5T-2/TEL | 6625028 | Connection cable, female M12, angled, 5-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com |  |

Function accessories

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