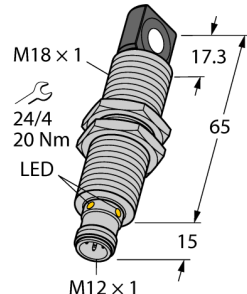


Ultrasonic Sensor Diffuse Mode Sensor RU100U-M18MS-LFX-H1151



- Rectangular transducer front
- Cylindrical housing M18, potted
- Connection via M12 x 1 male
- Temperature compensation
- Blind zone: 15 cm
- Range: 100 cm
- Resolution: 1 mm
- Sonic cone angle: 16°
- Frequency output 300...2000 Hz (150...1000 Hz)
- Frequency range selectable via FS control line (see functional principle)

Type designation RU100U-M18MS-LFX-H1151
Ident-No. 1610020

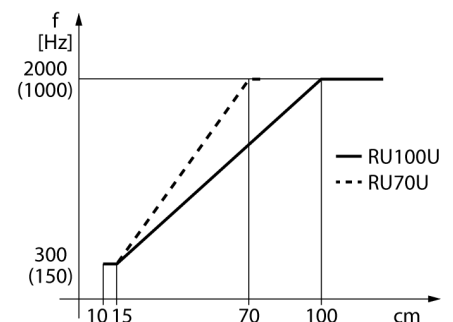
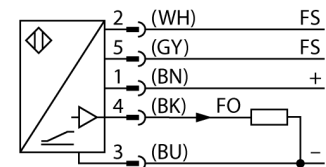
Function Ultrasonic diffuse mode sensor
Range 150...1000 mm
Resolution 1 mm
minimum measuring range 100 mm
minimum switching range 10 mm
Ultrasound frequency 200 kHz
Repeat accuracy 0.15 % of full scale
Temperature drift 1.5% of full scale
Linearity error ≤ ± 0.5 %
Edge lengths of the nominal actuator 100 mm
Approach speed ≤ 8 m/s
Pass speed ≤ 2 m/s

Operating voltage 15...30 VDC
Residual ripple 10 % U_n
DC rated operational current ≤ 150 mA
Residual current ≤ 0.1 mA
Response time typical 90 ms
Readiness delay 300 ms
Switching frequency 6.9 Hz
Short-circuit protection yes/ Cyclic
Reverse polarity protection yes
Wire breakage protection yes

Design Threaded barrel, M18
Radiation direction side
Dimensions 80 x Ø 18 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...+70 °C
Storage temperature -40...+80 °C
Declaration of conformity EN ISO/IEC EN 60947-5-7
Vibration resistance IEC 60068-2
MTTF 281 years
MTTF note acc. to SN 29500 (Ed. 99) 40 °C

Switching state LED, Yellow
Object detected LED, Green

Wiring Diagram

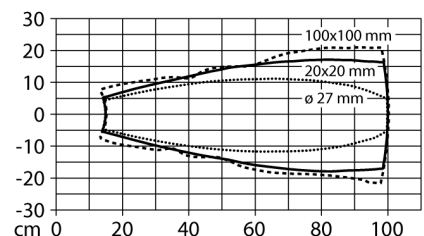


Functional principle

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.

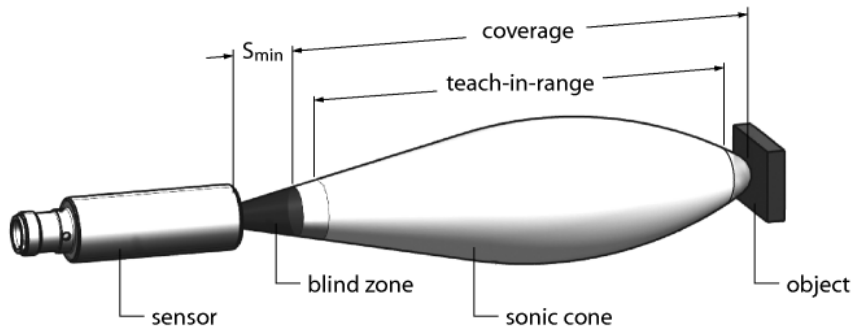
The frequency range can be selected via the control input. If this is connected to ground (-), the lower frequency range is selected. If it is not connected to ground or connected to the supply voltage, the output works in the higher frequency range.

Sonic Cone



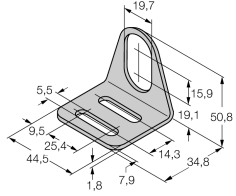
Ultrasonic Sensor
Diffuse Mode Sensor
RU100U-M18MS-LFX-H1151

Mounting instructions/Description



Ultrasonic Sensor Diffuse Mode Sensor RU100U-M18MS-LFX-H1151

Accessories

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

Function accessories

Type code	Ident-No.	Description	Dimension drawing
IM21-14-CDTRI	7505650	Rotation speed monitor with display indication, freely parametrizable monitoring functions, start-up bypass, interlock function, pulse output, current output	