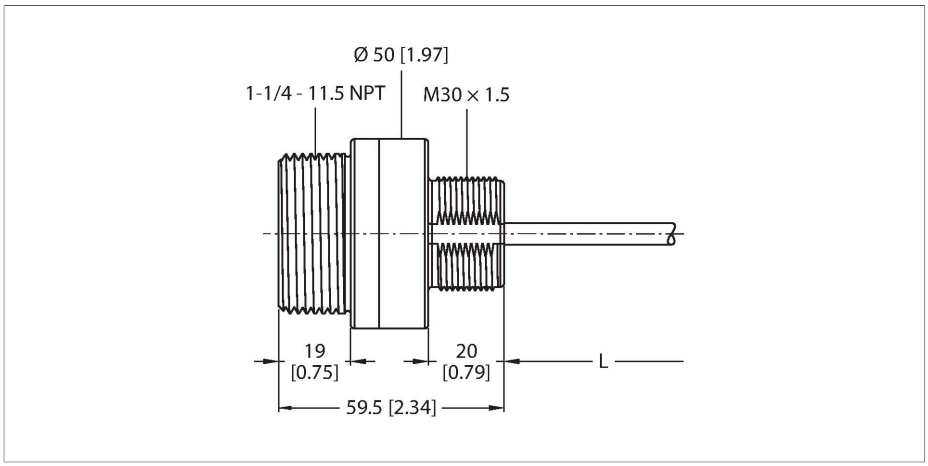
K50UX2ARA
Ultrasonic Sensor – diffuse mode sensor
With RS485/Modbus RTU Serial Interface



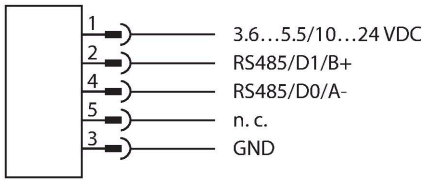
Technical data

Type	K50UX2ARA
ID	3804557
Ultrasonic data	
Function	Proximity switch
Range	100…1000 mm
Ultrasound frequency	224 kHz
Repeatability	≤ ± 1 mm
Electrical data	
Operating voltage U_B	10…30 VDC
DC rated operating current I_e	≤ 0.18 mA
Readiness delay	≤ 10000 ms
Communication protocol	RS485 Modbus RTU
Output function	RS485
Reverse polarity protection	yes
Wire breakage protection	yes
Mechanical data	
Design	Threaded barrel, K50UX
Dimensions	Ø 50 x 59.5 mm
Housing material	Plastic, PBT
Transducer material	Plastic, Epoxy-resin
Electrical connection	Cable with connector, M12 × 1, 5-wire, 0.23 m, PVC
Ambient temperature	-40…+70 °C
Storage temperature	-40…+70 °C
Relative humidity	95 %

Features

- Protection class IP67
- Operating temperature: -40…+70 °C
- 230 mm cable, PVC, with male connector, M12 × 1, 5-pin
- Range: 10…100 cm
- Sound frequency: 224 kHz
- Resolution > 1 mm
- Operating voltage: 10…30 VDC or 3.5…5.5 VDC
- RS485 interface for connecting as a MOD-BUS RTU slave

Wiring diagram



Functional principle

Ultrasonic sensors detect a multitude of objects contactless and wear-free with ultrasonic waves. Regardless of whether the object is transparent or opaque, metallic or non-metallic, liquid, solid or powdery. Even environmental conditions such as spray, dust or rain hardly affect their function.

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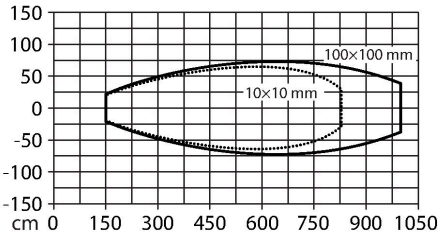
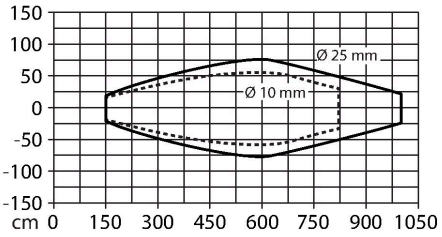
Technical data

Protection class	IP67
Power-on indication	LED, Yellow
Tests/approvals	
Vibration resistance	MIL-STD-202F, method 201A (vibration: 10 Hz to 60 Hz maximum, 0.06 inch [1.52 mm] double amplitude, 10 G maximum acceleration). IEC 60947-5-2 (shock: 30 G 11 ms duration, half sine wave)





Accessories

BWA-BK-006	3800834

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