

## UT210070

### ULTRASONIC SENSORS • DISTANCE MEASUREMENT

Ultrasonic sensors are non-contact and wear-free position switches which can also be used under rough environmental conditions. A key advantage of these devices lies in the fact that the material and the surface characteristics of the objects to be detected can be almost anything. Solids, liquids, grainy materials and powdery materials can be identified without the shape or the color of the object having any influence to the measured result. In addition, the ability to detect transparent materials such as films and fluids is of particular importance. The shape and color of the objects do not influence the result of the detection. The capability to detect transparent films or liquids is also of special importance. Ultrasonic sensors are used for distance measurement (e.g. detection of diameters, loop control), for fill level detection (e.g. silo detection), for positioning and presence detection (e.g. glass pane positioning, film tear check, glass bottle detection)



#### MECHANICAL DATA

Ambient temperature (MAX)	60 °C
Ambient temperature (MIN)	-10 °C
Degree of protection (IP)	IP67
Diameter detection	Yes
Housing design	Cuboid
Housing material	Plastic
Housing material, detail	Plastic (polyester)
Sensor height	15 mm
Sensor length	15 mm
Sensor width	20 mm

#### ELECTRICAL DATA

Adjustable distance (MIN)	5 mm
Adjustable measuring range	Yes
Carrier frequency	380 kHz
Distance measuring sensors	Yes
Filling level measurement	Yes
Load resistance (current output)	1.1 kOhm
Measuring range length (MAX)	200 mm
Measuring range length (MIN)	20 mm
No-load current	35 mA
Number of pins	4
Relative repeat accuracy	0.1 %
Residual ripple	10 %
Response/decay time	30 ms
Reverse polarity protection	Yes
Setting procedure	Teach-In
Setting via teach-in	Yes

**ELECTRICAL DATA**

Short-circuit-proof	Yes
Sound cone (angle of beam spread)	6 °
Sound cone with small angle of beam spread	Yes
Sound outlet	Lateral
Supply voltage (MAX)	30 V
Supply voltage (MIN)	15 V
Synchronization possible	No
Temperature drift	2 %
Type of analog output	4 mA ... 20 mA
Type of electrical connection	Connector M8
Voltage type	DC
With LED display (measuring range)	Yes

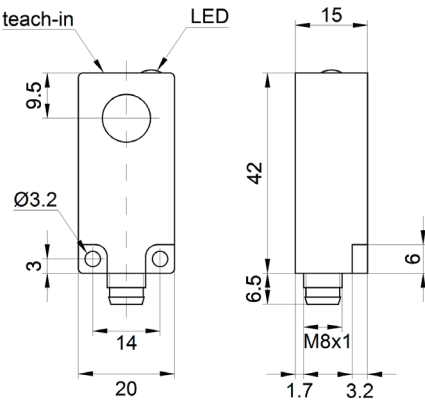
**OPTICAL DATA**

High resolution	Yes
Resolution	0.3 mm

**OTHER DATA**

Level detection	Yes
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**DIMENSIONAL DRAWING**



**INSTALLATION**



Mounting / Installation may only be carried out by a qualified electrician!

**DISPOSAL**



**SAFETY WARNINGS**

Before initial operation, please make sure to follow all safety instructions that may be provided in the product information!

Never use these devices in applications where the safety of a person depends on their functionality.