

## UT180003

### 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	-20 °C ... 70 °C
Degree of protection (IP)	IP65
Diameter detection	Yes
Housing design	Cylinder, screw-thread
Housing material	Plastic
Sensor length	96 mm
Thread length	65 mm
Thread pitch	1 mm
Thread size, metric	18

#### ELECTRICAL DATA

Adjustable distance	30 mm ... 400 mm
Adjustable measuring range	Yes
Carrier frequency	360 kHz
Distance measuring sensors	Yes
Filling level measurement	Yes
Measuring range length	30 mm ... 400 mm
No-load current	30 mA
Relative repeat accuracy	0.2 %
Response time	60 ms
Reverse polarity protection	Yes
Setting procedure	Teach-In
Setting via teach-in	Yes
Short-circuit-proof	Yes
Sound cone (angle of beam spread)	8 °
Sound outlet	Axial
Supply voltage	15 V ... 30 V
Synchronization possible	No

**ELECTRICAL DATA**

Temperature compensation	70 °C
Temperature compensation	-20 °C
Type of analog output	4 mA ... 20 mA
Type of electrical connection	Cable
Voltage type	DC
With LED display	Yes

**OPTICAL DATA**

High resolution	Yes
Resolution	0.12 mm

**OTHER DATA**

Level detection	Yes
Loop control	Yes
Relative linearity deviation	0.5 %

**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!