

UT98A357

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	-25 °C ... 70 °C
Degree of protection (IP)	IP65
Diameter detection	Yes
Housing coating	Chromium-plated
Housing design	Cylinder, screw-thread
Housing material	Copper
Sensor diameter	65 mm
Sensor length	163.5 mm
Thread pitch	1.5 mm
Thread size, metric	30

ELECTRICAL DATA

Adjustable distance	600 mm ... 6000 mm
Adjustable measuring range	Yes
Carrier frequency	80 kHz
Combined switching and analog outputs	Yes
Distance measuring sensors	Yes
Filling level measurement	Yes
Hysteresis	1 %
Load resistance (current output)	0.3 kOhm
Max. output current	300 mA
Measuring range length	600 mm ... 6000 mm
No-load current	60 mA
Number of pins	5
Relative repeat accuracy	0.15 %
Residual ripple	10 %
Response time	400 ms
Sensing range	600 mm ... 6000 mm

ELECTRICAL DATA

Setting procedure	Manual adjustment
Short-circuit-proof	Yes
Sound cone (angle of beam spread)	6 °
Sound cone with small angle of beam spread	Yes
Sound outlet	Axial
Supply voltage	20 V ... 30 V
Switching frequency	1 Hz
Synchronization possible	Yes
Temperature compensation	70 °C
Temperature compensation	-25 °C
Type of analog output	4 mA ... 20 mA
Type of electrical connection	Connector M12
Type of switching function	Programmable/configurable
Type of switching output	PNP
Voltage type	DC
With LED display	Yes

OPTICAL DATA

Resolution	1 mm
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OTHER DATA

Level detection	Yes
Loop control	Yes
Object detection on conveyor systems	Yes

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!