

UR210170

ULTRASONIC SENSORS • RETRO-REFLECTIVE SENSORS

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

Degree of protection (IP)	IP67
Diameter detection	Yes
Housing design	Cuboid
Housing material	Plastic
Housing material, detail	Plastic
Sensor height	42 mm
Sensor length	15 mm
Sensor width	20 mm

ELECTRICAL DATA

Carrier frequency	380 kHz
Max. output current	200 mA
Measuring range length (MAX)	200 mm
Measuring range length (MIN)	0 mm
No-load current	35 mA
Relative repeat accuracy	0.75 %
Residual ripple	10 %
Response time	10 ms
Response/decay time	10 ms
Reverse polarity protection	Yes
Setting procedure	Teach-In
Setting via teach-in	Yes
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)	12 V

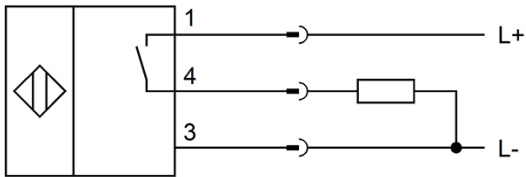
ELECTRICAL DATA

Temperature drift	2 %
Type of electrical connection	Connector M8
Type of switching function	Normally open contact (NO)
Type of switching output	PNP
Voltage drop	2 V
Voltage type	DC
With LED display	Yes

OTHER DATA

Object detection on conveyor systems	Yes
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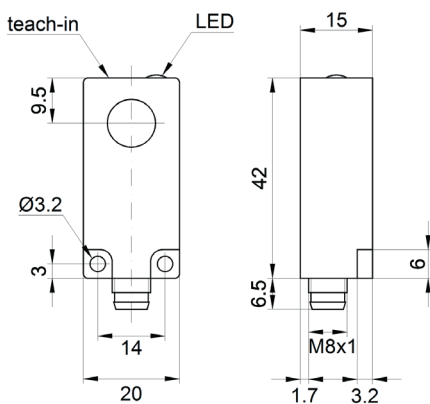
CONNECTION



Colors: 1 = BN (brown), 3 = BU (blue), 4 = BK (black)

Functions: 1 = L+, 3 = L-, 4 = PNP NO

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.