

# UT120021

## Ultrasonic sensors • Distance measurement

Ultrasonic sensor, diffuse reflection sensor, M12x1 88lang, Sn: 2-82, 15-30V diagnostic coverage, 0-10V, M12 plug-in connector 4-pin, IP67, nickel-plated (n-pltd) brass, teach-in, LED, axial sound cone

including Nut



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)

### Electrical features

Display	LED display
Resolution	0.3mm
Type of analog output	0 - 10V
Type of electrical connection	Connector M12
Setting procedure	Teach-In
Short-circuit protection	Yes
No-load current	35mA
Number of pins	4
Relative repeat accuracy	0.1%
Sound outlet	axial
Protection class	III
Temperature drift over entire measuring range	2%
Carrier frequency	380kHz
Reverse polarity protection	Yes
Operating voltage (DC)	15 - 30V
Measuring range	2 - 82mm

**Mechanical features**

Design	Cylinder, screw-thread
Thread length	42.5mm
Thread pitch	1mm
Length	88mm
Surface	nickel-plated
Degree of protection (IP)	IP67
Housing material	Brass
Diameter detection	Yes
Thread dimension	M12
Ambient temperature	-10 - 60°C

**Other features**

Operating frequency	380kHz
Level detection	Yes

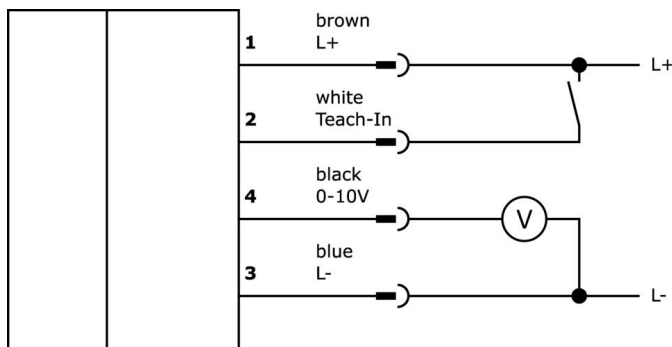
**Classification**

ETIM 8	EC001846 Ultrasonic distance sensor
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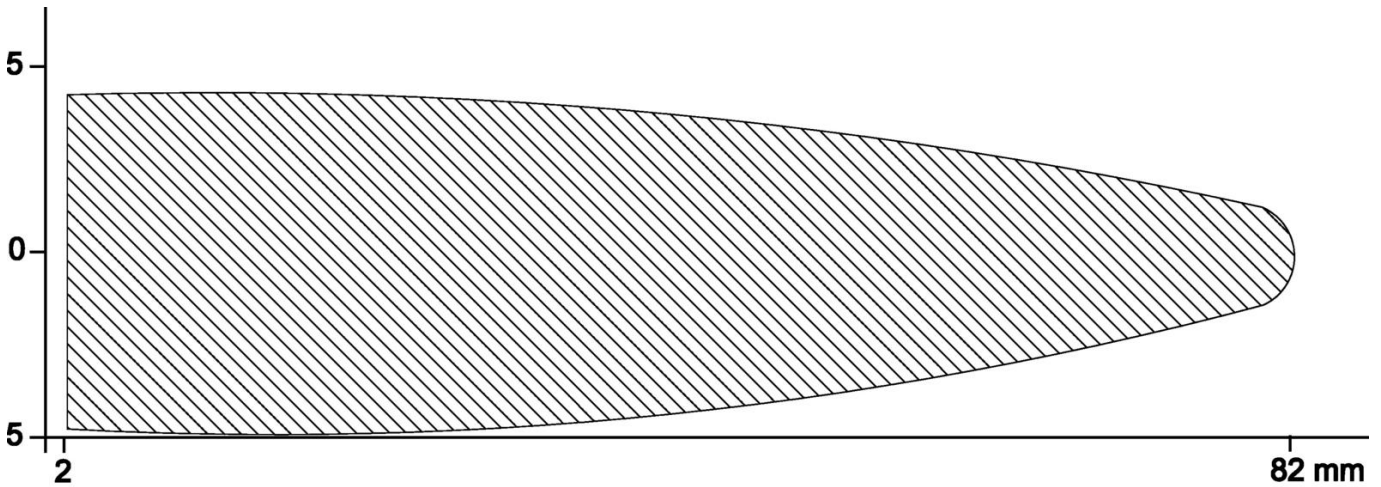
**More**

IPF Product Group	259 ultrasonic sensors (analog)
packaging dimensions	120 x 100 x 17 mm
gross weight	50 g
Customs tariff number	85365019
WEEE number	40951076
Reach-compliant	Yes
RoHS-compliant	Yes

**Connection**



**Dimensional drawing**



 **sichere Erkennung eines Objektes von 15x15mm**

**UT120021**

**Extract accessories program**

**VK003020**



Cable socket, Angular, Suitable for self-assembly, Screw connection, Ø3-6.5mm, 4A, 240V, -25-90°C, M12 Female (socket) 4pin, IP67, PBT

**VK003024**



Cable socket, Straight, Suitable for self-assembly, Screw connection, Ø3-6.5mm, 4A, 240V, -25-90°C, M12 Female (socket) 4pin, IP67, PBT

**VK205321**



Connection cable, 2m, M12 Female (socket) 4pin Angular, Free conductor end, 4x0.34mm<sup>2</sup>, PUR (Polyurethane), Ø5.5mm, 250V, -25-90°C, IP67, Shielded, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicon...

**VK205325**



Connection cable, 2m, M12 Female (socket) 4pin Straight, Free conductor end, 4x0.34mm<sup>2</sup>, PUR (Polyurethane), Ø5.5mm, 250V, -25-90°C, IP67, Shielded, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silico...

**AV000114**



accessories, Teach adapter, M12 Female (socket) 4pin Straight, M12 Male (connector) 4pin Straight Black

**AY000115**



accessories sensor, Fixture kit, Metal, ball joint

**AY000162**



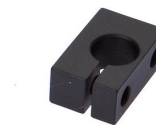
Accessories, magnetic, Ø43mm, neodymium-iron-boron, inside thread M5, rubber

**AY000025**



accessories, Hexagon nut, M12x1, Wrench size 17mm, Brass Nickel-plated

**AY000032**



accessories sensor, Ø12mm, Aluminum, For sensor 12mm, for Wall mounting, Screw mounting

You can find further accessories on our homepage

**Installation**



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

**Disposal**



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**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.