

UT18002B

Ultrasonic sensors • Distance measurement

Ultrasonic sensor, diffuse reflection sensor, M18x1, 104 long, Sn: 100-800, 15–30 V DC, 0–10 V, 5-pin M12 connector, IP67, plastic, teach-in, LED, axial sound cone



Ultrasonic sensors are contactless, wear-free position switches that can be used even under harsh environmental conditions. A key advantage of these devices is that the material and surface properties of the objects to be detected can be virtually any type. They perform recognition of solid, liquid, granular, and powdered materials. The shape and color of the objects have no effect on the recognition result. The ability to recognize transparent materials such as films or liquids is also a feature. Ultrasonic sensors are used for distance measurement (e.g., diameter detection, loop control), level or fill-level monitoring (e.g., silo detection), and for positioning and presence detection (e.g., glass pane positioning, film tear detection, glass bottle detection).

Electrical features

Response/decay time	100 ms
Display	LED display
Resolution	0.25 mm
Type of analog output	0 - 10V
Type of electrical connection	Connector M12
Setting procedure	Teach-In
No-load current	30 mA
Number of pins	5
Relative linearity deviation	0.5 %
Relative repeat accuracy	0.2 %
Sound outlet	axial
Protection class	III
Carrier frequency	300 kHz
Operating voltage (DC)	15 - 30 V
Measuring range	100 - 800 mm
protection functions	short circuit protection reverse polarity protection

Mechanical features

Design	Cylinder, screw-thread
Thread length	65 mm
Thread pitch	1 mm
Length	104 mm
Degree of protection (IP)	IP67
Housing material	plastic
Thread dimension	M18
Ambient temperature	-20 - 70 °C

Optical features

Angle of beam spread	8 °
----------------------	-----

Other features

Operating frequency	300 kHz
Applications	Level sensing

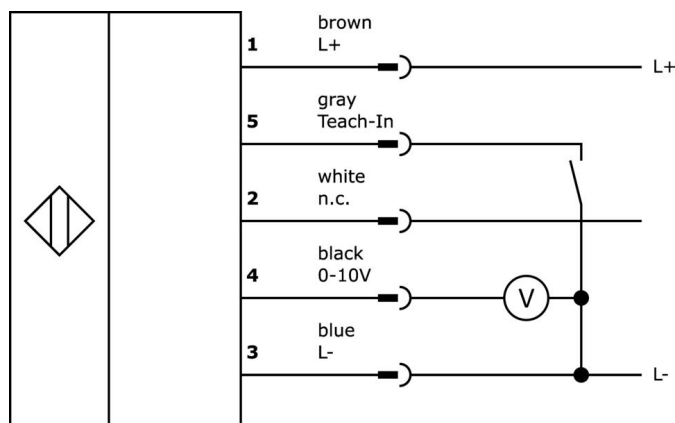
Classification

ETIM 8

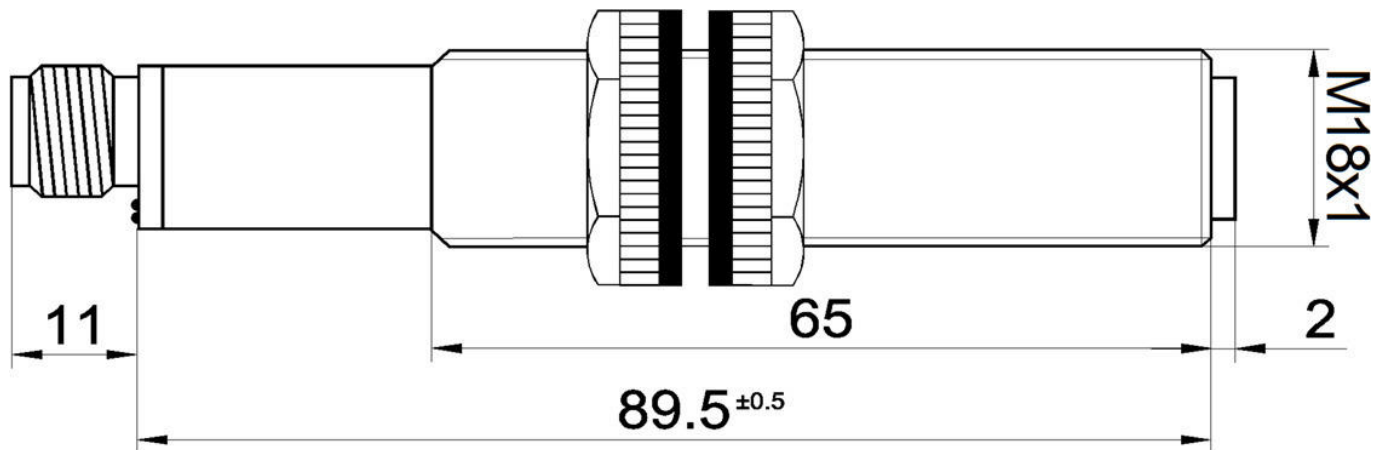
More

IPF Product Group	259 ultrasonic sensors (analog)
packaging dimensions	165 x 110 x 55 mm
gross weight	90 g
customs tariff number	85365019
WEEE number	40951076
OzDS-compliant	Yes
POP-compliant	Yes
Reach-compliant	Yes
RoHS-compliant	Yes

Connection



Dimensional drawing



Extract accessories program

AY000014



accessories sensor, Reduction sleeve, M18, Plastic

VK003021



Cable socket, Angular, Suitable for self-assembly, Screw connection, Ø3-6.5mm, 4A, 60V, -25-90°C, M12 Female (socket) 5pin, IP67, PBT

VK003025



Cable socket, Straight, Suitable for self-assembly, Screw connection, Ø3-6.5mm, 4A, 60V, -25-90°C, M12 Female (socket) 5pin, IP67, PBT

AU000001



accessories ultrasonic, Deflection bracket, 50x105mm, Deflection bracket, Steel, 90°

AU000002



accessories ultrasonic, Deflection bracket, 50x105mm, Deflection bracket, Steel, 90°

VK205621



Connection cable, 2m, M12 socket 5-pin angular, free cable end, 5x0.34mm², PUR (polyurethane), Ø6mm, 60V, -25-90°C, IP67, shielded, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

VK205625



Connection cable, 2m, M12 socket 5-pin straight, free cable end, 5x0.34mm², PUR (polyurethane), Ø6mm, 60V, -25-90°C, IP67, shielded, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

AY000117



accessories sensor, Fixture kit, Metal, ball joint

AY000162



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

You can find further accessories on our homepage



Installation

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



Disposal

WEEE number according to § 6 para. 3
ElektroG: 40951076

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.