



# SENSORS: MOTOSONIC

## MOTOMETER

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INDUSTRIE  
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With the new ultrasonic level sensor MOTOSONIC you enter a new dimension of measuring content levels because measurement of the liquid level in a tank is done contactless by using ultrasonic technology.

The flexible MOTOSONIC can be used for quite a high number of liquids in various tank shapes.

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The ultrasonic level sensor MOTOSONIC generates a high frequency sound wave to measure the time, the wave needs to run to the fluid level and back, after it was reflected by the liquid surface. Based on the measured time and the speed of sound, the distance between the sensor and the liquid surface can be calculated, and by this means the tank content as well.



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It is important for the calculation to take also the tank shape into account, just as waves on the surface of the liquid or possibly upcoming reflections in the tank.

Compared with classical level sensors, measurement with the ultrasonic method is very precise, because distance is detected with an accuracy of  $\pm 3.2$  mm and a resolution of 1.8 mm. Moreover, measurement is done contactless to the medium, what avoids abrasion of mechanical parts and increases the lifetime of the sensor.

Fixing on the tank is realised by a 54 mm 5-hole-flange or a 80 mm 6-hole-flange adapter (other flanges can also be offered on request). The electrical connection is realised with an Delphi-connector. By programming a table of interpolation values into the sensor, tank contents of various tank shapes can exactly be displayed on standard gauges. The ultrasonic level sensor can be operated at an operating voltage between 10 and 32 Volts and is therewith suitable for electrical systems of 12 Volt or 24 Volt power supplies.

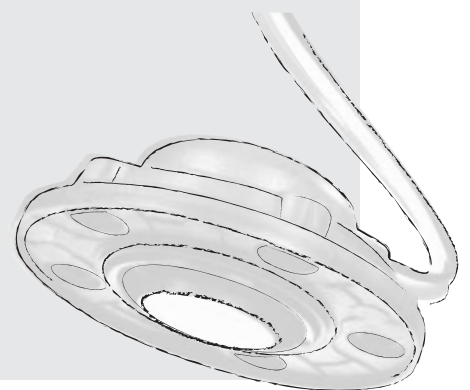
All data subject to technical changes.

### Two basic modules are offered

- modul 1 with Two-Wire Connection: Output signal: 30 to 260 Ohm
- modul 2 with Three-Wire Connection: Output signal: 0.5 to 4.5 Volts

### Technical specifications

Operating voltage:	10 to 32 Volts
Output signal:	2-Wire: 30 to 260 Ohm (Pullup-Resistance 90 to 150 Ohm) or 3-Wire: 0.5 to 4.5 Volts (Output impedance 1k to 20 kOhm)
Max. tank depth:	810 mm
Blind area:	50 mm
Load dump:	120 Volts
ESD:	15 KV
Mechanical shock:	18 G Shock
Vibration:	4 G, 8 hours each direction in space
Acoustic cone angle:	+/- 6 degrees
Operation temperature:	-40 to +85 °C



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