

# Load Cell Type AO / ED 21



**Fully digital, monobloc oscillating-wire load cell, made of aluminium, for a nominal load of 40kg.**

## General

As in all DIGI SENS load measuring cells, an oscillating-wire transducer is used to convert the force/load into an electrical signal.

This patented element is able to deliver a signal that can be directly processed by a computer. The calibration data could be stored in the load cell electronics. An optional built-in temperature measurement ensures active temperature compensation.

## Applications

Calibrated measurement of loads, weights and forces in applications such as:

- Platform scales
- Container scales
- Mixers
- Conveyor scales
- Robot arm scales

## Description

A guide-plate of aluminium allows weighing



systems to be built using one load cell (monobloc construction), where normally three or more conventional cells would be required.

Torsion forces due to eccentric application of the load are filtered out and complicated suspension systems (pendulum bearings), designed to avoid unwanted stresses, are superfluous.

The logically designed, practically displacement-free mounting is characterised by a very low measuring displacement of less than 0.4 mm.

The result is a weighing system with outstanding measuring precision.

The calibration data of the load cell are stored in a built-in memory.

No adjustment whatsoever is required either at commissioning or when a load cell is replaced.

A 5V TTL output signal is available for load and temperature.

For processing and transmission of the signal, as well as for other more complex measuring and regulating functions, DIGI SENS offers suitable electronics and software.

Together with this electronics and other components, such as inclinometers or accelerometers, the AO loads cells can be extended to form complete weight or force-measuring systems for static or dynamic applications.

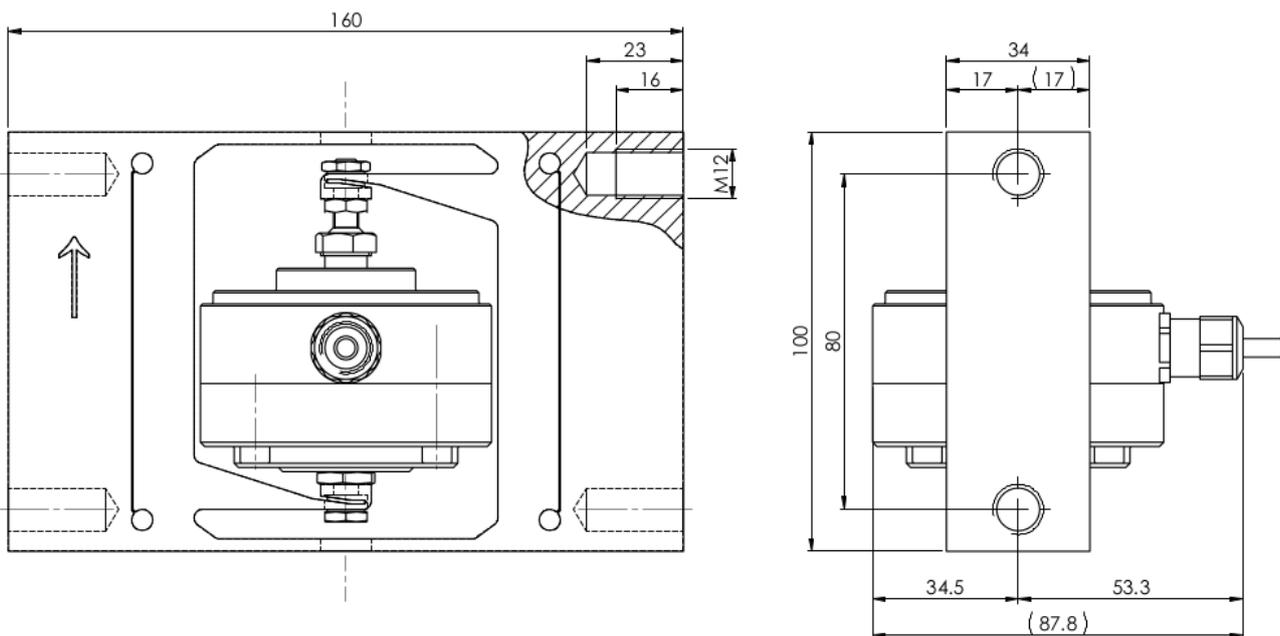
# Load Cell Type SO / ED 21



## Technical Data

<b>Measuring Ranges</b> Nominal load 40kg (other ranges on request)	<b>Overload capability</b> Without permanent damage 100%	<b>Output signal</b> Frequency range 12....19kHz Zero 13kHz±500Hz Frequency shift for nominal load 3kHz±500Hz Amplitude 5V TTL
<b>Resolution</b> N <sub>max</sub> 1ppm* * depending on the measurement unit	<b>Measuring displacement</b> Displacement at nominal load 0.4mm	<b>Protection class</b> IP67
<b>Measurement uncertainty</b> Total error <0.03% Error in part-range <0.01% Linearity over measuring range 0.025% Hysteresis 0.05%	<b>Temperature drift</b> Zero 0.2% / 10K Sensitivity 0.05% / 10K Voltage 5V DC ± 10% Max. current consumption <10mA Type current consumption 5mA	<b>Temperature range</b> Calibration -10...+40°C Service -30...+70°C <b>EMC</b> residential: EN 61000-6-1 and -3 industrial: EN 61000-6-2 and -4

## Dimensional drawing



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