

MG-SENSOR SERVICES

Calibration Services

In measurement technologies, calibration is one of the most important quality-relevant processes, as well as an instrument for reliable determination and confirmation of the conformity of a measuring instrument with the applicable regulations.

Calibration according to DIN EN ISO/IEC 17025 may only be performed by test laboratories certified by the German Accreditation authority. The DIN EN ISO/IEC 17025 standard requires traceability to native standards and the measured value display is compared with the respective standard. The certified calibration of test and measurement equipment and its traceability is a reliable recording of the test equipment. As an accredited calibration laboratory, mg-sensor can thus ensure the product quality of your products.

As an accredited laboratory, we offer you the measured variables force and moment, torque, angular velocity, acceleration shock and sine, length, angle of rotation, temperature, relative humidity, voltage and current as standard calibration or according to DIN EN ISO/IEC 17025.

Depending on the required calibration type, standard calibration or according to DIN EN ISO/IEC 17025, we will issue the respective calibration certificate. All test results of the calibration process are recorded in the corresponding calibration certificate.

DIN EN ISO/IEC 17025	Measured Variables	Standard Calibration
0.5 – 25 kN	Force (Seat Belt)	0.5 – 25 kN
2 – 20 kN	Force (Sensors)	2 – 20 kN
0.05 – < 0.5 kN 0.5 – 25 kN	Multi-Component Force (ATD)	0.05 – < 0.5 kN 0.5 – 25 kN
0.05 – 600 kN	Force (Transducer)	0.05 – 600 kN
3 – 1,200 Nm	Multi-Component Moment (ATD)	3 – 1,200 Nm
8 – 5,000 °/s	Angular Velocity	8 – 5,000 °/s
200 - 20.000 m/s ²	Acceleration Shock	200 - 20.000 m/s ²
5 - 200 m/s ² (10 Hz - 10 kHz)	Acceleration Sine	5 - 200 m/s ² (10 Hz - 10 kHz)
0 - 200 mm	Length	0 - 500 mm
0 - 360°	Rotation Angle	0 - 360°
-90° - 90°	Tilt	-90° - 90°
10 - 50 °C	Temperature	10 - 50 °C
-50 - 500 °C	Temperature Modules	-50 - 500 °C
10 % - 80 %	Relative Humidity	10 % - 80 %
0 V, 10 mV - 1000 V	DC Voltage	0V - 1000 V
0 A - 10 A	DC Current	0 A - 10 A
0 A - 1000 A	Current Clamps	0 A - 1000A

Your partner for reliable calibration services:

- ✓ Fast and high-quality calibration services
- ✓ Competent consulting
- ✓ Accredited calibration laboratory according to DIN EN ISO/IEC 17025
- ✓ Accreditation for seat belt load cells according to ISO 17025 / ISO/TS 17242
- ✓ Accreditation for ATD load cells
- ✓ 14 different measurands

- ✓ 13 calibration systems
- ✓ Calibration of all brands (on request)
- ✓ 33,000 axis per year
- ✓ Calibration laboratory on over 250 m²

Contact our sales team: sales@mg-sensor.de

Maintenance

Downtimes due to defective sensors can unexpectedly affect the efficiency of work processes and profitability. A fast turnaround time for repairs is necessary to avoid long downtimes as far as possible. An exact error description from customer side will be helpful.

Our experienced team will be able to help you.

We are able to repair:

- Defective mg-sensor products
- Defective third-party sensors (on request)
- Cable damages
- Defective connectors

After the visual inspection of customer parts, we will provide a non-binding cost estimate. If the approval is given, we start repairing and if necessary, replacing defective components. If the sensor could be repaired, it will be reassembled and a functional test will be performed. Finally, we calibrate your sensor, either as standard calibration or according to DIN EN ISO/ IEC 17025, as required.

Sensors, which shows a defect during the calibration are tested directly in the repair center and, after agreement with the customer, either repaired or returned for relief.

Please send us your defective parts to:

mg-sensor GmbH

Repair department

Airport Boulevard B 210

77836 Rheinmuenster

Germany

Expert processing of your repairs:

- ✓ Error tracking/ functional test
- ✓ Non-binding cost estimate
- ✓ High-quality repair
- ✓ Replacement of irreparable components
- ✓ Functional end test
- ✓ Standard calibration / Calibration according to DIN EN ISO/IEC 17025

Contact our repair team: sales@mg-sensor.de

Strain Gauge Application

Due to the application of strain gauges on mechanical components, these can be converted into measuring instruments. You provide us with the mechanical components and we take over the entire process of turning the provided parts into a measuring instrument.

Depending on the requirements, we can apply two different technologies:

Cold bonding

- Used for parts, which cannot be applied at high temperatures
- Typical areas of applications are for example, car body components, chassis components
- Lifetime of application is typically 1 year

Hot bonding:

- Long lifetime application
- All dummy load cells and force and moment sensors
- Suitable for higher temperature applications
- This process requires mechanical application tools adapted to the shape of the component
- Epoxy adhesive requires several hours curing time in oven → longer production time

Due to more than 20 years of experience of our employees in the field of strain gauge application, we guarantee the highest quality and a very long lifetime of the strain gauge application.

Procedure of application:

- Providing of the mechanical component by the customer (e.g., machine part, vehicle part)
- Specification by the customer or determination of where the forces have to be determined and which output signals can be processed
- Determination of the application points
- If required, mechanical adaption of the components (creation of a 3D-CAD model)
- Selection of the strain gauges under consideration of the component material as well as the environmental conditions
- Strain gauge application
- Connection with measuring amplifiers according to customer requirements
- Calibration of the component, on request with a calibration device specially developed for this application (According to customer specifications DIN EN ISO/IEC 17025 or standard calibration)
- Delivery of the finished measuring instrument incl. calibration certificates

Your partner for high-quality strain gauge application

- ✓ Competent consulting
- ✓ Non-binding cost estimate
- ✓ High technical know-how
- ✓ Highest quality standards
- ✓ Requirement specific technology

Contact our sales team: sales@mg-sensor.de

Custom Products

Developments are usually very time-consuming and require capacities which are lacking elsewhere. Save yourself this effort and contact us. For special requirements we produce adapted sensors, which you can use directly for your application. We offer you special solutions in individual production or small series, which are developed especially for your application.

Design of the measuring points according to your requirements:

- Geometry
- Load of the sensor
- Measuring axis
- Output signal of the sensor
- Material
- Environmental influences

However, if you would like to use a standard sensor, we will be glad to advise you and adapt it to your needs:

- Measuring range
- Extension of the measuring axis
- Drilling pattern
- Adaption
- Geometry

We are glad to help you with these topics:

- Design of compensation circuits
- Design of linearization
- Digitalization of sensors
- Strain gauge application on components provided by the customer
- Individual pin configuration

Customized products developed for you!

- ✓ Development of prototypes
- ✓ Knowledgeable application consulting
- ✓ Non-binding cost estimate
- ✓ High technical know-how
- ✓ Highest quality standards

Contact our sales team: sales@mg-sensor.de

Product Trainings

We do not only sell our products and services; we also want you to understand the technology behind them. Therefore, we offer individual training courses on various topics.

Get to know our products and our company better and attend one of our courses:

- Data Acquisition Systems
- Calibration Services
- Strain Gauge Technology
- Product Training

Profound knowledge through high-quality product trainings with practical examples.

Do you need a training course in another topic, which is not listed? Please contact us, we are glad to arrange an individual trainings program with you.

Technical Support

You have technical questions about our products or need information about a specific application?
 We are at your disposal in various ways:

Phone: +49 7229 6996-90

E-Mail: sales@mg-sensor.de

You are from abroad and need local support? Our international representatives are glad to support you.

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