Deutsche Akkreditierungsstelle

# Annex to the Partial Accreditation Certificate D-K-18446-01-02 according to DIN EN ISO/IEC 17025:2018

**Valid from:** **09.02.2023**

Date of issue: 09.02.2023

This annex is a part of the accreditation certificate D-K-18446-01-00.

Holder of partial accreditation certificate:

**mg-sensor GmbH**
**Airport Boulevard B210, 77838 Rheinmünster**

The calibration laboratory meets the minimal requirements of DIN EN ISO/IEC 17025:2018 and, if applicable, additional legal and normative requirements, including those in relevant sectoral schemes, in order to carry out the conformity assessment activities listed below.
The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of calibration laboratories and confirm generally with the principles of DIN EN ISO 9001.

*This certificate annex is only valid together with the written accreditation certificate and reflects the status as indicated by the date of issue. The current status of any given scope of accreditation can be found in the directory of accredited bodies maintained by Deutsche Akkreditierungsstelle GmbH at https://www.dakks.de.*

Calibration in the fields:

**Dimensional quantities**

**Length**

- **Length measuring instruments**

**Angle**

- **Angle of rotation**
- **Inclination**

**Electrical quantities**

**DC and low frequency quantities**

- **DC voltage**
- **DC current**

Within the measurands/calibration items marked with with *, the calibration laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, to use calibration standards or equivalent calibration procedures listed here with different issue dates.
The calibration laboratory maintains a current list of all calibration standards / equivalent calibration procedures within the flexible scope of accreditation.

DAkkS Deutsche Akkreditierungsstelle

**Permanent laboratory, Rheinmünster location**

Calibration and Measurement Capabilities (CMC)

| Measurement quantity / Calibration item | Range | | | Measurement conditions / procedure | Expanded uncertainty of measurement | Remarks |
|---|---|---|---|---|---|---|
| **Length*** Displacement sensor (ATD)) | 0 mm | to | 200 mm | ISO 23521:2020 | 20 µm | Analogue and digital sensors |
| chest displacement potentiometer | 0 mm | to | 200 mm | SAE J 2517:2016 | 20 µm | |
| IR Tracc displacement | 0 mm | to | 200 mm | ISO/TS 21476:2018 | 1 % | |
| **Angle** Angle of rotation* Direct rotary encoder systems* | 0° | to | 360° | VDI/VDE 2648 page 1:2009 | 0.3° | Rotation angle sensors Analogue and digital sensors |
| Inclinometers | -90° | to | 90° | KW-AN0001:2022 | 0.3° | Inclination angle sensors Analogue and digital sensors |
| IR Tracc angle | -45° | to | 45° | KW-DS0003:2022 | 1 % | |
| **Electrical quantities** DC voltage | 0 V | to | 1000 V | | $0.1 \cdot 10^{-3}\ U + 2$ µV | *U*: measured value |
| DC current | | | 0 A | | 5 nA | *I*: measured value |
| | 100 µA | to | 1 A | | $0{,}3 \cdot 10^{-3}\ I$ | |
| | > 1 A | to | 1000 A | | $2 \cdot 10^{-3}\ I$ | |
| DC current current clamps | 0 A | to | 1000 A | 1 to *N* windings | $10 \cdot 10^{-3}\ I + 10$ mA | |

**Abbreviations used:**

| | |
|---|---|
| KW- | calibration procedure of the mg-sensor GmbH |
| VDE | Verband der Elektrotechnik, Elektronik und Informationstechnik e.V. |
| VDI | Verein Deutscher Ingenieure e.V. |

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