

Comparison measurement for DC resistance

Provider of the comparison measurement

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1 Program

A comparison measurement for **DC resistances is carried out**. Normal resistance with the nominal values: **1 Ohm, 100 Ohm, 10 kOhm** are sent as calibration objects. The respective **DC resistance value** is to be determined.

The **method used can be freely** selected.

1.1 Confidentiality

The participants undertake to maintain confidentiality about the information and results obtained in the course of the comparative measurement. Any subcontractors involved are contractually bound to the same confidentiality.

All participants will be named in the technical protocol and final report, but the results will only be presented anonymously.

1.2 Schedule / Procedure

Planned start: **September 2023**

The comparison measurement will take place in a ring-shaped manner, with a calibration being carried out in the pilot laboratory before and after the participants, and always **after 4-5 participants**.

Each participant has two calendar weeks to perform the calibration and forward the calibration items. If this is not possible, the coordinator must be informed, if possible even before the start of the interlaboratory comparison.

The participants are responsible for **an insured and immediate forwarding** of the calibration items in the **provided transport box** to the next participant or to Testo Industrial Services. An ambient temperature of **10 °C to 50 °C** must be maintained during transport. **It is recommended to send the calibration items personally to the next participant.**

A data logger for monitoring the ambient conditions during transport will be provided.

2 Implementation

2.1 Note

The resistance are to be measured at **23 °C**. If this is not possible, the measured value must also be corrected to 23 °C.

A temperature coefficient is provided for this purpose.

2.2 Assigned values

The reference values are determined in the electrical laboratory of Testo Industrial Services Kirchzarten by **direct measurement against a reference standard using a resistance measuring bridge**. The resistances are stored **in air at 23 °C**.

2.3 Evaluation

The results are evaluated based on the E_n value at the assigned value. If necessary, a transfer uncertainty contribution is also considered.

A satisfactory result exists if $|E_n| \leq 1,0$.

3 Participation

3.1 Participants

This comparison measurement is intended for all calibration laboratories that have or are seeking accreditation for the specified measurand.

3.2 Registration procedure

In case of interest, an offer will be sent to the participant. Participation is considered binding as soon as an order confirmation is sent by Testo Industrial Services.

Note: A minimum number of 8 participants is required for this intercomparison to take place.

4 Further details

At the end of the comparison measurement program, a draft of the final report will be sent to the participants to review the results and their performance evaluation.

It is planned to present the results anonymously to the DKD Technical Committee.