

Deutsche Akkreditierungsstelle

Annex to the Accreditation Certificate D-K-19750-02-00 according to DIN EN ISO/IEC 17025:2018

Valid from: 14.12.2022

Date of issue: 20.03.2023

Holder of accreditation certificate:

MPS Mess- und Prüfsysteme GmbH
Industriestraße 17, 97483 Eltmann

The calibration laboratory meets the requirements of DIN EN ISO/IEC 17025:2018 to carry out the conformity assessment activities listed in this annex. The calibration laboratory meets additional legal and normative requirements, if applicable, including those in relevant sectoral schemes, provided that these are explicitly confirmed 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.

Calibrations in the fields:

Electrical quantities

DC and low frequency quantities

- **High voltage quantities ^{a)}**
- **High voltage impulse quantities ^{a)}**

a) also on-site calibrations

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.

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>.

Abbreviations used: see last page

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This document is a translation. The definitive version is the original German annex to the accreditation certificate.

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Permanent Laboratory

Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement	Remarks
Impulse charge (Q)	1 pC to 50 nC	Oscilloscope real time mode	$0.02 \cdot Q + 0.15 \text{ pC}$	Q: Measured value
AC voltage	1 kV to 100 kV 10 kV to 200 kV	50 Hz	$0.004 \cdot U + 0.02 \text{ kV}$ $0.004 \cdot U + 0.02 \text{ kV}$	Effective value and $\hat{U}/\sqrt{2}$ Calibration of measuring systems and dividers 100/200 kV measuring device with one or two capacitors
	0.5 kV to 20 kV	50 Hz	$0.007 \cdot U + 0.02 \text{ kV}$	Effective value with multimeter and probe considering the scale factor
DC voltage	0.5 kV to 35 kV	DC	$0.006 \cdot U + 0.02 \text{ kV}$	Calibration of measuring systems and dividers with multimeter and HV probe

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On-site calibrations

Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement	Remarks
Impulse charge (Q)	1 pC to 50 nC	Oscilloscope real time mode	$0.05 \cdot Q + 0.3 \text{ pC}$	Q: Measured value
AC voltage	1 kV to 100 kV 10 kV to 200 kV	50Hz	$0.004 \cdot U + 0.02 \text{ kV}$ $0.004 \cdot U + 0.02 \text{ kV}$	Effective value and $\hat{U}/\sqrt{2}$ Measuring conditions on site (ambient conditions) are taken into account, calibration of measuring systems and dividers 100/200 kV measuring device with one or two capacitors
	80 kV to 1000 kV	linearity measurement 50 Hz	$0.004 \cdot U + 0.02 \text{ kV}$	
	0.5 kV to 20 kV	50 Hz	$0.007 \cdot U + 0.02 \text{ kV}$	Calibration of measuring systems and dividers with multimeter and HV probe
DC voltage	0.5 kV to 35 kV	DC	$0.006 \cdot U + 0.02 \text{ kV}$	Calibration of measuring systems and dividers with multimeter and HV probe

Abbreviations used:

CMC Calibration and measurement capabilities
DIN German Institute for Standardization e.V.
IEC International Electrotechnical Commission

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