

Data Sheet no. 10.31/4

Calibration of High Voltage Measuring Systems according to IEC 60060-2

General

According to IEC 60060-2 and general metrological principles high-voltage measurements have to be traceable to National Standards. Because of the requirements of IEC 60060-2 and the existence of an Accreditation System in Germany, the first calibration has to be done by an accredited calibration laboratory. IEC 60060-2 recommends annual performance tests, but requires in minimum one in five years. Therefore at HIGHVOLT a DKD-Calibration Laboratory was established, accredited by the Accreditation Body of the German Calibration Service (DKD) at the Physikalisch-Technische Bundesanstalt. The Physikalisch-Technische Bundesanstalt is the metrological institute of the Federal Republic of Germany and has the responsibility for the National Standards of measurement for representation of the international units SI (by law).

The HIGHVOLT Calibration Laboratory registered under the number DKD-K-24501 offers the following services.

Calibration objects

- Peak Voltmeters
- Compressed Gas Standard Capacitors
- High Voltage Dividers
- High Voltage Measuring Systems
- High Voltage Reference Measuring Systems
- Capacitance and Dissipation Factor Measuring Systems

Calibration procedures

- Component calibration (peak voltmeters, capacitors)
- Divider calibrations
- System calibrations
- Linearity check

Place of calibration

The calibration is offered

- at the laboratory in Dresden
- at the laboratory of the user (on-site calibration)

Calibration equipment

- DC/AC Calibrator (max. 1000 V)
- Impulse Calibrator (max. 1000 V)
- Capacitance and Dissipation factor Measuring System (max. 800 kV)
- Reference Standards for
 - DC (300 kV)
 - AC (100 kV, 200 kV, 800 kV)
 - SI (500 kV)
 - LI (700 kV)

Uncertainty of measurement

The accredited uncertainties are

- DC, AC voltage up to 1000 V 0.05 %
- Impulse voltage up to 1000 V 0.75 %
- DC voltage up to 300 kV 0.4 %
- AC voltage up to 200 kV 0.4 %
- AC voltage up to 800 kV 0.8 %
- SI voltage 180 kV up to 200 kV 0.45 %
- SI voltage up to 500 kV 0.8 %
- LI voltage 180 kV up to 200 kV 0.45 %
- LI voltage up to 700 kV 0.7 %
- Time parameters T_1 , T_2 of LI, SI 3%
- Capacitance of Standard Capacitors 0.05%
- Dissipation factor: $3 \cdot 10^{-5}$

Calibration Certificates

The laboratory issues German or English DKD Calibration Certificates and if desired unofficial translations of the certificates in French and Russian.

This calibration certificate documents the traceability to national standards, which realize the units of measurements according to the International System of Units (SI).

The DKD is signatory to the multilateral agreements of the European co-operation for Accreditation (EA) and of the International Laboratory Accreditation Cooperation (ILAC) for the mutual recognition of calibration certificates.

Questionnaire for calibration (copies to be applied when a quotation is requested)

Customer		
Name of the company:		
Address of the company:		
Person in charge:	Name:	Phone:
	Email:	Fax :
Measuring System (Please, use one questionnaire for each system)		
Kind of voltage:		
Rated voltage:		
Measuring quantities:		
Measuring range:		
Are there any measuring taps to be calibrated?	No <input type="checkbox"/>	
	Yes <input type="checkbox"/>	Number Rated voltages:
		Measuring range:
Divider		
Type:		
Serial No.:		
Rated voltage:		
Type of the low voltage part:		
Serial no of the low voltage part:		
Scale factors:		
Measuring instrument		
Type:		
Serial N.:		
Measuring quantities:		
Measuring ranges:		
Kind of desired calibration	On-site	At the stationary laboratory
Calibration of the measuring system		
Divider calibration		
Calibration of measuring instruments		
Desired date		
Date and sign of the person in charge		

You can find the official DKD information in the world wide web under <http://www.dkd.eu/laboratorien/de/pdf/24501.pdf>

In case of questions and enquiries concerning calibration, please contact our calibration laboratory:

Mail to: calibration@highvolt.de

Fax: +49 351 8425-9668

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For further information please contact

or our local representative:

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