Deutsche Akkreditierungsstelle

Annex to the Partial Accreditation Certificate D-K-12107-01-02 according to DIN EN ISO/IEC 17025:2018

Valid from: **27.09.2023**

Date of issue: 21.11.2023

This annex is a part of the accreditation certificate D-K-12107-01-00.

Holder of partial accreditation certificate:

IPH Institut "Prüffeld für elektrische Hochleistungstechnik" GmbH
Landsberger Allee 378 A, 12681 Berlin

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 they conform to the general principles of DIN EN ISO 9001.

Calibration in the fields:

Thermodynamic quantities

Temperature quantities

- **Resistance thermometers**
- **Thermocouples**
- **Direct reading thermometers**
- **Temperature transmitters, data loggers**
- **Climatic chambers (temperature)** [a)]

[a)] **also on-site calibrations**

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.

Permanent Laboratory

Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement [1]	Remarks
Temperature quantities Resistance thermometers, direct reading thermometers und transmitters with resistance sensor	0 °C to 90 °C	DKD-R 5-1:2018 in liquid bath	0.3 K	Comparison with resistance thermometers
	-20 °C to < 50 °C	DKD-R 5-1:2018 in dry-well-calibrator	0.7 K	
	50 °C to < 100 °C		0.15 K	
	100 °C to < 425 °C		0.3 K	
	425 °C to 660 °C		0.5 K	
Base metal thermocouples, direct reading thermometers und transmitters with base metal thermocouple sensor	-20 °C to 50 °C	DKD-R 5-3:2018 in dry-well-calibrator	0.5 K	
	> 50 °C to 100 °C		0.8 K	
	> 100 °C to 140 °C		1.0 K	
Climatic chambers without air circulation	25 °C to 100 °C	DKD-R 5-7:2018 method A and B	1.0 K	
	> 100 °C to 250 °C		2.0 K	
Measuring locations in climatic chambers without air circulation	25 °C to 100 °C	DKD-R 5-7:2018 method C	1.0 K	
	> 100 °C to 250 °C		2.0 K	

On-site Calibration

Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement [1]	Remarks
Climatic chambers without air circulation	25 °C to 100 °C	DKD-R 5-7:2018 method A and B	1.0 K	Comparison with resistance thermometers
	> 100 °C to 250 °C		2.0 K	
Measuring locations in climatic chambers without air circulation	25 °C to 100 °C	DKD-R 5-7:2018 method C	1.0 K	
	> 100 °C to 250 °C		2.0 K	

Abbreviations used:

DIN	Deutsches Institut für Normung e.V. – German institute for standardization
DKD-R	Calibration Guideline of Deutscher Kalibrierdienst (DKD), published by Physikalisch-Technische Bundesanstalt (PTB)

[1] Unless otherwise specified, the unit of a variable corresponds to the unit of the measuring range.

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