

# 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) <sup>a)</sup>

<sup>a)</sup> 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>.*

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.**

## Annex to the Partial Accreditation Certificate D-K-12107-01-02

### Permanent Laboratory

#### Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement <sup>1</sup>	Remarks
<b>Temperature quantities</b>	0 °C to 90 °C	DKD-R 5-1:2018 in liquid bath	0.3 K	Comparison with resistance thermometers
Resistance thermometers, direct reading thermometers and transmitters with resistance sensor	-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 and 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 <sup>1</sup>	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)

<sup>1</sup> Unless otherwise specified, the unit of a variable corresponds to the unit of the measuring range.

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