

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-K-19592-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: 26.08.2020

Date of issue: 26.08.2020

Holder of certificate:

**Amphenol Advanced Sensors Germany GmbH
Sinsheimer Straße 6, 75179 Pforzheim**

Calibration in the fields:

Thermodynamic quantities

Temperature quantities

- Resistance thermometers
- Direct reading thermometers
- Temperature transmitters, data loggers

Humidity quantities

- Devices for relative humidity

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.

Abbreviations used: see last page

*The certificate together with its annex reflects the status at the time of the date of issue. The current status of the scope of accreditation can be found in the database of accredited bodies of Deutsche Akkreditierungsstelle GmbH.
<https://www.dakks.de/en/content/accredited-bodies-dakks>*

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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 and temperature transmitters with resistance sensor	-196 °C	in copper block in liquid nitrogen DKD-R 5-1:2018	10 mK	Comparison with standard resistance thermometer (SPRT)
	-65 °C to -55 °C	in alcohol bath DKD-R 5-1:2018	8 mK	interpolation of the characteristic curve according to DKD-R 5-6:2018
	-0.1 °C to 0.1 °C	in water bath DKD-R 5-1:2018	5 mK	
	95 °C to 105 °C	in oil bath DKD-R 5-1:2018	7 mK	
	255 °C to 265 °C	in salt bath DKD-R 5-1:2018	9 mK	
	415 °C to 425 °C		12 mK	
	-196 °C to < -90 °C	in baths DKD-R 5-1:2018	20 mK	
	-90 °C to 260 °C		10 mK	
	> 260 °C to 420 °C		15 mK	
Temperature data loggers with resistance sensor	-85 °C to < -60 °C	in baths DKD-R 5-1:2018	50 mK	Comparison with reference resistance thermometer (IPRT)
	-60 °C to 260 °C		25 mK	interpolation of the characteristic curve according to DKD-R 5-6:2018
	> 260 °C to 420 °C		50 mK	
Humidity quantities Data logger for relative humidity	10 % to 30 %	in 2-pressure-generator temperature range: 10 °C to 70 °C DKD-R 5-8:2019	0.3 %	Comparison with dew point mirror; Measurement uncertainty expressed in relative humidity
	> 30 % to 70 %		0.6 %	
	> 70 % to 95 %		0.8 %	

Abbreviations used:

CMC Calibration and measurement capabilities
 DKD-R Guideline of Deutscher Kalibrierdienst (DKD), published by Physikalisch-Technische Bundesanstalt

¹⁾ The expanded uncertainties according to EA-4/02 M:2013 are part of CMC and are the best measurement uncertainties within accreditation. They have a coverage probability of approximately 95 % and have a coverage factor of $k = 2$ unless stated otherwise. Uncertainties without unit are relative uncertainties referring to the measurement value unless stated otherwise.