DAkkS
Deutsche
Akkreditierungsstelle

Accreditation

The Deutsche Akkreditierungsstelle attests with this **Accreditation Certificate** that

Metra Meß- und Frequenztechnik Radebeul GmbH & Co. KG
Meißner Str. 58a, 01445 Radebeul

operates a calibration laboratory that fulfills the requirements according to DIN EN ISO/IEC 17025:2018 for those conformity assessment activities specified in detail in the annex listed below. This includes additional existing legal and normative requirements for the calibration laboratory including those in relevant sectoral schemes, provided that these are explicitly confirmed in the annex listed below.

D-K-21664-01-01 **Valid from: 01.01.2026**

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 principles of DIN EN ISO 9001.

This accreditation was issued in accordance with Art. 5 Para. 1 Sentence 2 of Regulation (EC) 765/2008, after an accreditation procedure was carried out in compliance with the minimum requirements of DIN EN ISO/IEC 17011 and on the basis of a review and decision of the appointed accreditation committees.

This accreditation certificate only applies in connection with the notice of 17.12.2025. It consists of this cover sheet, the reverse side of the cover sheet and the corresponding annex .

Registration number of the accreditation certificate: **D-K-21664-01-00**

Berlin, 17.12.2025 Dipl.-Wirtsch.-Ing. (BA) Tim Harnisch | Head of Technical Unit

Translation issued: 17.12.2025

See notes overleaf

Deutsche Akkreditierungsstelle GmbH

Office Berlin
Spittelmarkt 10
10117 Berlin

The Deutsche Akkreditierungsstelle GmbH (DAkkS) is the entrusted national accreditation body of the Federal Republic of Germany according to § 8 section 1 AkkStelleG in conjunction with § 1 section 1 AkkStelleGBV. DAkkS is designated as the national accreditation authority by Germany according to Art. 4 Para. 4 of Regulation (EC) 765/2008 and clause 4.7 of DIN EN ISO/IEC 17000.

Pursuant to Art. 11 section 2 of Regulation (EC) 765/2008, the accreditation certificate shall be recognised as equivalent by the national authorities within the scope of this Regulation as well as by the WTO member states that have committed themselves in bilateral or multilateral mutual agreements to recognise the certificates of accreditation bodies that are members of ILAC or IAF as equivalent.

DAkkS is a signatory to the multilateral agreements for mutual recognition of the European co-operation for Accreditation (EA), International Accreditation Forum (IAF) and International Laboratory Accreditation Co-operation (ILAC).

The up-to-date state of membership can be retrieved from the following websites:
EA: www.european-accreditation.org
ILAC: www.ilac.org
IAF: www.iaf.nu

Deutsche Akkreditierungsstelle

Annex to the Accreditation Certificate D-K-21664-01-01 according to DIN EN ISO/IEC 17025:2018

Valid from: **01.01.2026**

Date of issue: 17.12.2025

This annex is part of the Accreditation Certificate D-K-21664-01-00.

Holder of the Accreditation Certificate:

Metra Meß- und Frequenztechnik Radebeul GmbH & Co. KG
Kalibrierlabor
Meißner Str. 58a, 01445 Radebeul

with the location

Metra Meß- und Frequenztechnik Radebeul GmbH & Co. KG
Kalibrierlabor
Meißner Str. 58a, 01445 Radebeul

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 principles of DIN EN ISO 9001.

Calibration in the fields:

Mechanical quantities

– **Acceleration**

Permanent Laboratory

Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement	Remarks
Acceleration	For sinusoidal activation and narrowband evaluation methods (sinusoidal approximation), there is a clear relationship between the amplitude of vibration acceleration, vibration velocity, and vibration displacement across the oscillation frequency. For this reason, the acceleration measurement variable specified in the table can also be used to calibrate vibration velocity and vibration displacement sebsors in the corresponding measurement ranges converted to frequency. All range specifications refer to peak values (amplitude for sine).			
Acceleration (secondary) sinusoidal Vibration sensor Vibration meter Vibration measuring chains	0.1 m/s² to 50 m/s²	DIN ISO 16063-21:2016 DKD-R 3-1 Part 3:2020 0.2 Hz to < 0.4 Hz 0.4 Hz to < 1 Hz 1 Hz to 63 Hz > 63 Hz to 160 Hz	 1.5 % / 1.5° 1.0 % / 0.7° 0.5 % / 0.7° 1.0 % / 1.0°	Test specimen mass up to 0.9 kg Displacement amplitude up to 50 mm Calibration result: - complex transfer coeffi-cient (magnitude/phase) - display deviation
Acceleration (secondary) sinusoidal Vibration sensor Vibration meter Vibration measuring chains	0.1 m/s² to 50 m/s²	DIN ISO 16063-21:2016 DKD-R 3-1 Part 3:2020 0.2 Hz to < 0.4 Hz 0.4 Hz to < 1 Hz 1 Hz to 63 Hz > 63 Hz to 160 Hz	 1.5 % / 1.5° 1.0 % / 0.7° 1.0 % / 1.5° 3.0 % / 3.0°	Test specimen mass from 0.9 kg to 2.5 kg Displacement amplitude up to 50 mm Calibration result: - complex transfer coeffi-cient (magnitude/phase) - display deviation
Acceleration (secondary) sinusoidal Vibration sensor Vibration meter Vibration measuring chains	1 m/s² to 200 m/s²	DIN ISO 16063-21:2016 DKD-R 3-1 Part 3:2020 5 Hz to < 10 Hz 10 Hz to < 20 Hz 20 Hz to 5 kHz > 5 kHz to 10 kHz > 10 kHz to 15 kHz > 15 kHz to 20 kHz	 1.5 % / 1.0° 1.0 % / 0.7° 0.7 % / 0.7° 1.5 % / 1.0° 2.0 % / 2.0° 3.0 % / 3.0°	Test specimen mass up to 0.2 kg Displacement amplitude up to 50 mm Calibration result: - complex transfer coeffi-cient (magnitude/phase) - display deviation

Permanent Laboratory

Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement	Remarks
Acceleration (secondary) sinusoidal, RMS Vibration sensor Vibration meter Vibration measuring chains	1 m/s^2	DIN ISO 16063-21: 2016 DKD-R 3-1 Part 3: 2020 70 Hz to < 4 kHz 4 kHz to < 8 kHz 8 kHz to < 10 kHz	 2 % 4 % 8 %	Measured using the RMS method Test specimen mass up to 65 g Calibration result: transfer coefficient
Vibration calibrator Acceleration amplitude (magnitude) Frequency Total harmonic distortion (THD)	 1 m/s^2 to 200 m/s^2 5 Hz to 20 kHz > 0 % to 20 %	DIN ISO 16063-44:2019 5 Hz to < 10Hz 10 Hz to < 20 Hz 20 Hz to 5 kHz > 5 kHz to 10 kHz > 10 kHz to 20 kHz	 1.5 % 1.0 % 0.7 % 1.0 % 3.0 % 0.05 % 10 % of THD	
Charge Charge amplifier	1 pC to 10000 pC	DKD-R 3-2:2019 0.2 Hz to < 1 Hz 1 Hz to < 5 kHz 5 kHz to < 10 kHz 10 kHz to 20 kHz > 20 kHz to 50 kHz	 0.5 % / 0.7° 0.4 % / 0.5° 0.4 % / 1.0° 0.6 % / 2.0° 1.0 % / -	Calibration result: - complex transfer coefficient (magnitude/phase) - display deviation
Voltage Voltage amplifier	10 mV to 10 V	DKD-R 3-2:2019 0.2 Hz to < 1 Hz 1 Hz to < 5 kHz 5 kHz to < 10 kHz 10 kHz to 20 kHz > 20 kHz to 50 kHz	 0.4 % / 0.7° 0.3 % / 0.5° 0.3 % / 0.5° 0.3 % / 0.5° 1.0 % / -	Calibration result: - complex transfer coefficient (magnitude/phase) - display deviation

Abbreviations used:

CMC	Calibration and measurement capabilities
DIN	Deutsches Institut für Normung e.V. – German institute for standardization
DKD-R	Guideline of Deutscher Kalibrierdienstes (DKD), published by PhysikalischTechnische Bundesanstalt
EN	Europäische Norm – European Standard
IEC	International Electrotechnical Commission
ISO	International Organization for Standardisation