

Deutsche Akkreditierungsstelle

Annex to the Accreditation Certificate D-PL-19142-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: 30.06.2023

Date of issue: 30.06.2023

Holder of accreditation certificate:

ProfEC Ventus GmbH
Marie-Curie-Straße 1, 26129 Oldenburg

The testing laboratory meets the requirements of DIN EN ISO/IEC 17025:2018 to carry out the conformity assessment activities listed in this annex. The testing 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 testing laboratories and confirm generally with the principles of DIN EN ISO 9001.

Tests in the fields:

Measurement of Wind Turbine Power Performance; Wind Resource and Energy Yield Assessment of Wind Turbines and Wind Farms; Installation and Evaluation of Wind Measurements with Anemometers and Remote Sensing Devices (RSD); Site Classification of Wind Turbines; Validation and Classification of Remote Sensing Devices

Within the scope of accreditation marked with *, the testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, to use standards or equivalent testing methods listed here with different issue dates.

The testing laboratory maintains a current list of all testing methods within the flexible scope of accreditation.

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>.

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1. Measurement of Wind Turbine Power Performance

IEC 61400-1 Ed.4 * 2019-02 in junction with Ed. 4.0 / COR1 2019-09	Wind energy generation systems - Part 1: Design requirements Correction to the Ed. 4.0
IEC 61400-2 Ed.3 * 2013-12 in junction with Ed. 3 / COR1 2019-10	Wind turbines - Part 2: Small wind turbines Correction to the Ed. 3
IEC 61400-12 Ed.1 * 2022-09	Wind energy generation systems - Part 12: Power performance measurements of electricity producing wind turbines - Overview
IEC 61400-12-1 Ed.2 * 2017-03	Wind turbines - Part 12-1: Power performance measurements of electricity producing wind turbines (<i>withdrawn standard</i>)
IEC 61400-12-1 Ed.3 * 2022-09	Wind energy generation systems - Part 12-1: Power performance measurements of electricity producing wind turbines
IEC 61400-12-2 Ed.3 * 2022-09	Wind energy generation systems - Part 12-2: Power performance of electricity producing wind turbines based on nacelle anemometry
IEC 61400-12-3 Ed.1 * 2022-08	Wind energy generation systems - Part 12-3: Power performance - Measurement based site calibration
IEC 61400-12-4 Ed.1 * 2020-09	Wind energy generation systems - Part 12-4: Numerical site calibration for power performance testing of wind turbines
IEC 61400-12-5 Ed.1 * 2022-08	Wind energy generation systems - Part 12-5: Power performance - Assessment of obstacles and terrain
IEC 61400-12-6 Ed.1 * 2022-08	Wind energy generation systems - Part 12-6: Measurement based nacelle transfer function of electricity producing wind turbines
IEC 61400-50 Ed.1 * 2022-08	Wind energy generation systems - Part 50: Wind measurement - Overview

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IEC 61400-50-1 Ed.1 * 2022-11	Wind energy generation systems - Part 50-1: Wind measurement - Application of meteorological mast, nacelle and spinner mounted instruments
IEC 61400-50-2 Ed.1 * 2022-08	Wind energy generation systems - Part 50-2: Wind measurement - Application of ground-mounted remote sensing technology
FGW TR 2 Rev.18 * 2023-01	Determination of Power Performance and Standardised Energy Yields
MEASNET Version 5 2009-12	Power Performance Measurement Procedure

2. Wind Resource and Energy Yield Assessment of Wind Turbines and Wind Farms

FGW TR 6 Rev.11 * 2020-09	Determination of Wind Potential and Energy Yields
MEASNET Version 3 2022-09	Evaluation of Site Specification Wind Conditions
TPI-01 2022-12	Wind Resource Assessment and Energy Yield Assessment

3. Installation and Evaluation of wind measurements with Anemometers and Remote sensing devices (RSD)

IEC 61400-50 Ed.1 * 2022-08	Wind energy generation systems - Part 50: Wind measurement - Overview
IEC 61400-50-1 Ed.1 * 2022-11	Wind energy generation systems – Part 50-1: Wind measurement – Application of meteorological mast, nacelle and spinner mounted instruments
IEC 61400-50-2 Ed.1 * 2022-08	Wind energy generation systems – Part 50-2: Wind measurement – Application of ground-mounted remote sensing technology
FGW TR 6 Rev.11 * 2020-09	Determination of Wind Potential and Energy Yields
MEASNET Version 3 2022-09	Evaluation of Site Specification Wind Conditions

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TPI-03
2022-12
Measurement Installation for PPM and EYA

IEA expert group study on
recommended practices
recommendation 15
2013-01
Ground-Based Vertically-Profiling Remote Sensing for Wind
Resource Assessment

4. Site Classification of Wind Turbines

IEC 61400-1 Ed. 4 *
2019-02
in junction with
Ed. 4.0 / COR1
2019-09
Wind energy generation systems - Part 1: Design requirements
Correction to the Ed. 4.0

IEC 61400-2 Ed.3 *
2013-12
in junction with
Ed. 3 / COR1
2019-10
Wind turbines - Part 2: Small wind turbines
Correction to the Ed. 3

TPI-04
2022-12
Site Classification

5. Validation and Classification of Remote Sensing Devices (RSD)

IEC 61400-50 Ed.1 *
2022-08
Wind energy generation systems - Part 50:
Wind measurement - Overview

IEC 61400-50-1 Ed.1 *
2022-11
Wind energy generation systems - Part 50-1:
Wind measurement - Application of meteorological mast,
nacelle and spinner mounted instruments

IEC 61400-50-2 Ed.1 *
2022-08
Wind energy generation systems - Part 50-2:
Wind measurement - Application of ground-mounted remote
sensing technology

TPI-09
2023-04
Remote Sensing Device Classification and
Remote Sensing Device Verification

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Abbreviations used:

DIN	German Institute for Standardization
FGW	Federation of German Wind Power and other Renewable Energies
IEC	International Electrotechnical Commission
MEASNET	International Measuring Network of Wind Energy Institutes
IEA	International Energy Agency
TPI	in-house Technical Procedure Instruction
PPM	Power Performance Measurement and Verification
EYA	Energy Yield Assessment
RSD	Remote Sensing Device