

# Overview of Methods within the Flexible Scope of ISO/IEC 17025:2017 Accreditation

## Accreditation Number: PL-11095-01

This list represents an overview of all standards within the accredited scope including the information of the existing flexibilities of UL International GmbH.

The three Categories of flexible Scope are described in the DAkKS R-17025-PL ([Link to DAkKS-R-10725-PL on the DAkKS Website](#))

Tests in the fields:

- Wind measurements and measurements of the power curve,  
*Windmessungen und Vermessung der Leistungskennlinie.*
- Measurement of the electrical characteristics of wind turbines,  
*Messung der elektrischen Eigenschaften von Erzeugungseinheiten und Erzeugungsanlagen.*
- Measurement of the mechanical stresses and loads of wind turbines,  
*Messung der mechanischen Beanspruchungen und der Lasten von Windenergieanlagen.*

### List of Standards within flexible Scope:

| Standard No. and Revision                                    | Standard Title   | Flex. Cat.<br>(Check DAkKS rule given above) |
|--|--|--|
| <b>Wind measurements and measurements of the power curve</b> |  |  |
| IEC 61400-12 Ed. 1*<br>2022-09                               | Wind energy generation systems - Part 12-1: Power performance measurements of electricity producing wind turbines-Overview         | A  |
| IEC 61400-12-1 Ed. 3*<br>2022-09                             | Wind energy generation systems - Part 12-1: Power performance measurements of electricity producing wind turbines                  | A  |
| IEC 61400-12-2 Ed. 2*<br>2022-09                             | Wind energy generation systems - Part 12-2: Power performance of electricity - producing wind turbines based on nacelle anemometry | A  |
| IEC 61400-12-3 Ed. 1*<br>2022-08                             | Wind energy generation systems - Part 12-3: Power performance - Measurement based site calibration                                 | A  |
| IEC 61400-12-5 Ed. 1*<br>2022-08                             | Wind energy generation systems - Part 12-5: Power performance - Assessment of obstacles and terrain                                | A  |
| IEC 61400-12-6 Ed. 1*<br>2022-08                             | Wind energy generation systems - Part 12-6: Measurement based nacelle transfer function of electricity producing wind turbines     | A  |
| IEC 61400-50 Ed. 1*<br>2022-08                               | Wind energy generation systems - Part 50: Wind measurement - Overview  | A  |

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|---|---|--|
| IEC 61400-50-1 Ed. 1*<br>2022-08                                      | Wind energy generation systems - Part 50-1: Wind measurement - Application of meteorological mast, nacelle and spinner mounted instruments                          | A  |
| IEC 61400-50-2 Ed. 1*<br>2022-08                                      | Wind energy generation systems – Part 50-2: Wind measurement – Application of ground mounted remote sensing technology  | A  |
| IEC 61400-50-3 Ed. 1*<br>2022-01                                      | Wind energy generation systems – Part 50-3: Use of nacelle-mounted lidars for wind measurements   | A  |
| IEC 61400-12 Ed. 2*<br>2017-03  | Wind Turbines - Part 12: Power performance measurements of electricity producing wind turbines  | A  |
| IEC 61400-12-1 Ed 1*<br>2005-12                                       | Wind turbines - Part 12-1: Power performance measurements of electricity producing wind turbines  | A  |
| IEC 61400-12-1 Ed. 2*<br>2017-03                                      | Wind turbines - Part 12-1: Power performance measurements of electricity producing wind turbines  | A  |
| IEC 61400-12-1 Ed.2*<br>2017-03,<br>Annex L                           | Wind turbines - Part 12-1: Power performance measurements of electricity producing wind turbines - Verification of Remote Sensing Devices                           | A  |
| IEC 61400-12-2 Ed. 1*<br>2013-03                                      | Wind turbines - Part 12-2: Power performance of electricity - producing wind turbines based on nacelle anemometry   | A  |
| FGW TR 2 Rev.17*<br>2018-03   | Bestimmung von Leistungskurve und standardisierten Energieerträgen  | A  |
| FGW TR 5, Rev. 08*<br>2020-03   | Bestimmung und Anwendung des Referenzertrages   | A  |
| <b>Measurement of the electrical characteristics of wind turbines</b> |   |  |
| IEC 61400-21-1 Ed. 1.0*<br>2019-05                                    | Wind energy generation systems – Part 21-1: Measurement and assessment of electrical characteristics – Wind turbines  | A  |
| IEEE 519*<br>2022   | IEEE Standard for Harmonic Control in Electric Power Systems  | A  |
| DIN VDE V 0124-100*<br>2020-06  | Netzintegration von Erzeugungsanlagen – Niederspannung Prüfanforderungen an Erzeugungseinheiten vorgesehen zum Anschluss und Parallelbetrieb am Niederspannungsnetz | A  |
| FGW TR 3, Rev. 25*<br>2018-09   | Technische Richtlinien für Erzeugungseinheiten und -anlagen Teil 3: Bestimmung der elektrischen Eigenschaften von Erzeugungseinheiten                               | A  |

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|   | und –anlagen, Speicher sowie für deren Komponenten am Mittel-, Hoch- und Höchstspannungsnetz.   |  |
| FGW TR3, Rev. 26*<br>2022-04  | Technische Richtlinien für Erzeugungseinheiten und -anlagen- Teil 3: Bestimmung der elektrischen Eigenschaften von Erzeugungseinheiten und –anlagen, Speicher sowie für deren Komponenten am Mittel-, Hoch- und Höchstspannungsnetz             | A  |
| MEASNET, V. 1*<br>2019-06   | Procedure for Measurement of Electrical Characteristics   | A  |
| CEI 0-16*<br>2022-03 Annexes C, D, E, N, Nbis, Nter, O, P, Q, R, S, V, X, | Reference Technical Rules for the Connection of Active and Passive Consumers to the HV and MV Electrical Networks of Distribution Company   | A  |
| CEI 0-21*<br>2022-03<br>Annex B, Bbis, Bter                               | Reference Technical Rules for the Connection of Active and Passive Users to the LV Electrical Utilities   | A  |
| Commission Regulation (EU) 2016/631 (EC RfG)*<br>2016-04                  | Establishing a network code on requirements for grid connection of generators   | A  |
| ENA Engineering Recommendation G99*, Issue 1 Amendment 9,<br>2022-10      | Requirement for the connection of generation equipment in parallel with public distribution networks on or after 27 April 2019  | A  |
| NTS, Rev. 2.1*<br>2021-07   | Norma técnica de supervisión de la conformidad de los módulos de generación de electricidad según el Reglamento UE 2016/631<br>Technical standard for monitoring the conformity of power generation modules according to EU Regulation 2016/631 | A  |
| NTS SENP, Rev. 1.1*<br>2021-07  | Norma técnica de supervisión de la conformidad de los módulos de generación de electricidad según el P.O.12.2 SENP<br><br>Technical standard for monitoring the conformity of power generation modules according to P.O.12.2 SENP               | A  |

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| EN 50549-10*<br>2022   | Requirements for generating plants to be connected in parallel with distribution networks - Part 10: Tests for conformity assessment of generating units  | A  |
| <b>Measurement of the mechanical stresses and loads of wind turbines</b> |   |  |
| IEC 61400-13 Ed. 1*<br>2015  | Wind turbines - Part 13: Measurement of mechanical loads  | A  |
| IEC 61400-1 Ed. 4*<br>2019   | Wind Turbines - Part 1: Design Requirement  | A  |
| IEC 61400-2 Ed. 3*<br>2013   | Wind Turbines - Part 2: Small Wind Turbines Chapters:<br>5.2 Design methods (testing requirements) Part II Type Testing,<br>13. Testing<br>Annex G Example of test reporting formats Annex I Natural frequency analysis   | A  |
| IEC 61400-4 Ed. 1*<br>2012   | Wind Turbines - Part 4: Design requirements for wind turbine gearboxes<br>Chapters:<br>Design verification (specifies the testing to be done on a wind turbine gearbox):<br>Test planning,<br>Workshop prototype testing<br>Field test<br>Chapter 8.5 Production testing<br>8.8 Bearing specific validation<br>8.9 Test documentation | A  |
| IECRE OD 501 Ed. 2*<br>2018  | Type and Component Certification Scheme:<br>7.4 Type Testing  | A  |
| IECRE OD 501-5 Ed 1*<br>2017   | Section 5.1 Requirements for safety and function tests  | A  |
| VDI 3834 Blatt 1*<br>August 2015   | Messung und Beurteilung der mechanischen Schwingungen von Windenergieanlagen und deren Komponenten<br>Blatt 1: Windenergieanlagen mit Getriebe  | A  |