

# Deutsche Akkreditierungsstelle GmbH

## Annex to the Accreditation Certificate D-ZE-11326-01-00 according to DIN EN ISO/IEC 17065:2013

**Valid from: 30.06.2020**

Date of issue: 30.06.2020

Holder of certificate:

**DEWI-OCC Offshore and Certification Centre GmbH  
Contrescarpe 45, 28195 Bremen**

Certifications of products, processes and services in the fields:

**On- and offshore wind turbines and their components; wind turbines, wind farm projects, small wind turbines and grid connection of decentralized power generating units and plants**

Without previous information and agreement of the DAkKS- the certification body is allowed to use within the accreditation fields marked with \* different revisions of the herewith specified Certification Schemes / Requirements Document.

The certification body maintains a current list of all Certification Schemes / Requirements Document within the flexible scope of accreditation.

### **1. On- and offshore wind turbines and their components; wind turbines, wind farm projects and small wind turbines**

37-GC-P0850 2017-08	Certification of Wind Turbines and Wind Turbine Components
37-GC-P0851 2017-09	Project Certification
37-GC-P0852 2018-08	Certification of Small Wind Turbines

Abbreviations used: see last page

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IEC 61400-22 * 2010-05	Wind Turbines - Part 22: Conformity testing and certification of wind turbines
IEC-WT-01 2001-04	IEC System for Conformity Testing and Certification of Wind Turbines: Rules and Procedures
IS/IEC 61400-22 2018-06	Wind Turbines - Part 22: Conformity testing and certification of wind turbines
IECRE OD-501 * Edition 2.0 2018-05	Type and Component Certification Scheme
IECRE OD-502 * Edition 1.0 2018-10	Project Certification Scheme
<b>On the basis of:</b>	
Germanischer Lloyd * 2010	Guideline for the Certification of Wind Turbines
Germanischer Lloyd * 2012	Guideline for the Certification of Offshore Wind Turbines
DNV-DSS-904 * 2014-01	Type Certification of Wind Turbines
DNV-OSS-901 * 2012-06	Project Certification
DNVGL-SE-0074 * 2018-01	Type and component certification of wind turbines according to IEC 61400-22
DNVGL-SE-0441 * 2016-06	Type and component certification of wind turbines
DNVGL-SE-0073 * 2018-01	Project certification of wind farms according to IEC 61400-22
DNVGL-SE-0190 * 2015-12	Project certification of wind power plants
DNVGL-SE-0263 * 2016-03	Certification of lifetime extension
DNVGL-SE-0436 * 2018-04	Shop approval in renewable energy

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DNVGL-SE-0439 * 2016-06	Certification of condition monitoring
MCS 006 Issue 2.1 2014-01	Microgeneration Certification Scheme (MCS), Product Certification Scheme Requirements: Small Wind Turbines
Renewable UK 2014-01	Small Wind Turbine Standard
AWEA 9.1 standard 2009	AWEA Small Wind Turbine Performance and Safety Standard
UL 6141 2016-05	Wind Turbines Permitting Entry of Personnel
UL 6142 2012-11	Standard for Safety for Small Wind Turbines
UL4143 2018-02	Standard for Wind Turbine Generator - Life Time Extension (LTE)
JSWTA 0001 2011-11	Small Wind Turbine Performance and Safety Standard (Japan Small Wind Turbine Association Standard)
IEC 61400-1 * Edition 4 2019-02	Wind Turbines - Part 1: Design requirements (VDE 0127-1)
IEC 61400-2 * Edition 3.0 2013-12	Wind Turbines - Part 2: Small wind turbines
IEC 61400-3 * Edition 1.0 2009-02	Wind turbines - Part 3: Design requirements for offshore wind turbines
IEC 61400-3-1 * Edition 1.0 2019-04	Wind energy generation systems - Part 3-1: Design requirements for fixed offshore wind turbines
IEC TS 61400-3-2 * Edition 1.0 2019-04	Wind energy generation systems - Part 3-2: Design requirements for floating offshore wind turbines
IEC 61400-4 * Edition 1.0 2012-12	Wind turbines - Part 4: Design requirements for wind turbine gearboxes

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IEC 61400-5 * Edition 1 (FDIS) 2020-03	Wind energy generation systems - Part 5: Wind turbine blades
IEC 61400-6 * Edition 1 APUB 2020-02-14	Wind turbines - Part 6: Tower and foundation design requirements Required documentation
IEC 61400-23 * Edition 1.0 2014-01	Wind turbines - Part 23: Full-scale structural testing of rotor blades
IEC 61400-24 * Edition 2.0 2019-07	Wind Turbines - Part 24: Lightning protection
IEC 61400-25-1 * Edition 2.0 2017-07	Wind turbines - Part 25-1: Communications for monitoring and control of wind power plants - Overall description of principles and models ( <i>withdrawn</i> )
IEC 61400-25-2 * Edition 2.0 2015-06	Wind turbines - Part 25-2: Communications for monitoring and control of wind power plants - Information models ( <i>withdrawn</i> )
IEC 61400-25-3 * Edition 2.0 2015-06	Wind turbines - Part 25-3: Communications for monitoring and control of wind power plants - Information exchange models ( <i>withdrawn</i> )
IEC 61400-25-4 * Edition 2.0 2016-11	Wind turbines - Part 25-4: Communications for monitoring and control of wind power plants - Mapping to communication profile ( <i>withdrawn</i> )
IEC 61400-25-5 * Edition 2.0 2017-09	Wind turbines - Part 25-5: Communications for monitoring and control of wind power plants - Conformance testing ( <i>withdrawn</i> )
IEC 61400-25-6 * Edition 2.0 2016-12	Wind turbines - Part 25-6: Communications for monitoring and control of wind power plants - Logical node classes and data classes for condition monitoring ( <i>withdrawn</i> )
Schriften des DIBt, Reihe B * Heft 8 2012-10	Richtlinie für Windenergieanlagen - Einwirkungen und Standsicherheitsnachweise für Turm und Gründung. - Korrigierte Fassung März 2015
DIN EN 50308 VDE 0127-100 * 2005-03 and technical Corrigendum 1 2008-11	Wind turbines - Protective measures - Requirements for design, operation and maintenance

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<p>ISO 13849-1 * 2006-11 Technical Corrigendum 1 2009-02 Draft Standard DAM 1 2013-08</p>	<p>Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design (<i>withdrawn</i>)</p>
<p>ISO 13849-2 * 2012-10</p>	<p>Safety of machinery - Safety-related parts of control systems - Part 2: Validation</p>
<p>BSH 7004 * 2. Fortschreibung 2014-02</p>	<p>Standard Baugrunderkundung, Mindestanforderungen an die Baugrunderkundung und -untersuchung für Offshore- Windenergieanlagen, Offshore-Stationen und Stromkabel</p>
<p>BSH 7005 * 2015-07</p>	<p>Standard - Design of Offshore Wind Turbines with the supplements for "Construction Guidance", "Amendment Chapter 4", "Note on Grouted Connections" and "Note on Noise during Installation" (<i>withdrawn</i>)</p>
<p>Danish Energy Agency * 2013-01</p>	<p>Executive Order from the Danish Ministry for Climate, Energy and Buildings No. 73 dated 2013-01-25: "Bekendtgørelse om teknisk certificeringsordning for vindmøller" (Executive Order on a technical certification scheme for wind turbines)</p>
<p>DNVGL-RP-0363* Rev. 4 Edition April 2016</p>	<p>Recommended Practice Extreme temperature conditions for wind turbines</p>

**2. Certification of grid connection of decentralized power generating units and plants in the field of renewable energies**

<p>37-GC-P0853 Issue 8.0 2020-03</p>	<p>Evaluation of Grid Code Compliance</p>
<p>37-GC-P0867 Issue 1.0 2019-12</p>	<p>Global Certification Policy for Hybrid Power Systems</p>

**On the basis of:**

<p>AS/NZS 4777.1 2016-09</p>	<p>Grid connection of energy systems inverters Part 1: Installation requirements</p>
<p>AS/NZS 4777.2 2015-10</p>	<p>Grid connection of energy systems via inverters Part 2: Inverter requirements</p>

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AS/NZS 4777.3 2005-05	Grid connection of energy systems via inverters Part 3: Grid protection requirements
Engineering Recommendation G99 Issue 1 Amendment 4 2019-06	Requirements for the connection of generation equipment in parallel with public distribution networks on or after 27 April 2019
Engineering Recommendation G98 Issue 1 Amendment 4 2019-06	Requirements for the connection of Fully Type Tested Micro-generators (up to and including 16 A per phase) in parallel with public Low Voltage Distribution Networks on or after 27 April 2019
FGW-TG8, Rev. 9 * 2019-02	Technical Guidelines for Power Generating Units and Systems - Part 8 (TG8): Certification of the Electrical Characteristics of Power Generating Units and Systems in the Medium-, High- and Extra-High voltage Grids
FGW-TG4 , Rev. 9 * 2019-02	Technical Guidelines for Power Generating Units and Systems - Part 4 (TG4): Demands on Modeling and Validating Simulation Models of the Electrical Characteristics of Power Generating Units and Systems
VDE-AR-N 4105 * 2018-11	Generators connected to the low-voltage distribution network – Technical requirements for the connection to and parallel operation with low-voltage distribution networks
VDE-AR-N 4110 * 2018-11	Technical requirements for the connection and operation of customer installations to the medium voltage network (TAR medium voltage)
VDE-AR-N 4120 * 2018-11	Technical requirements for the connection and operation of customer installations to the high-voltage network (TCC High-Voltage)
VDE-AR-N 4130 * 2018-11	Technical requirements for the connection and operation of customer installations to the extra high voltage network (TAR extra high voltage)
CEI 0-16 2019-04	Reference technical rules for the connection of active and passive consumers to the HV and MV electrical networks of distribution Company
CEI 0-21 2019-04	Reference technical rules for the connection of active and passive users to the LV electrical Utilities
DEWA Version 2.0 2016-02	Standards for Distributed Renewable Resources Generators connected to the Distribution Network

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The Grid Code Issue 5 Revision 38 2019-09	UK Grid Code by NETS for Power Generating Units and Stations >1MW
South African Grid Code Version 3.0 2019-08	Grid Connection Code for Renewable Power Plants (RPPs) connected to the Electricity Transmission System (TS) or the Distribution System (DS) in South Africa
FERC Order 661 2006-06	United States of America Federal Energy Regulatory Commission - Interconnection for Wind Energy
PO 12.2* 2018-02	Instalaciones conectadas a la red de transporte y equipo generador: requisitos minimos de diseno, equipamiento, funcionamiento, puesta en servicio y seguridad PO 12.2 (SENP)
PO 12.3* 2006-10	Instalaciones conectadas a la red de transporte y equipo generador: requisitos minimos de diseno, equipamiento, funcionamiento, puesta en servicio y seguridad PO 12.2 (SENP)
PVVC PO12.3* Version 9 2011-05	Procedure for verification validation and certification of the requirement of the PO 12.3 on the response of wind Farms and Photovoltaic plants in the event of voltage dips
(EU) 2016/631 2016-07	Regulation (EU) 2016/631: Network Code on requirements for connection of generators to the network
NTS V1* 2019-07	Technical standard for monitoring the conformity of electricity generation modules according to EU Regulation 2016/631 (Norma técnica de supervision de la conformidad de los módulos de generación de electricidad según el Reglamento UE 2016-631)
SAGC Issue 2 2014-03	The Saudi Arabian Grid Code Issue 02 - Revision 01 - March 2014
1 <sup>st</sup> SAGC 2016-05	The Saudi Arabian Grid Code 1 <sup>st</sup> Electronic Update as of May 2016
2 <sup>nd</sup> SAGC 2016-10	The Saudi Arabian Grid Code 2 <sup>nd</sup> Electronic Update as of October 2016
3 <sup>rd</sup> SAGC 2017-06	The Saudi Arabian Grid Code (3 <sup>rd</sup> ) Electronic Update as of June 2017
4 <sup>th</sup> SAGC 2020-02	The Saudi Arabian Grid Code (4 <sup>th</sup> ) Electronic Update as of February 2020

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VDN * 2007-08	Transmission Code 2007 Network and System Rules of the German Transmission System Operators
BDEW * 2008-06	Technical Guideline, Generating Plants Connected to the Medium-Voltage Network with FNN supplement, 2009-01, including the 2 <sup>nd</sup> supplement 2010-07, 3 <sup>rd</sup> supplement 2011-02, 4 <sup>th</sup> supplement 2013-01
EEG 2017	Gesetz für den Ausbau erneuerbarer Energien (Erneuerbare-Energie-Gesetz 2017), 23.6.2017 German Renewable Energy Act 2017
BGBl. Teil I Nr. 39 (BGBl. I S. 1734) 2009-07	Verordnung zu Systemdienstleistungen durch Windenergieanlagen (Systemdienstleistungsverordnung - SDLWindV) Ordinance on System Services by Wind Energy Plants (System service ordinance - SDLWindV) with amending regulations of 25 <sup>th</sup> June 2010, 13 <sup>th</sup> April 2011, 28 <sup>th</sup> July 2011, 21 <sup>st</sup> July 2014, 06 <sup>th</sup> February 2015
SDL WindV 2015-02	Verordnung zu Systemdienstleistungen durch Windenergieanlagen (Systemdienstleistungsverordnung - SDLWindV) Ordinance on System Services by Wind Energy Plants (System service ordinance - SDLWindV) with amending regulations of 25 <sup>th</sup> June 2010, 13 <sup>th</sup> April 2011, 28 <sup>th</sup> July 2011 21 <sup>st</sup> July 2014 ,06 <sup>th</sup> February 2015
12/X/STD(CONN)/GM/CEA 2007-02	Central Electricity Authority (Technical Standards for connectivity to the Grid) Regulations, 2007
12/X/STD(CONN)/GM/CEA 2013-10	Central Electricity Authority (Technical Standards for connectivity to the Grid) Amendment Regulations, 2013
12/X/STD(GRID)/GM/CEA 2010-06	Central Electricity Authority (Grid Standards), Regulations 2010
12/X/STD(CONN)/GM/CEA 2019-02	Central Electricity Authority (Grid Standards), Regulations 2019



**Abbreviations used:**

AR	Anwendungsregel
AS/NZS	Australian / New Zealand Standard, Committee EL-043, Renewable Energy Power Supply Systems and Equipment
AWEA	American Wind Energy Association
BDEW	Bundesverband der Energie- und Wasserwirtschaft e.V. (Federal Association of the Energy and Water Industry)
BGBI.	Bundesgesetzblatt (Official gazette)
BSH	Bundesamt für Seeschifffahrt und Hydrographie (Federal Maritime and Hydrographic Agency)
CEA	Central Electricity Authority
CEI	Comitato Elettrotecnico Italiano
DEWA	Dubai Electricity and Water Authority
DIBt	Deutsches Institut für Bautechnik (German Institute of Construction Technology)
EEG	Erneuerbare-Energie-Gesetz (German Renewable Energy)
FERC	Federal Energy Regulatory Commission
FGW	FGW e.V. - Fördergesellschaft Windenergie und andere Erneuerbare Energien
IEC	International Electrotechnical Commission
JSWTA	Japan Small Wind Turbine Association Standard
MCS	Microgeneration Certification Scheme
PVVC	Procedure for verification validation and certification
UL	Underwriters Laboratories
VDE	Verband der Elektrotechnik, Elektronik und Informationstechnik
VDN	Verband der Netzbetreiber e.V. (Association of German Power Transmission System Operators)
37-GC-P0xxx	Certification procedures of DEWI-OCC Offshore and Certification Centre GmbH