

DAkKS Scope Flexible Scope

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch D-PL-19065-01-00 according to ISO/IEC 17025:2017



Tests in the fields:

Photovoltaic Inverters and Wind Converters, ESS-Converters

The testing laboratory is permitted, without being required to inform and obtain prior approval from DAkKS, to use standards or equivalent testing methods listed in the annex to the Accreditation Certificate D-PL-19065-01-00 according to ISO/IEC 17025:2017 with different issue dates.

The current status of any given scope of accreditation may be found respectively in the database of accredited bodies of Deutsche Akkreditierungsstelle GmbH <https://www.dakks.de/en/content/accredited-bodies-dakks>

Existing scope	Flexible scope (Category III)	Description	Update date of flexible scope
IEC 62116:2014	NA	Test procedure of islanding prevention measures for utility-interconnected photovoltaic inverters	
EN 62116:2014	NA	Test procedure of islanding prevention measures for utility-interconnected photovoltaic inverters	
IEC 61727:2004	NA	Photovoltaic (PV) systems - Characteristics of the utility interface	
EN 50438: 2013	NA	Requirements for the connection of micro-generators in parallel with public low-voltage distribution networks	
IEC TS 62910:2020	IEC TS 62910:2015	Utility-interconnected photovoltaic inverters - Test procedure for low voltage ride-through measurements	2023-03-31
IEC TS 63217:2021	NA	Utility-interconnected photovoltaic (PV) inverters - Test procedure of over-voltage ride-through measurements	
EN 50549-1:2019	EN 50549-1:2019/AC:2019	Requirements for generating plants to be connected in parallel with distribution networks - Part 1: Connection to a LV distribution network above 16 A	2022-09-01
EN 50549-2:2019	EN 50549-2:2019/AC:2019	Requirements for generating plants to be connected in parallel with distribution networks - Part 2: Connection to a MV distribution network	2022-09-01
DIN V VDE V 0124-100:2020	DIN V VDE V 0124-100:2012	Grid integration of generator plants -	2023-03-31

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		Generator units - Test requirements for generation units to be connected and operated parallel with the low-voltage distribution networks	
DIN VDE V 0126-1-1:2013	NA	Automatic disconnection device between a generator and the public low-voltage grid	
VDE-AR-N 4105: 2018	NA	Generators connected to the low-voltage distribution network - Technical requirements for the connection to and parallel operation with low-voltage distribution networks	
VDE-AR-E 2510-2: 2015	NA	Stationary electrical energy storage systems intended for connection to the low voltage grid	
VDE-AR-N 4100:2019	VDE-AR-N 4100:2017	Technical rules for the connection and operation of customer installations to the low voltage network (TAR low voltage)	2023-03-31
VDE-AR-N 4110: 2018	VDE-AR-N 4110/A1: 2022	Technical requirements for the connection and operation of customer installations to the medium voltage network (TAR medium voltage)	2023-08-03
VDE-AR-N 4120: 2018	NA	Technical requirements for the connection and operation of customer installations to the high voltage network (TAR high voltage)	
VDE-AR-N 4130: 2018	NA	Technical requirements for the connection and operation of customer installations to the extra high voltage network (TCR extra high voltage)	
BDEW:2008+ Supplement 1/2009 7/2010 2/2011 1/2013	NA	Technical Guideline Generating Plants Connected to the Medium-Voltage Network Guideline for generating plants' connection to and parallel operation with the medium-voltage network	
FGW TR3 Rev.25	FGW TR3 Rev.23 FGW TR3 Rev.24 FGW TR3 Rev.26	Technical Guidelines for Power Generating Units Part 3 Determination of electrical characteristics of power generating units connected to MV, HV and EHV grids	2023-08-03
FGW TR4 Rev.9	FGW TR4 Rev.6 FGW TR4 Rev.7 FGW TR4 Rev.8	Technical Guidelines for Power Generating Units	2023-08-03

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	FGW TR4 Rev.10	Part 4 Demands on Modelling and Validating Simulation Models of the Electrical Characteristics of Power Generating Units and Systems	
FGW TR8 Rev.9	FGW TR8 Rev.6 FGW TR8 Rev.7 FGW TR8 Rev.9	Technical Guidelines for Power Generating Units Part 8 Certification of the electrical characteristics of power generating units and systems in the medium-, high- and highest-voltage grids	2023-08-03
FNN Hinweis: 2019	FNN Hinweis: 2016	Connection and operation of storage system to low voltage network (Anschluss und Betrieb von Speichern am Niederspannungsnetz)	2023-03-31
AS 4777.2: 2020	AS 4777.2:2015 AS/NZS 4777.2:2020 Amd 1:2021	Grid connection of energy systems via inverters, Part 2: Inverter requirements	2023-08-03
AS 4777.3:2005	NA	Grid connection of energy systems via inverters, Part 3: Grid protection requirements	
ER G83 issue2:2012	G83 Issue 2 Amendment 3 :2019	Recommendations for the Connection of Type Tested Small-scale Embedded Generators (Up to 16A per Phase) in Parallel with Low-Voltage Distribution Systems	2023-08-03
ER G59 issue2:2011 ER G59 issue3:2013 ER G59 issue3-3:2018	G59/3/7 Issue 3:2019	Recommendations for the connection of generating plant to the distribution systems of licensed distribution network operators	2023-08-03
ER G98 issue1-1:2018	G98 Issue 1 - Amendment 7 :2022	Requirements for the connection of Fully type tested micro-generators (up to and including 16A per phase) in parallel with public low voltage distribution networks	2023-08-03
ER G99 issue1-1:2018	ER G99 issue8-1:2021 G99 Issue 1 - Amendment 9:2022	Requirements for the connection of generation equipment in parallel with public distribution networks	2023-08-03
RD 1663:2000	NA	Königliches Dekret 1663/2000, Connection of photovoltaic system to the low-voltage grid network	
RD 661:2007	NA	Königliches Dekret 661/2007, About the generation of electric energy	

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RD 1699: 2011	NA	Königliches Dekret 1699/2011, the connection of generation system for electric energy with small power	
UNE 206006: 2011	NA	Performance tests for islanding detection of multiple grid-connected photovoltaic inverters in parallel	
UNE 206007-1: 2013	NA	Requirements for connecting to the power system. Part1: Grid-connected inverters	
UNE 206007-2 IN:2014	NA	Requirements for connecting to the power system. Part 2: Requirements concerning system security for installations containing inverters.	
P.O.12.2:2018	NA	Generation and demand facilities: minimum design, equipment, operation, service and security requirements	
P.O. 12.3. :2006	NA	Requirements for responding to voltage gaps in wind installations	
OVE E 8001-4-712/A2:2016	NA	Erection of electrical installations with rated voltages up to AC 1000 V and DC 1500 V - Part 4-712: Photovoltaic power-systems - Erection and safety requirements systems	
TOR D4: 2016	NA	Technical and organizational rules for operators and users of networks Part D: Special technical rules Main section D4: Parallel operation of generation plants with distribution networks	
Technical Regulation 3.2.1:2016	NA	Technical regulation 3.2.1 for power plants up to and including 11 kW	
UTE C 15-712-1: 2010	UTE C15-712-1:2013	LOW-VOLTAGE ELECTRICAL INSTALLATIONS: Photovoltaic installations connected to the public distribution network	2023-08-03
C10/11:2021	C10/11:2012 C10/11:2019	SPECIFIC TECHNICAL PRESCRIPTIONS REGARDING POWER-GENERATING PLANTS OPERATING IN PARALLEL TO THE DISTRIBUTION NETWORK	2023-08-03
CEI 0-21:2019+V1:2020	CEI 0-21:2014 + V1:2014 CEI 0-21:2019	Reference technical rules for the connection of active and passive users to the LV electrical Utilities	2023-08-03

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	CEI 0-21:2022 V1		
CEI 0-16:2019+V1:2020	CEI 0-16:2014 + V1:2014 CEI 0-16: 2019 CEI 0-16;V2 (2023-05)	Reference technical rules for the connection of active and passive consumers to the HV and MV electrical networks of distribution Company	2023-08-03
IEEE 1547:2003	IEEE 1547:2018	IEEE Standard for Interconnecting Distributed Resources with Electric Power Systems	2023-03-31
IEEE 1547.1:2005	IEEE 1547.1:2020	IEEE Standard Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems	2023-03-31
ABNT NBR 16149: 2013	NA	Photovoltaic (PV) systems - Characteristics of the utility interface	
ABNT NBR 16150: 2013	NA	Photovoltaic (PV) systems - Characteristics of the utility interface - Conformity test procedure	
INMETRO ORDINANCE n°16/2021	NA	Photovoltaic Power Generation Equipment INMETRO ORDINANCE n°16/2021	
MEA Guideline 2013	NA	Regulation for an Inverter Used in Grid-connected Power Generating System of the Metropolitan Electricity Authority (MEA)	
PEA Guideline 2016	NA	The Requirements on Grid Connection of Provincial Electricity Authority(PEA) for VSPP	
NRS 097-2-1:2017	NA	Grid interconnection of embedded generation Part 2: Small-scale embedded generation	
COMMISSION REGULATION (EU) 2016/631	NA	COMMISSION REGULATION (EU) 2016/631 of 14 April 2016 establishing a network code on requirements for grid connection of generators	
NC RFG:2018	NA	Poland: Proposal for general application requirements under Commission Regulation (EU) 2016/631 of April 14, 2016 establishing a network code on the requirements for connecting generating units to the grid (NC RfG)	
PTPiREE: 2021	NA	Conditions and procedures for the use of certificates in the process of connecting modules in power generation to electricity grids	

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NTS V2.1:2021-07	NA	Technical standard for monitoring the conformity of the electricity generation modules according to EU Regulation 2016/631	
UNE 217001:2020	NA	Requirements and tests for systems that avoid the discharge of energy to the distribution network	
UNE 217002:2020	NA	Inverters for connection to the distribution network Testing of DC injection requirements to the grid, surge generation and island operation detection system	
PVVC:2018	NA	Procedures for verification, validation and certification of the requirements of po 12.3 on the response of the wind and photovoltaic facilities to the voltage holes	
OVE-Richtlinie R 25:2020	NA	Test requirements for generator units to be connected to and operated in parallel with low-voltage distribution networks	
IEC 61400-21-1:2019	NA	Wind energy generation systems - Part 21-1: Measurement and assessment of electrical characteristics - Wind turbines	
IEC 61400-27-2:2020	NA	Wind energy generation systems - Part 27-1: Electrical simulation models - Generic models	
NA/EEA-NE7 - CH 2020	NA	Network connection for energy generation systems to the low-voltage network - Technical requirements for connection and parallel operation in NE7	
BVES 2.0	NA	Efficiency guideline for PV storage systems	

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Test and simulation according to the NTS V2.0:2020-11 NTS V2.1:2021-07	NA	Test and simulation of control of power, frequency, voltage regulation and robustness against disturbances in the network by testing and simulation according to chapters: 5.1: Limited frequency sensitive mode - overfrequency (LFSM-O) 5.2: Limited frequency sensitive mode - underfrequency (LFSM-U) 5.3: Frequency sensitive mode (FSM) 5.5: Active power control range and remote controllability 5.7: Reactive power capability at maximum capacity and below maximum capacity 5.8: Reactive Power Control in PPM 5.11: Robustness requirements: Active power recovery after a fault, Fault ride Through Capability, and Fast Fault Current Injection Capability 6. Validation of the simulation model	
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