Deutsche Akkreditierungsstelle

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Anlage zur Akkreditierungsurkunde D-PL-12024-03-04 nach DIN EN ISO/IEC 17025:2018

Gültig ab: **10.02.2026**

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Diese Urkundenanlage ist Bestandteil der Akkreditierungsurkunde D-PL-12024-03-00.

Inhaber der Akkreditierungsurkunde:

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mit dem Standort

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Das Prüflaboratorium erfüllt die Anforderungen gemäß DIN EN ISO/IEC 17025:2018, um die in dieser Anlage aufgeführten Konformitätsbewertungstätigkeiten durchzuführen. Das Prüflaboratorium erfüllt gegebenenfalls zusätzliche gesetzliche und normative Anforderungen, einschließlich solcher in relevanten sektoralen Programmen, sofern diese nachfolgend ausdrücklich bestätigt werden.

Die Anforderungen an das Managementsystem in der DIN EN ISO/IEC 17025 sind in einer für Prüflaboratorien relevanten Sprache verfasst und stehen insgesamt in Übereinstimmung mit den Prinzipien der DIN EN ISO 9001.

Netzintegration (elektrische Kraftwerkseigenschaften von dezentralen Erzeugungsanlagen, z.B. Photovoltaikwechselrichter und Blockheizkraftwerke *Durchführung von vor Ort-Prüfungen*	**Grid integration** (electrical power plant characteristics of decentralized generation plants, such as photovoltaic inverters and combined heat and power plants) *On-site testing*

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Der jeweils aktuelle Stand der gültigen und überwachten Akkreditierung ist der Datenbank akkreditierter Stellen der Deutschen Akkreditierungsstelle zu entnehmen (www.dakks.de)

Flexibler Akkreditierungsbereich:

Dem Prüflaboratorium ist, ohne dass es einer vorherigen Information und Zustimmung der DAkkS bedarf, die Anwendung der hier aufgeführten genormten oder ihnen gleichzusetzenden Prüfverfahren mit unterschiedlichen Ausgabeständen gestattet (Flexibilisierung nach Kategorie A).

Das Prüflaboratorium verfügt über eine aktuelle Liste aller Prüfverfahren im flexiblen Akkreditierungsbereich. Die Liste ist öffentlich verfügbar auf der Webpräsenz des Prüflaboratoriums.

Flexible Scope of Accreditation:

The testing laboratory is permitted to use standardised or equivalent test methods listed here with different issue dates without being required to prior inform and obtain approval from DAkkS (flexibilization according to category A).

The testing laboratory has an up-to-date list of all test methods within the flexible scope of accreditation. The list is publicly available on the website of the testing laboratory.

Fachbereich	Norm / Hausverfahren / Version	Titel der Norm oder des Hausverfahrens (ggf. Abweichungen / Modifizierungen von Normverfahren angeben)	Prüfbereich / Einschränkung
Netz-integration	ABNT NBR 16149:2013	Photovoltaics (PV) systems – Characteristics of the utility interface Sistemas fotovoltaicos (FV) – Caracteristicas da interface de conexao com a rede eletrica de distribuicao	Brazil / Brasilien
Netz-integration	ABNT NBR 16150:2013	Photovoltaics (PV) systems – Characteristics of the utility interface – Conformity test procedure procedure Sistemas fotovoltaicos (FV) – Caracteristicas da interface de conexao com a rede elétrica de distribuicao -- Procedimento de ensaio de conformidade	Brazil / Brasilien
Netz-integration	AEMO VDRT:2020	Short duration undervoltage response test	Australia / Australien
Netz-integration	AERO:2017	Small Scale Grid-Connected Solar PV Systems Technical Guidelines	Oman / Oman

Netz-integration	ANRE No. 03:2023 ANRE No. 30:2013 ANRE No. 79:2016 ANRE No. 208:2018 ANRE No. 228:2018	ANRE No. 03: Technical standard for connection requirements to public electricity networks for electricity storage facilities and the notification procedure for the connection of electricity storage facilities. ANRE No. 03: Normei tehnice privind cerințele tehnice de racordare la rețelele electrice de interes public pentru instalațiile de stocare a energiei electrice și procedura de notificare pentru racordarea instalațiilor de stocare a energiei electrice ANRE No. 30: Technical conditions for connection to the public electricity recipes for photovoltaic power plants ANRE No. 30: Condiţii tehnice de racordare la reţetele electrice de interes public pentru centralele electrice fotovoltaice ANRE No. 79: to approve the classification of units and power plants ANRE No. 79: pentru aprobarea clasificarii unitatilor si a centralelor electrice ANRE No. 208: Technical Standard on Technical Requirements for Connection to Public Electricity Networks for Generating Modules, Centralized Generating and Central Modules Generated by Offshore Generating Modules (Offshore) ANRE No. 208: Norma tehnică privind cerinţele tehnice de racordare la reţelele electrice de interes public pentru module generatoare, centrale formate din module generatoare şi centrale formate din module generatoare offshore (situate în larg) ANRE NO 228: Technical conditions for connection to public-interest electrical networks for active power injection	Romania / Rumänien

		ANRE No 228: Condiţii tehnice de racordare la reţelele electrice de interes public pentru prosumatorii cu injecţie de putere activa in retea	
Netz-integration	AS/NZS 4777.2:2020 Amd2: 2024 AS/NZS 4777.2:2020 Amd1:2021 AS/NZS 4777.2:2020	Grid connection of energy systems via inverters – Part 2: Inverter requirements Netzanschluss von Energiesystemen über Wechselrichter - Teil 2: Wechselrichteranforderungen	Australia / Australien
Netz-integration	AS/NZS 4777.3:2005	Grid connection of energy systems via inverters – Part 3: Grid protection requirements Netzanschluss von Energiesystemen über Wechselrichter - Teil 3: Netzschutzanforderungen	Australia / Australien
Netz-integration	ΑΠΟΦΑΣΕΙΣ Αριθμ. απόφ. 1165:2020	Determination of maximum power thresholds applicable to power plants and general application parameters (EU) 2016/631. Καθορισμός κατωφλίων μέγιστης ισχύος που εφαρμόζονται σε μονάδες ηλεκτροπαραγωγής και παράμετροι γενικής εφαρμογής Κανονισμού (ΕΕ) 2016/631	Greece / Griechenland

Netz-integration	ΑΗΚ ΤΕΧΝΙΚΟΣ ΟΔΗΓΟΣ Σχέδιο ΔΣΔ (ΑΗΚ) «Σ.Μ.10»:2023 Σχέδιο ΔΣΔ (ΑΗΚ) «Σ.Α.Α.Η»:2022	Technical provisions, Requirements and conditions for parallel connection and operation of photovoltaic systems with the low voltage distribution network ΤΕΧΝΙΚΕΣ ΠΡΟΝΟΙΕΣ, ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΟΡΟΙ ΓΙΑ ΤΗ ΔΙΑΣΥΝΔΕΣΗ ΚΑΙ ΤΗΝ ΠΑΡΑΛΛΗΛΗ ΛΕΙΤΟΥΡΓΙΑ ΦΩΤΟΒΟΛΤΑΪΚΟΥ ΣΥΣΤΗΜΑΤΟΣ ΜΕ ΤΟ ΔΙΚΤΥΟ ΔΙΑΝΟΜΗΣ ΧΑΜΗΛΗΣ ΤΑΣΗΣ Technical provisions, requirements and conditions for parallel connection and operation of production from RES (renewable energy sources) with the distribution network with the distribution network of ΑΗΚ ΤΕΧΝΙΚΕΣ ΠΡΟΝΟΙΕΣ, ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΟΡΟΙ ΓΙΑ ΤΗ ΔΙΑΣΥΝΔΕΣΗ ΚΑΙ ΤΗΝ ΠΑΡΑΛΛΗΛΗ ΛΕΙΤΟΥΡΓΙΑ ΣΥΣΤΗΜΑΤΟΣ ΠΑΡΑΓΩΓΗΣ ΗΛΕΚΤΡΙΣΜΟΥ ΑΠΟ ΑΠΕ ΜΕ ΤΟ ΔΙΚΤΥΟ ΔΙΑΝΟΜΗΣ ΤΟΥ ΔΙΑΧΕΙΡΙΣΤΗ ΣΥΣΤΗΜΑΤΟΣ ΔΙΑΝΟΜΗΣ (ΑΗΚ)	Cyprus / Zypern
Netz-integration	BNdP PTPiREE:2024	Set of settings and protection parameters as well as configuration of control characteristics for MWE types A and B ‘Setting table for Poland’ Zbiór nastaw I kryteriów zabezpieczeniowych oraz parametrów konfiguaracyjnych charaketerystyk regulacyjnych dla MWE typu A I B “Bank Nastaw dla Polski”	Poland / Polen
Netz-integration	BDEW Mittelspannungsrichtlinie 2008 + 1. Ergänzung:2009 + 2. Ergänzung:2010 + 3. Ergänzung:2011+ 4. Ergänzung: 2013	Technical Guideline Generating Plants in the medium-voltage network policy for connection and parallel operation of generators in the public medium-voltage grid Note: Flexible accreditation not valid for combustion engines Technische Richtlinie Erzeugungsanlagen am Mittelspannungsnetz Richtlinie für Anschluss und Parallelbetrieb von	Germany / Deutschland

		Erzeugungsanlagen am Mittelspannungsnetz Anmerkung: Flexibilisierung gilt nicht für VKM (Verbrennungskraftmaschinen)	
Netz-integration	BLPC:2017	Interconnection Requirements at Voltages 24.9 kV and below	Barbados / Barbados
Netz-integration	BPL SSRG:2017 BPL MSGR:2022	Requirements for grid interconnection of small-scale renewable energy generation systems Requirements for grid interconnection of Medium-Scale generation Renewable (MSGR) Energy Systems >100KW and ≤ 500KW	Bahamas / Bahamas
Netz-integration	C10-11:2024	Specific technical prescriptions regarding power- generating plants operating in parallel to the low-voltage and medium voltage distribution network Spezifische technische Vorschriften für Eigenerzeugungseinheiten, die parallel zum Niederspannungs- und Mittelspannungsnetz betrieben werden Prescriptions techniques spécifiques pour les installations de production d'électricité, fonctionnante en parallèle sur le réseau de distribution basse tension ou haute tension	Belgium / Belgien
Netz-integration	CEA:2023	Central Electricity Authority (Technical standard for connectivity to the grid) Central Electricity Authority (Technischer Standard für die Netzanbindung)	India / Indien
Netz-integration	CEDROSOLAR:2017	Solar PV Grid Interconnection Code for Lebanon	Lebanon / Lebanon
Netz-integration	CEDROWIND:2017	Wind Energy Grid interconnection Code For Lebanon	Lebanon / Lebanon
Netz-integration	CEC 300-2008-007-CMF	GUIDELINES FOR CALIFORNIA'S SOLAR ELECTRIC INCENTIVE PROGRAMS with Performance Test Protocol for	USA / USA

		Evaluating Inverters Used in Grid-Connected Photovoltaic Systems RICHTLINIEN FÜR KALIFORNIEN'S SOLAR ELEKTRISCHE ANREIZ-PROGRAMME mit Leistungstestprotokoll zur Bewertung von Wechselrichtern, die in netzgekoppelten Photovoltaikanlagen eingesetzt werden	
Netz-integration	CEI 0-21;V2:2024 CEI 0-21;V1:2022 CEI 0-21:2022	Reference technical rules for the connection of active and passive users to the LV network of electrical distribution companies. Regola tecnica di riferimento per la connessione di utenti attivi e passivi alle reti BT delle imprese distributrici di energia elettrica.	Italy / Italien
Netz-integration	CEI 0-16;V3:2024 CEI 0-16;V2:2023 CEI 0-16;V1:2022 CEI 0-16:2022	Reference technical rules for the connection of active and passive users to the HV and MV network of electrical distribution companies. Regola tecnica di riferimento per la connessione di utenti attivi e passivi alle reti AT ed MT delle Imprese distributrici di energia elettrica	Italy / Italien
Netz-integration	CER-06-190:2006	Comission for Energie Regulation. Arrangements for Micro Generation. Kommission für Energieverordnung. Anordnungen für die Mikroerzeugung.	Ireland / Irland
Netz-integration	CLP:2022	Grid Connection Requirements for Renewable Energy Systems (RES)	Hong Kong / Hongkong
Netz-integration	COES SINAC:2021 COES SINAC:2013	Resolution of the board of directors energy and mining investment supervisory body OSINERGMIN N° 083-2021-OS/CD Technical Procedure of the Economic Operation Committee of SEIN. Approved by Resolution OSINERGMIN Nº035-2013-OS/CD Resolución de consejo directivo organismo supervisor de la inversión en	Peru / Peru

		energia y mineria osinergmin n° 083-2021-OS/CD Procedimiento Técnico del Comite de Operación Económica del SEIN. Aprobado mediante Resolución OSINERGMIN Nº035-2013-OS/CD	
Netz-integration	COMISIÓN NACIONAL DE ENERGÍA (NTCO MT):2024	Technical standard for connecting and operating of power generation units (PMGD's) in medium voltage systems Norma Técnica de Conexión y Operación de PMGD en Instalaciones de Media Tensión	Chile / Chile
Netz-integration	COMISIÓN NACIONAL DE ENERGÍA (NTSyCS:2020)	Technical Standard of Safety and Quality of Service Norma Técnica de Seguridad y Calidad de Calidad de Servicio	Chile / Chile
Netz-integration	COMISIÓN NACIONAL DE ENERGÍA (NTCO BT):2014	Technical Standard of Connection and Operation of Low Voltage Generation Equipment Norma Técnica de Conexión y Operación de Equipamiento de Generación en Baja Tensión	Chile / Chile
Netz-integration	CRF:2017	Photovoltaic Network Code: 2013 Technical, operational and quality standards for the connection of the systems of solar power stations and solar power stations with photovoltaic technology to the national interconnected system (SIN) Código de Redes Fotovoltaico:2013 Normas técnicas, operativas y de calidad, para la conexión de los sistemas de centrales solares y centrales solares con tecnología fotovoltaica al sistema interconectado nacional (SIN)	Panama / Panama
Netz-integration	CRE-3025:2016 CRE RES/151:2016 CRE RES/142:2017	General rules of interconnection to the national electricity system. Annex 3: Technical requirements for the interconnection of photovoltaic solar power plants to the national electricity system.	Mexico / Mexiko

		Energy Regulatory Commission, Section Four: Resolution by which the Energy Regulatory Commission issues the general administrative provisions that contain the criteria of efficiency, quality, reliability, continuity, safety and sustainability of the National Electrical System: Provides article 12, section XXXVII of the Law of the Electrical Industry: No. Res/151/2016 and No. Res/142/2017 Reglas generales de interconexión al Sistema eléctrico nacional. Anexo 3: Requerimientos técnicos para interconexión de centrales solares fotovoltaicas al sistema eléctrico nacional. Comisión Reguladora de Energía, Cuarta sección: Resolucion por la que la Commisión Reguladora de Energía expide las Disposiciones administrativas de ceracter general que contienen los criterios de eficiencia, calidad, confiabilidad, continuidad, seguridad y sustentabilidad del Sistema Eléctrico Nacional: Código de Red, conforme dispone el artículo 12, fracción XXXVII de la Ley de la Industria Eléctrica: No. Res/151/2016 y No. Res/142/2017	
Netz-integration	Green Power Denmark LV:2022	Guide for connection of power-generating plants to the low-voltage grid (≤1kV) Type A and B	Denmark / Dänemark
Netz-integration	Green Power Denmark MV:2022	Guide for connection of power-generating plants to the medium and high-voltage grid (>1kV) Type B, C and D	Denmark / Dänemark
Netz-integration	Despacho No. 7 Despacho No. 9	Transitional requirements to be applied when connecting electricity generators like PV and CPV generators to the public service electric network (RESP). Requisitos transitórios a aplicar na ligação de geradores de eletricidade à rede elétrica de serviço público (RESP) de geradores PV e CPV.	Portugal / Portugal

Netz-integration	DEWA:2023	Standard for Distributed Renewable Resources Generators connected to the Distribution Network	United Arabic Emirates / Vereinigten Arabischen Emirate
Netz-integration	DIN VDE V 0124-100 VDE V 0124-100:2020	Grid integration of generator plants – low voltage - Test requirements for generator units to be connected and operated parallel with the low-voltage distribution networks Netzintegration von Erzeugungsanlagen- Niederspannung- Prüfanforderungen an Erzeugungseinheiten vorgesehen zum Anschluss und Parallelbetrieb am Niederspannungsnetz Intégration des générateurs dans le réseau électrique - Basse tension - Exigences d´essai pour les générateurs prévus pour être raccordés et fonctionner en parallèle avec les réseaux de distribution à basse-tension	Germany / Deutschland
Netz-integration	DIN VDE V 0126-1-1:2013 VDE V 0126-1-1:2013	Automatic disconnection device between a generator and the public low-voltage grid Selbsttätige Schaltstelle zwischen einer netzparallelen Eigenerzeugungsanlage und dem öffentlichen Niederspannungsnetz Dispositif de déconnexion automatique entre un générateur et le réseau public à basse tension	Germany / Deutschland
Netz-integration	DTIS-230206-BRL:2021 DOC-030221-GAP:2022 DOC-310552-HLU:2022	DTIS-230206-BRL: Conditions Governing Connection and Operation of Micro-generation DOC-030221-GAP: Conditions Governing the Connection and Operation of Mini-Generation DOC-310552-HLU: Conditions Governing the Connection and Operation of Small Scale Generation (50 kW - 200 kW)	Ireland / Irland

Netz-integration	EIFS 2018.2:2018	EIFS 2018.2 The Energy Market Inspectorate's Regulations on the determination of generally applicable requirements for network connection of generators EIFS 2018.2 Energimarknadsinspektionens föreskrifter om fastställande av generellt tillämpliga krav för nätanslutning av generatorer	Sweden / Schweden
Netz-integration	EirGrid:2025	EirGrid Grid Code	Ireland / Irland
Netz-integration	Elektrilevi Tyypi A:2023 Typpi B-D:2023	Type A: Technical Conditions for Less than 500 kW with maximum power manufacturer A-tüüpi: Tehnilised tingimused alla 500 kW maksimumvõimsusega elektrienergia tootjale Types B to D (over 500 kW) generation modules technical conditions B-D tüüpi (üle 500 kW) tootmismoodulite tüüpsed tehnilised tingimused	Estonia / Estland
Netz-integration	EN 50549-1:2019 + A1 2023 DIN EN 50549-1:2020 VDE 0124-549-1:2020	Requirements for the connection of power generation plants over 16A per phase - Part 1: Connection to the low voltage distribution network Anforderungen für den Anschluss von Stromerzeugungsanlagen über 16A je Phase – Teil 1: Anschluss an das Niederspannungsverteilungsnetz Prescriptions relatives au raccordement de générateurs de plus de 16A par phase – Partie 1: connexion au réseau de distribution BT	Europe / Europa
Netz-integration	EN 50549-2:2019 + A1 2023 DIN EN 50549-2:2020 VDE 0124-549-2:2020	Requirements for the connection of power generation plants over 16 A per phase - Part 2: Connection to the medium voltage distribution network Anforderungen für den Anschluss von Stromerzeugungsanlagen über 16 A je	Europe / Europa

		Phase – Teil 2: Anschluss an das Mittelspannungsverteilungsnetz Prescriptions relatives au raccordement de générateurs de plus de 16A par phase – Partie 2: connexion au réseau de distribution MT	
Netz-integration	EN 50549-10:2022	Requirements for generating plants to be connected in parallel with distribution networks — Part 10: Tests demonstrating compliance of units Anforderungen an die Parallelschaltung von Erzeugungsanlagen an Verteilungsnetzen - Teil 10: Tests zum Nachweis der Konformität von Einheiten Exigences relatives aux installations de production à connecter en parallèle aux réseaux de distribution - Partie 10: Essais démontrant la conformité des unités	Europe / Europa
Netz-integration	EN 50438:2013 DIN EN 50438:2014 VDE 0435-901:2014	Requirements for the connection of micro-generators on parallel with public low-voltage distribution Anforderungen für den Anschluss von Klein-Generatoren an das öffentliche Niederspannungsnetz Exigences pour les installations de micro-génération destinées à être raccordées en parallèle avec les réseaux publics de distribution à basse tension	Europe / Europa
Netz-integration	EN 50530:2010 EN 50530/A1:2010 DIN EN 50530 VDE 0126-12:2013	Overall efficiency of grid connected photovoltaic inverters Gesamtwirkungsgrad von netzgekoppelten Photovoltaik-Wechselrichtern Efficacité globale des onduleurs photovoltaïques raccordés au réseau	Efficiency / Wirkungsgrad
Netz-integration	ENEDIS-NOI-RES_13E:2018	Protection of production installations connected to the public distribution network.	France / Frankreich

		Protections des installations de production raccordées Identification au réseau public de distribution	
Netz-integration	ENEDIS-FOR-RES_20E:2024	Information Collection Sheets for a Proposal Connection before completion of the file and for an Offer of Connection, to the Public Distribution Network managed by Enedis, a Non-photovoltaic Production Installation power greater than 36 kVA Fiches de Collecte de renseignements pour une Proposition de Raccordement avant complétude du dossier et pour une Offre de Raccordement, au Réseau Public de Distribution géré par Enedis, d'une Installation de Production hors photovoltaïque de puissance supérieure à 36 kVA	France / Frankreich
Netz-integration	ENEDIS-PRO-RES_10E:2025	Description and study of decoupling protections for the connection of Production Installations connected to the Public Distribution Network Description et étude des protections de découplage pour le raccordement des Installations de Production raccordées au Réseau Public de Distribution	France / Frankreich
Netz-integration	ENEDIS-PRO-RES_64E:2025	Procedures for the control of the performance of the production facilities in high voltage (HTA) at the Public Distribution Network managed by Enedis Modalités du contrôle de performances des Installations de Productionraccordées en haute tension (HTA) au Réseau Public de Distributiongéré par Enedis	France / Frankreich
Netz-integration	Energiateollisuus Tekninen Liite 1:2019 Tekninen Liite 2:2016	Technical Annex 1 Introduction of the power generation plant to the distribution network - not exceeding 100 kVA for the nominal power Tekninen Liite 1 Ohjeeseen Sähköntuotantolaitoksen liittäminen	Finland / Finnland

		jakeluverkkoon - Nimellisteholtaan enintään 100 kVA laitoksen liitäminen Technical Appendix 2 to the guidelines 'Connecting an electricity generation installation to the distribution network' – connecting an installation with a nominal rated capacity of over 100kVA Tekninen Liite 2 Ohjeeseen Sähköntuotantolaitoksen liittäminen jakeluverkkoon – Nimellisteholtaan yli 100 kVA laitoksen liitäminen	
Netz-integration	EqC:2024 (PTPiREE)	Implementation of the requirements under the Commission Regulation (EU) 2016/631 of 14 April 2016 establishing a network code on requirements for grid connection of generators Conditions and procedures for the use of certificates in the process of connecting power-generating modules to power networks Wdrozenie wymogów wynikajacych z zapisów Rozporzadzenia Komisji (UE) 2016/631 z dnia 14 kwietnia 2016 r. ustanawiajacego kodeks sieci dotyczacy wymogów w zakresie przylaczenia jednostek wytwórczych do sieci Warunki i procedury wykorzystania certyfikatów w procesie przylaczenia modulów wytwarzania energii do sieci elektroenergetycznych	Poland / Polen
Netz-integration	ES-M:2024 ES:2024	Distribution Regulation Interconnection rules for access to the distribution network Distribution Regulation – Annexes Interconnection rules for access to the distribution network Elosztói szabályzat Az elosztó hálózathoz való hozzáférés együttműködési szabályai	Hungary / Ungarn

		Elosztói szabályzat – mellékletek Az elosztó hálózathoz való hozzáférés együttműködési szabályai	
Netz-integration	ESY:2017	ELEKTRİK ŞEBEKE YÖNETMELİĞİ ELEKTRİK ŞEBEKE YÖNETMELİĞİNDE DEĞİŞİKLİK YAPILMASINA İLİŞKİN YÖNETMELİK ELECTRICITY NETWORK REGULATION CHANGES IN ELECTRICITY NETWORK REGULATION	Turkey / Türkei
Netz-integration	ETGC:2017	Solar Energy Plants grid connection code	Egypt / Ägypten
Netz-integration	FD C11-519-11:2023	Requirements for connecting generators in parallel with the distribution network – Parameters for connection to the LV distribution network Anforderungen für den Anschluss von zum Parallelbetrieb mit dem Verteilnetz vorgesehenen Stromgeneratoren – Parameter zum Anschluss an das Niederspannungsverteilnetz Prescriptions pour le raccordement de générateurs en paralléle avec le reseau de distribution – Paramétres pour la connexion au réseau de distribtion BT	France / Frankreich
Netz-integration	FD C11-519-12:2023	Requirements for connecting generators in parallel with the distribution network – Parameters for connection to the MV distribution network Anforderungen für den Anschluss von zum Parallelbetrieb mit dem Verteilnetz vorgesehenen Stromgeneratoren – Parameter zum Anschluss an das Mittelspannungsverteilnetz Prescriptions pour le raccordement de générateurs en paralléle avec le reseau de distribution – Paramétres pour la connexion au réseau de distribution HTA	France / Frankreich

Netz-integration	FGW TR3 Rev. 26:2022 mit der entsprechenden FGW TR8 Richtlinie. / with the appropriate FGW TR8 Guideline.	Technical Guidelines for Generating Units Part 3: Determination of the electrical characteristics of generating units in the medium, high and extra high voltage networks Technische Richtlinien für Erzeugungseinheiten Teil 3: Bestimmung der elektrischen Eigenschaften von Erzeugungseinheiten am Mittel-, Hoch- und Höchstspannungsnetz	Germany / Deutschland
Netz-integration	FGW TR4 Rev. 10:2022 mit der entsprechenden FGW TR8 Richtlinie. / with the appropriate FGW TR8 Guideline.	Technical Guidelines for Generating Units Part 4: Requirements for modeling and validating simulation models of the electrical properties of generating units and installations Technische Richtlinien für Erzeugungseinheiten Teil 4: Anforderungen an Modellierung und Validierung von Simulationsmodellen der elektrischen Eigenschaften von Erzeugungseinheiten und -anlagen	Germany / Deutschland
Netz-integration	G98/1-7:2022	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	England / England
Netz-integration	G98/NI-1:2019	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 in Northern Ireland	North Ireland / Nordirland
Netz-integration	G99/1-10:2024	Requirements for the connection of generation equipment in parallel with public distribution networks	England / England
Netz-integration	G99/NI-1 Amd. 1:2023 G99/NI-1:2019	Requirements for the connection of generation equipment in parallel with public distribution networks in Northern Ireland	North Ireland / Nordirland

Netz-integration	G100/2-2:2023 G100/1-1:2023	Technical Requirements for Customer Export and Limiting Schemes	England / England
Netz-integration	Gridcp(SSDG):2010	Grid Code for Small Scale Distributed Generation (SSDG)	Mauritius / Mauritius
Netz-integration	Gridcp(MSDG):2016	Medium scale distributed generation (MSDG) till 200kW	Mauritius / Mauritius
Netz-integration	Gridcp(MSDG):2016	Medium scale distributed generation (MSDG) till 2MW	Mauritius / Mauritius
Netz-integration	IEC 61400-21:2008 EN 61400-21:2008 DIN EN 61400-21 VDE 0127-21:2009	Wind turbines – Part 21: Measurement and assessment of power quality characteristics of grid connected wind turbines Windenergieanlagen – Teil 21: Messung und Bewertung der Netzverträglichkeit von netzgekoppelten Eoliennes – Partie 21: Mesurage et évaluation des caractéristiques de qualité de puissance des éoliennes connectées au réseau	Germany / Deutschland
Netz-integration	IEC 61400-27-1:2020 DIN EN IEC 61400-27-1 VDE 0127-27-1:2022	Wind turbines – Part 27-1: Electrical simulation models – Wind turbines Windenergieanlagen – Teil 27-1: Elektrische Simulationsmodelle – Windenergieanlagen Eoliennes – Partie 27-1: Modèles de simulation électrique – Eoliennes	Germany / Deutschland
Netz-integration	IEC 61400-27-2:2020 DIN EN IEC 61400-27-2 VDE 0127-27-1:2022	Wind turbines – Part 27-2: Electrical simulation models – Model validation Windenergieanlagen – Teil 27-2: Elektrische Simulationsmodelle – Model Validierung Systèmes de génération d'énergie éolienne – Partie 27-2: Modèles de simulation électrique – Validation des modèles	Germany / Deutschland
Netz-integration	IEC 61683:1999 EN 61683:2000 DIN EN 61683:2000	Photovoltaic systems - Power conditioners - Procedure for measuring efficiency	Efficiency / Wirkungsgrad

		Photovoltaische Systeme – Stromrichter - Verfahren zur Messung des Wirkungsgrades Systèmes photovoltaïques - Convertisseurs de puissance - Méthode de mesure de l'efficacité	
Netz-integration	IEC 61727:2004 EN 61727:1995 DIN EN 61727:1996	Photovoltaic (PV) systems – Characteristics of the utility interface Photovoltaische (PV) Systeme - Eigenschaften der Netz-Schnittstelle Systèmes photovoltaïques (PV) - Propriétés de l'interface réseau	
Netz-integration	IEC 62116:2014 EN 62116:2014 DIN EN 61116 VDE 0126-2:2014 ABNT NBR IEC 62116:2012 IS 16169:2014	Test procedure of islanding prevention measures for utility interconnected photovoltaic Inverters Photovoltaik-Wechselrichter für den Anschluss an das Stromversorgungsnetz - Prüfverfahren für Maßnahmen zur Verhinderung der Inselbildung Onduleurs photovoltaïques interconnectés au réseau public – Procédure d'essai des mesures de prévention contre l'îlotage	
Netz-integration	IEC 62891:2020 DIN IEC 62891:2015 VDE 0126-12:2015	Overall efficiency of grid connected photovoltaic inverters Gesamtwirkungsgrad von Photovoltaik-Wechselrichtern Efficacité globale des onduleurs photovoltaïques connectés au réseau	Efficiency / Wirkungsgrad
Netz-integration	IEC TS 62910:2020 DIN IEC/TS 62910:2019 VDE V 0126-16:2019	Test procedure of Low Voltage Ride-Through (LVRT) measurement for utility-interconnected photovoltaic inverter Prüfverfahren für LVRT-Maßnahmen für Photovoltaik-Wechselrichter in Stromversorgungsnetzen Onduleurs photovoltaïques interconnectés - Procédure de test pour les mesures de traversée à basse tension	

Netz-integration	IEC 62933-2-1:2017 EN IEC 62933-2-1:2018 DIN EN IEC 62933-2-1 VDE 0520-933-2-1:2019	Electrical energy storage (EES) systems – Part 2-1: Unit parameters and testing methods – General specification Elektrische Energiespeichersysteme – Teil 2-1: Einheitsparameter und Prüfverfahren – Allgemeine Festlegungen Systèmes de stockage de l'énergie électrique (EES) – Partie 2-1 : paramètres unitaires et méthodes d'essai - Spécifications générales	
Netz-integration	IEC TS 62933-4-1:2017	Electrical energy storage (EES) systems - Part 4-1: Guidance on environmental issues - General specification Elektrische Energiespeichersysteme (EES) - Teil 4-1: Leitlinien zu Umweltaspekten - Allgemeine Spezifikation Systèmes de stockage de l'énergie électrique (EES) - Partie 4-1: Lignes directrices sur les problèmes environnementaux - Spécification générale	
Netz-integration	IEC TS 62933-5-1:2017	Electrical energy storage (EES) systems - Part 5-1: Safety considerations for grid-integrated EES systems - General specification Elektrische Energiespeichersysteme (EES) - Teil 5-1: Sicherheitsüberlegungen für netzintegrierte EES-Systeme - Allgemeine Spezifikation Systèmes de stockage d'énergie électrique (EES) - Partie 5-1: Considérations de sécurité pour les systèmes EES intégrés au réseau - Spécification générale	
Netz-integration	IEEE 1547:2018	IEEE 1547 Standard for Interconnecting Distributed Resources with Electric Power Systems.	USA /USA
Netz-integration	IEEE 1547.1:2020	IEEE 1547.1 Standard for Conformance Tests Procedures for Equipment	USA /USA

		Interconnecting Distributed Resources with Electric Power Systems	
Netz-integration	IRR-DCC-MV:2016	Intermittent Renewable Resources (Wind and PV) Distribution Connection Code (DCC) At Medium Voltage (MV)	Jordan / Jordanien
Netz-integration	IRR-TIC:2015	Intermittent Renewable Resources (IRR) Wind & PV Transmission interconnection code (TIC)	Jordan / Jordanien
Netz-integration	IRiESD:2025	Instrukcja Ruchu I Eksploatacji Sieci Dystrybucyjnej Instructions for the Operation and Maintance of the Distribution Network	Poland / Polen
Netz-integration	KS C 8564:2020	Small scale photovoltaic inverter (grid-tied type, stand-alone type) 소형 태양광 발전용 인버터(계통연계형, 독립형)	Korea / Korea
Netz-integration	KS C 8565:2020	Medium & large size Photovoltaic Inverter (Grid-tied type, Stand-alone type) 중대형 태양광 발전용 인버터 (계통연계형, 독립형)	Korea / Korea
Netz-integration	LANDSNET D1:2020	D.1 Terms of Technical Requirements for Power Generating Modules	Island / Island
Netz-integration	Latvijas Vestnesis 2023/46.24:2023	Network Code for the Electricity Sector Network connection requirements for power generation modules Tikla kodekss elektroenergijas nozare Tikla piesleguma prasibas elektroenergijas ražošanas moduliem	Latvia / Lettland
Netz-integration	MEA:2015	Grid-connected Inverter Regulation Metropolitan Electricity Authority	Thailand / Thailand
Netz-integration	Memorial A N. 1087:2018	Luxembourg Regulatory Institute - Regulation ILR / E18 / 43 of 14 November 2018 approving the requirements for connection to the network production facilities of types A, B, C and D - Electricity sector.	Luxembourg / Luxemburg

		Institut Luxembourgeois de Régulation - Règlement ILR/E18/43 du 14 novembre 2018 portant approbation des exigences applicables au raccordement au réseau des installations de production d'électricité des types a, b, c et d - Secteur électricité.	
Netz-integration	MGC:2020	Malaysian Grid Code	Malaysia / Malaysia
Netz-integration	Ministry of Energy:2012	Connection Guidelines for Small-Scale Renewable Generating Plant	Kenia / Kenia
Netz-integration	NA/EEA-NE5-CH:2022 NA/EEA-NE7-CH:2020	Empfehlung Netzanschluss für Energieerzeugungsanlagen Technische Anforderungen für den Anschluss und Parallelbetrieb in NE3 bis NE7	Switzerland / Schweiz
Netz-integration	NEPRA NTDC:2005 NEPRA NTDC: Addendum No. 2:2014 NEPRA NTDC: Addendum No. 2:2019	National, transmission and depatch company LTD. The Grid code	Pakistan / Pakistan
Netz-integration	Netcode elektriciteit:2024	Decision of the Authority for Consumers and Markets of 21 April 2016, reference ACM / DE / 2016/202151, according to the conditions as referred to in Article 31 of the Electricity Act 1998 (Network Code Electricity) Besluit van de Autoriteit Consument en Markt van 21 april 2016, kenmerk ACM/DE/2016/202151, houdende de vaststelling van de voorwaarden als bedoeld in artikel 31 van de Elektriciteitswet 1998 (Netcode elektriciteit)	Netherlands / Niederlande
Netz-integration	NGC:2018	Nigerian Grid code	Nigeria / Nigeria
Netz-integration	NIE:2019	Northern Ireland Electricity distribution code	North Ireland / Nordirland

Netz-integration	NN 10:2024 NN 52:2020 NN 128:2020	HEP - Distribution System Operator D.O.O Netwrok rules oft he distribution system HEP – Operator distribucijskog sustava D.O.O. Mreznih pravila distribucijskog sustava Crotaian transmission system operator D.O.O Network rules of the transmission system Hrvatski operator prijenosnog sustava D.O.O. Mreznih pravila prijenosnog sutava	Croatia / Kroatien
Netz-integration	NOSBiH:2023	Grid code Bosnia and Herzegovina	Bosnia and Herzegovina / Bosnien und Herzegowina
Netz-integration	Notas Legislación Nacional – REBT:2009	Procedure for power connection, test operation and the certification of wind and photovoltaic plants Nota de interpretación tecnica de la equivalencia de la separación galvánica de la connexion de instalaciones generadoras en baja tensión	Spain / Spanien
Netz-integration	NRS 097-2-1:2024 NRS 097-2-1:2017	GRID INTERCONNECTION OF EMBEDDED GENERATION Part 2: Small-scale embedded generation Section 1: Utility interface	South Africa / Südafrika
Netz-integration	NTS:2021 (V2.1 / SENP V1.1) NTS:2020 (V2.0 / SENP V1.0) NTS:2019 (V1.0)	Technical standards for power-generating module compliance monitoring in accordance with Regulation (EU) 2016/631 / P.O. 12.2 SENP Norma técnica de supervisión de la conformidad de los módulos de generación de electricidad según el Reglamento UE 2016/631 / P.O.12.2 SENP	Details, see Annex I Detalles, ver Anexo I Spain / Spanien
Netz-integration	O3E-323:2022	National Control Commission for Prices and Energy Rule for the parameters set under 14 April 2016, European Commission	Lithuania / Litaun

		Regulation (EU) No. 2016/631, which sets the requirements for the connection to the power supply of the generator Valstybinė kainų ir energetikos kontrolės komisija Nutarimas dėl parametrų, nustatytų pagal 2016 m. balandžio 14 d. europos komisijos reglamentą (es) nr. 2016/631, kuriame nustatomi generatorių prijungimo prie elektros energijos tinklo reikalavimai, patvirtinimo	
Netz-integration	OGC N28783:2013	Official Gazette Communique - Number 28783. October 2, 2013. Communique on implementation of the regulation related with unlicensed electricity generation in electricity market	Turkey / Türkei
Netz-integration	Ordinance INMETRO n°004:2011 Ordinance INMETRO n°357:2014	Annex III - Part 1 - Inverters photovoltaic systems independent Annex III - Part 2 - Inverters photovoltaic systems connected to the network Auto consumption Efficiency, harmonic distortion, voltage regulation and the frequency Overload Protection against polarity reversal Short-circuit output Efficiency, harmonic distortion, the tense you and frequency regulation environment at 40 ° C ANEXO III - Parte 1 – Inversores para sistemas fotovoltaicos autonomos ANEXO III – Parte 2 – Inversores para sistemas fotovoltaicos conectados a rede Autoconsumo	Excluded Annex I, II and IV Brazil / Brasilien

		Eficiencia, distorcao harmoica, regulacao da tensao e frequencia Sobrecarga Protecao contra inversao de polaridad Protecao contra curto-circuito na saida Eficiencia, distorcao harmonica, regulacao da tensao e frequencia em ambiente a 40°	
Netz-integration	Ordinance INMETRO n°140:2022 Ordinance INMETRO n°515:2023	Approves the Technical Regulation on Quality and the Conformity Assessment Requirements for Equipment for Generation, Conditioning and Storage of Electric Energy in Photovoltaic Systems - Consolidated. Aprova o Regulamento Técnico da Qualidade e os Requisitos de Avaliação da Conformidade para Equipamentos de Geração, Condicionamento e Armazenamento de Energia Elétrica em Sistemas Fotovoltaicos – Consolidado Amend Inmetro Ordinance No. 140 of 21 March 2022, which approves the Technical Regulation on the Quality and Conformity Assessment Requirements for Equipment for the Generation, Conditioning and Storage of Electrical Energy in Photovoltaic Systems – Consolidated Alterção de Portaria Inmetro No. 140, de 21 de março de 2022, qze aprova o Regulamento Técnico da Qualidade e os Requisitos de Avaliação da Conformidade para Equipamentos de Geração, Condicionamento e Armazenamento de Energia Elétrica em Sistemas Fotovoltaicos – Consolidado	ausgenommen Anhang A: Photovoltaik Module / without Annex A: Photovoltaic moduls Brazil / Brasilien
Netz-integration	OVE Richtline R20:2016	Stationary electrical energy storage systems intended for fix connection to the low voltage grid Stationäre elektrische Energiespeichersysteme vorgesehen	Austria / Österreich

		zum Festanschluss an das Niederspannungsnetz	
Netz-integration	OVE Richtline R25:2020	Test requirements for generator units to be connected to and operated in parallel with low-voltage distribution networks Prüfanforderungen an Erzeugungseinheiten (Generatoren) vorgesehen zum Anschluss und Parallelbetrieb an Niederspannungs-Verteilernetzen	Austria / Österreich
Netz-integration	ÖNORM E 8001-4-712:2009 ÖNORM E 8001-4-712/A1:2014 ÖNORM E 8001-4-712/A1:2016	Creation of electrical installations with rated voltages up to AC 1000 V and DC 1500 V - Part 4-712: Photovoltaic power-systems - Creation and safety requirements Systems Errichtung von elektrischen Anlagen mit Nennspannungen bis AC 1000 V und DC 1500 V- Teil 4-712: Photovoltaische Energieerzeugungsanlagen Errichtungs- und Sicherheitsanforderungen	Austria / Österreich
Netz-integration	PEA:2016	Grid-connected Inverter Regulation Provincial Electricity Authority	Thailand / Thailand
Netz-integration	PGC:2016	Philippine grid code - Amendment No. 1	Philippines / Philippinen
Netz-integration	PO 12.2:2018 (BOE-A-2020-8965:2020, TED/749/2020) PO 12.2:2005	PO12.2:2018 Resolution of the General Secretariat of Energy, approving the set of technical and instrumental procedures necessary to carry out the adequate technical management of the Electrical System. PO12.2:2018 Resolución de la Secretaría General de Energía, por la que se aprueba el conjunto de procedimiento de carácter técnico e instrumental necesarios para realizer la adecuada gestión técnica del Sistema Eléctrico. BOE-A-2020-8965:2020, TED/749/2020) Por la que se establecen los requisitos técnicos para la conexión a la red	Details, see Annex I Detalles, ver Anexo I Spain / Spanien

		necesarios para la implementación de los códigos de red de conexión. BOE-A-2020-8965:2020, TED/749/2020) Establishes the technical requirements for connection to the network necessary for the implementation of the connection network codes. PO12.2:2005 Instalaciones conectadas a la red de transporte: requisitos mínimos de diseño, equipamiento, functionamiento y seguridad y puesta en servicio. PO12.2:2005 Installations connected to the transmission network: minimum requirements for design, equipment, operation and safety and commissioning.	
Netz-integration	PO 12.3:2006	Resolution of the General Secretariat of Energy, approving the set of technical and instrumental procedures necessary to carry out the adequate technical management of the Electrical System. Resolution of the General Secretariat of Energy, approving the operation procedure 12.3 Required response to the voltage gaps of wind farms. Resolución de la Secretaría General de Energía, por la que se aprueba el conjunto de procedimiento de carácter técnico e instrumental necesarios para realizer la adecuada gestión técnica del Sistema Eléctrico. Resolución de la Secretaría General de Energía, por la que se aprueba el procedimiento de operación 12.3 Requistas de respuesta frente a huecos de tension de las instalaciones eólicas.	Spain / Spanien
Netz-integration	Portaria N. 73:2020	Non-exhaustive requirements for connecting the generating modules to the Public Service Electrical Network (RESP).	Portugal / Portugal

		Requisitos não exaustivos para ligação dos módulos geradores à Rede Elétrica de Serviço Público (RESP).	
Netz-integration	PPDS:2022	Rules for parallel operation of products and accumulation equipment networking by distribution system operators Pravidla pro paralelní provoz výroben a akumulacních zarízení se sítí provozovatele distribucní soustavy	Czechia / Tschechien
Netz-integration	PPDS A1, A2 NNVMK A1, A2 V01:2025 MpTNKVMK A1, A2 V01:2024 (EG.D člen ckupiny E.ON)	National setting of non-synchronous production modules of category A1 and A2 at LV level Národní nastavení nesynchronních výrobnich modulů kategorie A1 a A2 na hladině NN Methodology for testing a non-synchronous component of a Category A1 and A2 production module Metodika pro testování nesynchronní komponenty výrobního modulů kategorie A1 a A2	Czechia / Tschechien
Netz-integration	PV 501:2012	Detailed examination of renewable energy equipment based small solar power inverter (Grid-connected, stand-alone)	Korea / Korea
Netz-integration	PV 502:2012	Detailed examination of renewable energy equipment solar power inverter for medium to large basis (On-grid, stand-alone)	Korea / Korea
Netz-integration	PVVC Revision 11:2018	Procedures for verification, validation and certification of the requirements of PO 12.3 and PO12.2 on the response of wind and photovoltaic installations to voltage gaps. Procedimientos de verificación, validación y certificación de los requisitos del PO 12.3 y PO12.2 sobre la respuesta de las ubstalaciones eólicas y fotovoltaicas ante huecos de tensión.	Spain / Spanien

Netz-integration	RA n.20/2014	Approving the safety regulation and installation of the interconnections of solar photovoltaic Aprova o Regulamento de segurança e instalação das interligações de energia solar fotovoltaica	Macau / Macau
Netz-integration	RD661:2007	Royal Decree 661/2007, which regulates the activity of production of electrical energy Real Decreto 661/2007, por el que se regula la actividad de producción de energia eléctirca	Spain / Spanien
Netz-integration	RD1565:2010	Royal Decree 1565/2010, which regulates and modifies certain aspects related to the activity of production of electric energy in special regime Real Decreto 1565/2010, por el que se regulan y modifican determinados aspectos relativos a la actividad de producción de energía eléctrica en régimen especial	Spain / Spanien
Netz-integration	RD1663:2000	Royal Decree 1663/2000, on connection of photovoltaic installations to the low voltage grid Real Decreto 1663/2000, sobre conexión de instalaciones fotovoltaicas a la red de baja tensión	Spain / Spanien
Netz-integration	RD1699:2011 + RD413:2014 + RD 647:2020	Royal Decree 1699/2011 and Royal Decree 413/2014 by which regulates the connection to grid of installations of production of electric power of small power Real Decreto 1699/2011 y Real Decreto 413/2014 por el que se regula la conexión a red de instalaciones de producción de energía eléctrica de pequeña potencia Royal Decree 647/2020, of 7 July, which regulates aspects necessary for the implementation of the network codes	Spain / Spanien

		for the connection of certain electrical installations. Real Decreto 647/2020, de 7 de julio, por el que se regulan aspectos necesarios para la implementación de los códigos de red de conexión de determinadas instalaciones eléctricas.	
Netz-integration	RENblad 342:2025	Technical functional requirements for connection and network rental agreement for feed customers at low voltage grids Tekniske funksjonsjkrav til tiklnytnings - Og Nettleieavtale for innmatingskunder i lavspenningsnettet	Norway / Norwegen
Netz-integration	Resolution No 7-26/2018-005	National provisions regarding the requirements for grid connection of generators established by Elering AS pursuant to Article 7(4) of Commission Regulation No 2016/631	Estonia /Estland
Netz-integration	RFG:2016	Commission Regulation (EU) 2016/631 of 14 April 2016 establishing a network code on requirements for grid connection of generators	Europe / Europa
Netz-integration	RFG-Krav for Tærskelværdier fastsat i henhold til rfg art. 5:2018 RFG-Bilag 1:2022 RFG-Bilag 1A:2018 RFG-Bilag 1B:2020 RFG-Bilag 1C:2018 RFG-Bilag 1D:2018	Requirements determined according to RfG: Requirements set according to EU Regulation 2016/631 – Requirements for grid connection of Generators Appendix 1: Approved by the utiliy authority 22-07-2022 (rev. 2) Appendix 1A: Generic signaling list for production plants – real-time information requirements Appendix 1 B: Requirements for generators (RFG) – simulation model requirements Appendix 1C: Robustness requirements for power generation plants (FRT) Appendix 1D: Requirements for reactive power control characteristics for	Denmark / Dänemark

		electricity generating plants connected to the transmission grid Krav fastsat i medfør af RfG: Krav fastsat I henhold til EU-forordning 2016/631 - Requirements for grid connection of Generators Bilag 1: Godkendt af forsyningstilsynet 22-07-2022 (rev. 2) Bilag 1A: Generisk signalliste for produktionsanlæg – krav til realtidsinformation Bilag 1B: Requirements for generators (RFG) – krav til simuleringsmodel Bilag 1C: Robusthedskrav for elproduktionsanlæg (FRT) Bilag 1D: Krav til reaktiv effektreguleringsegenskaber for elproducerende anlæg tilsluttet transmissionsnettet	
Netz-integration	RKS-AT: Typ B:2024 RKS-AT: Typ C:2024 RKS-AT: Typ D:2024	Guidelines for the proof of conformity of power generation systems in Austria according to type B, C and D Richtlinien für den Konformitätsnachweis von Stromerzeugungsanlagen in Österreich nach Typ B, C und D	Austria / österreich
Netz-integration	RoGA (PSE NC RFG):2018	The general operational requirements resulting from Commission Regulation (EU) 2016/631 of 14 April 2016 establishing a network code on requirements for grid connection of generators (hereinafter referred to as NC RfG) Wymogi ogólnego stosowania wynikajace z Rozporzadzenia Komisji (UE) 2016/631 z dnia 14 kwietnia 2016 r. ustanawiajacego kodeks sieci dotyczacy wymogów w zakresie przylaczenia jednostek wytwórczych do sieci (NC RfG)	Poland / Polen
Netz-	Rule 14H:2018	Inverter Load Rejection Testing	Hawaii / Hawaii

integration			
Netz-integration	SAGC:2022	Grid connection code requirements for renewable power plants (RPPs) connected to the transmission system (TS) or the distribution system (DS) in South Africa	South Africa / Süd Afrika
Netz-integration	SDLWindV 2015	Ordinance on the EEG on system services provided by wind turbines (System Service Ordinance - SDLWindV) including Amendment Regulation of June 2010, Amendment Regulation 2 of April 2011 and Amendments July 2011, July 2014 and February 2015 Application required till 30.06.2017 Verordnung zum EEG zu Systemdienstleistungen durch Windenergieanlagen (Systemdienstleistungsverordnung – SDLWindV) incl. Änderungsverordnung vom Juni 2010, 2. Änderungsverordnung vom April 2011 und Novellierung Juli 2011, Juli 2014 und Februar 2015 Anwendungspflicht bis 30.06.2017	Germany / Deutschland
Netz-integration	SEC LV MV:2020	Sustainable Integration of Renewable Energy Sources (Solar PV) with SEC Distribution Network Low Voltage and Medium Voltage Technical Standards for the Connection of small-scale solar PV systems to the LV and MV Distribution Networks of SEC	Saudi Arabia / Saudi Arabien
Netz-integration	SI4777.2:2008	Grid connection of energy systems via inverters Part 2: Inverter requirements	Israel / Israel
Netz-integration	SI4777.3:2008	Grid connection of energy systems via inverters Part 3: Grid protection requirements	Israel / Israel
Netz-integration	SONDO:2021	System operating instructions for the electricity distribution network	Slovenia / Slowenien
Netz-integration	SONI:2024 SONI:2020 + Battery ESPS Grid	Soni grid code	North Ireland / Nordirland

	Code:2020	Battery ESPS Grid Code Implementation Note	
Netz-integration	ssPV:2014	Technical requirements for connecting small scale PV (ssPV) systems to low voltage distribution networks	Egypt / Ägypten
Netz-integration	Statnett 15/00250-12:2017	Statnett's proposal for practical implementation of the EU Regulation for connection (NC-RFG) Statnetts forslag til praktisk gjennomføring av EUs forordning for tilknytning av produksjon (NC-RfG)	Norway / Norwegen
Netz-integration	Statnett NVF:2024	The national supervisor of functional requirements in the power system Nasjonal veileder for funksjonskrav i kraftsystemet	Norway / Norwegen
Netz-integration	Technical Guidebook TNB:2013	Technical Guidebook on grid-interconnection of photovoltaic power generation systems to TNB Distribution LV and MV Network	Malaysia / Malaysia
Netz-integration	Technical Regulation 3.2.1:2016	Electricity-generation plant of 11kW or lower	Denmark / Dänemark
Netz-integration	Technical Regulation 3.2.2:2016	Electricity-generation for PV power plants above 11 kW	Denmark / Dänemark
Netz-integration	Technical Regulation 3.2.3:2017	Electricity-generation for thermal plants above 11 kW	Denmark / Dänemark
Netz-integration	Technical Regulation 3.2.5:2016	Technical regulation 3.2.5 for wind power plants above 11 kW	Denmark / Dänemark
Netz-integration	Technical Regulation 3.3.1:2024 R5	Technical regulation 3.3.1 for electrical energy storage facilities	Denmark / Dänemark
Netz-integration	Technical Requirements:2014	Technical Requirements and Evaluation of Grid Code Compliance for Photovoltaic Power Plants connected to the medium voltage level in Jordan	Jordan / Jordanien
Netz-integration	Technické Podmienky HV:2021 Technické Podmienky	Technické podmienky prevádzkovateľa distribučnej sústavy Technical conditions for distribution system operator	Slovakia / Slowakei

	LV/MV:2024	Prístupu a Pripojenia, Pravidlá Prevádzkovania Prenosoveh sústavy Access and connections, operating rules Transmission Systems	
Netz-integration	TOR Stromerzeugungsanlagen Typ A:2024 TOR Stromerzeugungsanlagen Typ B:2024 TOR Stromerzeugungsanlagen Typ C:2024 TOR Stromerzeugungsanlagen Typ D:2024	Connection and parallel operation of type A, B, C, D and miniature power plants Anschluss und Parallelbetrieb von Stromerzeugungsanlagen des Typs A, B, C, D und Kleinstanlagen	Austria / Österreich
Netz-integration	Tor Verteilnetz-anschluss:2024	Technical and organizational rules for operators and users of grids TOR distribution grid connection for low voltage (grid levels 6 and 7) Technical and organizational rules for operators and users of grids TOR distribution grid connection for medium voltage (grid levels 4 and 5) Technische und organisatorische Regeln für Betreiber und Benutzer von Netzen TOR Verteilernetzanschluss für die Niederspannung (Netzebenen 6 und 7) Technische und organisatorische Regeln für Betreiber und Benutzer von Netzen TOR Verteilernetzanschluss für die Mittelspannung (Netzebenen 4 und 5)	Austria / Österreich
Netz-integration	UNE 206006 IN:2011	Test of islanding detection for multiple photovoltaic grid tied inverters in parallel Ensayos de detección de funcionamiento en isla de múltiples inversores fotovoltaicos conectados a red en paralelo	Spain / Spanien
Netz-integration	UNE 206007-1 IN:2013	Requirements to the mains connection Part 1: Inverters for connection to the distribution network	Spain / Spanien

		Requisitos de conexión a la red eléctrica Parte 1: Inversores para conexión a la red de distribución	
Netz-integration	UNE 206007-2 IN:2014	Requirements for connection to the mains. Part 2: System safety requirements for installations constituted by inverters. Requisitos de conexión a la red eléctrica. Parte 2: Requisitos relativos a la seguridad del sistema para instalaciones constituidas por inversores.	Spain / Spanien
Netz-integration	UNE 217001 IN:2015 + RD244:2019 UNE 217001:2020	Requirements for connection to the mains. Part 2: System safety requirements for installations constituted by inverters. Requisitos de conexión a la red eléctrica. Parte 2: Requisitos relativos a la seguridad del sistema para instalaciones constituidas por inversores.	Spain / Spanien
Netz-integration	UNE 217002 IN:2020	Inverters for connection to the distribution network Testing of current injection requirements continuous to the grid, generation of overvoltages and island operation detection system Inversores para conexión a la red de distribución Ensayos de los requisitos de inyección de corriente continua a la red, generación de sobretensiones y sistema de detección de funcionamiento en isla	Spain / Spanien
Netz-integration	UTE C15-400:2005 UTE C15-400 F1:2011	LOW-VOLTAGE ELECTRICAL INSTALLATIONS – Connection of electric generators in installations supplied by public distribution network Installations électriques à basse tension - Guide pratique - Raccordement des générateurs d'énergie électrique dans les installations alimentées par un réseau public de distribution	France / Frankreich

Netz-integration	UTE C 15-712-1:2013	LOW-VOLTAGE ELECTRICAL INSTALLATIONS: Photovoltaic installations connected to the public distribution network Installations électriques à basse tension - Guide pratique - Installations photovoltaïques sans stockage et raccordées au réseau public de distribution	France / Frankreich
Netz-integration	UTE C15-712-2:2013	Low-voltage electrical installations - Practical guide - Stand-alone photovoltaic systems not connected to the public distribution network with battery storage Installations électriques à basse tension - Guide pratique - Installations photovoltaïques autonomes non raccordées au réseau public de distribution avec stockage par batterie	France / Frankreich
Netz-integration	XP C15-712-3:2019	Photovoltaic installations with a storage device and connected to a public distribution network - Photovoltaic installations with storage equipment and connected to a public distribution network Installations photovoltaïques avec dispositif de stockage et raccordées à un réseau public de distribution - Installations photovoltaïques avec dispositif de stockage et raccordées à un réseau public de distribution	France / Frankreich
Netz-integration	VJV:2018 SJV:2019	Grid Code Specifications for Power Generating Facilities VJV2018 Voimalaitosten järjestelmätekniset vaatimukset VJV2018 Grid Code Specifications for Grid Energy Storage Systems Sähkövarastojen järjestelmätekniset vaatimukset	Finland / Finnland

Netz-integration	VDE AR-E 2510-2:2021	Stationary electrical energy storage systems intended for connection to the low voltage grid Stationäre elektrische Energiespeichersysteme vorgesehen zum Anschluss an das Niederspannungsnetz Systémes de stockage d'énergie électrique stationnaires prévus pour la connexion au réseau à basse tension	Germany / Deutschland
Netz-integration	VDE AR-N 4100:2019+A1:2024	Technical rules for connection and opearation of customer installations to the low voltage network (TAR low voltage) Technische Regeln für den Anschluss von Kundenanlagen an das Niederspannungsnetz und deren Betrieb (TAR Niederspannung) Exigences techniques pour la connexion et l'opération des installations des clients au réseau à bassee tension (TAR basse tension)	Germany / Deutschland
Netz-integration	VDE AR-N 4105:2018	Generators connected to the low-voltage distribution network – technical requirements for the connection to and parallel operation with low-voltage distribution networks Erzeugungsanlagen am Niederspannungsnetz- Techn. Mindestanforderungen für Anschluss und Parallelbetrieb von Erzeugungsanlagen am Niederspannungsnetz Gènérateurs reliés de distribution de basse tension – Exigences techniques pour la connexion des générateurs et leur fonctionsnement paralléle aux réseaux de distributions á basse tension	Germany / Deutschland
Netz-integration	VDE AR-N 4110:2023	Technical requirements for the connection and operation of customer installations to the medium voltage network (TAR medium voltage)	Germany / Deutschland

		Technische Regeln für den Anschluss von Kundenanlagen an das Mittelspannungsnetz und deren Betrieb (TAR Mittelspannung) Exigences techniques pour la connexion et l'opération des installations des clients au réseau à moyenne tension (TAR moyenne tension)	
Netz-integration	VDE AR-N 4120:2018	Technical requirements for the connection and operation of customer installations to the high voltage network (TAR high voltage) Technische Regeln für den Anschluss und Betrieb von Kundenanlagen an das Hochspannungsnetz (TAR Hochspannung) Exigences techniques pour la connexion et l'opération des installations des clients au réseau à haute tension (TAR haute tension)	Germany / Deutschland
Netz-integration	VDE-AR-N 4130:2018	Technical requirements for the connection and operation of customer installations to the extra high voltage network (TAR extra high voltage) Technische Regeln für den Anschluss von Kundenanlagen an das Höchstspannungsnetz und deren Betrieb (TAR Höchstspannung) Exigences techniques pour la connexion et l'opération des installations des clients au réseau à très haute tension (TAB haute tension)	Germany / Deutschland
Netz-integration	WVCH-CH:2018	Technische Anschlussbedingungen (TAB) für den Anschluss von Verbraucher-, Energieerzeugungs- und Speicheranlagen an das Niederspannungsnetz	Switzerland / Schweiz

Anexo I

Annex I

ALCANCE DE LA ACREDITACIÓN

SCHEDULE OF ACCREDITATION

Instalaciones donde se llevan a cabo las actividades cubiertas por esta acreditación:

Facilities where the activities covered by this accreditation are performed:

	Código / Code
Bureau Veritas Consumer Products Services Germany GmbH Businesspark A96, 86842 Türkheim	A
Ensayos “in situ”/ “on site” Tests	I

PRODUCTO / MATERIAL A ENSAYAR PRODUCTS / MATERIALS TESTED	**ENSAYO** TYPE OF TEST	**NORMA/PROCEDIMIENTO DE ENSAYO STANDARD SPECIFICATIONS** TEST PROCEDURE	**CÓDIGO** CODE
Unidades de Generación de Electricidad (UGE) a instalar en Módulos de Generación de Electricidad (MGE) de tipo Módulo de Parque Eléctrico (MPE). Inversores fotovoltaicos y otros convertidores de potencia. Excepto UGE síncronos. Electricity Generation Units (UGE) to be installed in Electricity Generation Modules (MGE) of the Park	Prueba de control de potencia, frecuencia, regulación de tensión y robustez frente a perturbaciones en la red mediante prueba según los capítulos: 5.1: Modo regulación potencia-frecuencia limitado-sobrefrecuencia (MRPFL-O) 5.2: Modo regulación potencia-frecuencia limitado-subfrecuencia (MRPFL-U) 5.3: Modo regulación potencia-frecuencia (MRPF) 5.5: Capacidad de control y el rango de control de la potencia activa en remote 5.7: Capacidad de potencia reactiva a la capacidad máxima 5.7: Capacidad de potencia reactiva por debajo de la capacidad máxima 5.8: Control de potencia reactiva en MPE 5.11: Requisitos de robustez: Recuperación de potencia activa después de una falta, capacidad para soportar	“Norma técnica de supervisión de la conformidad de los módulos de generación de electricidad según el Reglamento UE 2016/631” (NTS) Norma técnica de supervisión de la conformidad de los módulos de generación de electricidad según el PO12.2 SENP (NTS SENP) "Technical standard for supervision of the compliance of electricity generation modules according to EU 2016/631" (NTS)	A, I

Module type Electrical (MPE). Photovoltaic inverters and other converters power. Except synchronous UGE.	huecos de tensión y capacidad de inyección rápida de corriente de falta. Test of control of power, frequency, voltage regulation and robustness against disturbances in the network by testing 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 contorl range and remote controllability 5.7: Reactive power capacity at maximum capacity 5.8: Reactive power contol at MPE 5.11: Robustness requirements: Post-fault active power recovery, low voltage ride through capability and provision of fast fault current	Technical standard for conformity monitoring of electricity generation modules according to PO12.2 SENP (NTS SENP)	

Componentes Adicionales de los Módulos de Generación de Electricidad (CAMGE) a instalar en Módulos de Parque Eléctrico (MPE). Power Plant Controller (PPC), STATCOM y Sistemas de almacenamiento por baterías PPC: Apartado 6.1. "PGS Controller". STATCOM: Apartado 6.2. "Reactive power provision active static compensation system". Sólo ensayos para unidades de generación de energía PGU Tipo 2 (PGU no síncronas). Additional Components of Electricity Generation Modules (CAMGE) to be installed in Electric Park Modules (MPE). Power Plant Controller (PPC), STATCOM and PPC Battery Storage Systems: Section 6.1. "PGS Controller". STATCOM: Section 6.2. "Reactive power provision active static compensation system". Only tests for PGU Type 2 power generation units (non-synchronous PGUs).	STATCOM (4.6.1): • Medida de capacidad de potencia reactiva intercambiada por un STATCOM • Medida de la dinámica de respuesta de un STATCOM frente a un cambio de consigna de potencia/corriente PPC (4.6.2) STATCOM y Sistemas de almacenamiento por baterías: 5.1 Modo regulación potencia frecuencia limitado-sobre frecuencia (MRPFL-O) 5.2 Modo regulación potencia frecuencia limitado-sub frecuencia (MRPFL-U) 5.3 Modo regulación potencia frecuencia (MRPF) 5.5 Capacidad de control y el rango de control de la potencia activa en remoto 5.7 Capacidad de potencia reactiva a la capacidad máxima 5.7 Capacidad de potencia reactiva por debajo de la capacidad máxima 5.8 Modos de control de la potencia reactiva 5.11 Capacidad para soportar huecos de tensión de los MPE conectados por debajo de 110 kV 5.11 Capacidad para soportar huecos de tensión de los MPE conectados por encima de 110 kV 5.11 Inyección rápida de corriente de falta en el punto de conexión en caso de faltas (trifásicas) simétricas 5.11 Recuperación de la potencia activa después de una falta STATCOM (4.6.1): • Measurement of reactive power capacity exchanged by a STATCOM • Measurement of the response dynamics of a STATCOM to a change in power / current PPC (4.6.2) STATCOM and battery storage systems: 5.1 Limited-overfrequency power-frequency regulation mode (MRPFL-O) 5.2 Limited-underfrequency power-frequency regulation mode (MRPFL-U) 5.3 Power-frequency regulation mode (MRPF) 5.5 Controllability and remote active power control range 5.7 Reactive power capacity at maximum capacity 5.7 Reactive power capacity below maximum capacity 5.8 Reactive power control modes 5.11 Ability to withstand voltage dips of MPE connected below 110 kV 5.11 Ability to withstand voltage dips of MPE connected above 110 kV 5.11 Rapid injection of fault current at the connection point in case of symmetrical (triphasic) faults 5.11 Recovery of active power after a fault	"Norma técnica de supervisión de la conformidad de los módulos de generación de electricidad según el Reglamento UE 2016/631" (NTS) Norma técnica de supervisión de la conformidad de los módulos de generación de electricidad según el PO12.2 SENP (NTS SENP) "Technical standard for supervision of the compliance of electricity generation modules according to EU 2016/631" (NTS) Technical standard for conformity monitoring of electricity generation modules according to PO12.2 SENP (NTS SENP) FGW. Technical Guidelines for Power Generating Units and Systems. Part 3: Determination of Electrical Characteristic of Power Generating Units and Systems, Storage Systems as well for their Components in Medium-, High and Extra-High Voltage Grids.	A, I

Modelos de Unidades de Generación de Electricidad (UGE) a instalar en Módulos de Generación de Electricidad (MGE) de tipo Módulo de Parque Eléctrico (MPE) **Inversores fotovoltaicos y otros convertidores de potencia.** **Excepto UGE síncronos (6.2.2)** Models of electricity generation units (UGE) to be installed in electricity generation modules (MGE) electrical park module type (MPE) Photovoltaic investors and other power converters. Except UGE Synchronous (6.2.2)	Simulaciones para la validación del modelo de UGE, según el apartado 6.2. de la NTS (Excepto 6.2.2) Simulaciones tabla 43 y 44 Simulations for the validation of the UGE model, according to section 6.2. of NTS (except 6.2.2) Simulations Table 43 and 44	Norma técnica de supervisión de la conformidad de los módulos de generación de electricidad según el Reglamento UE 2016/631" (NTS) Norma técnica de supervisión de la conformidad de los módulos de generación de electricidad según el PO12.2 SENP (NTS SENP) "Technical standard for supervision of the compliance of electricity generation modules according to EU 2016/631" (NTS) Technical standard for conformity monitoring of electricity generation modules according to PO12.2 SENP (NTS SENP)	A
Modelos de Componentes Adicionales de los Módulos de Generación de Electricidad (CAMGE) a instalar en Módulos de Parque Eléctrico (MPE). Power Plant Controller (PPC), STATCOM y Sistemas de almacenamiento por baterías. Models of Additional Components of Electricity Generation Modules (CAMGE) to be installed in Electric Park Modules (MPE). Power Plant Controller (PPC), STATCOM and Battery Storage Systems.	Simulations for the validation of the CAMGE model, according to section 6.3 of the NTS	Norma técnica de supervisión de la conformidad de los módulos de generación de electricidad según el Reglamento UE 2016/631" (NTS) Norma técnica de supervisión de la conformidad de los módulos de generación de electricidad según el PO12.2 SENP (NTS SENP) "Technical standard for supervision of the compliance of electricity generation modules according to EU 2016/631" (NTS) Technical standard for conformity monitoring of electricity generation modules according to PO12.2 SENP (NTS SENP)	A

Modelos de Unidades de Generación de Electricidad (UGE) Inversores fotovoltaicos Modelos de Componentes Adicionales de los Módulos de Generación de Electricidad (CAMGE) a instalar en Módulos de Parque Eléctrico (MPE). Sistemas de almacenamiento por baterías. Models of Electricity Generation Units (UGE) Photovoltaic Inverters Additional Component Models of Electricity Generation Modules (CAMGE) to be installed in Electric Park Modules (MPE). Battery storage systems.	Simulaciones: 5.1 Modo regulación potencia-frecuencia limitado-sobre frecuencia (MRPFL-O) 5.2 Modo regulación potencia-frecuencia limitado-subfrecuencia (MRPFL-U) 5.3 Modo regulación potencia-frecuencia (MRPF) Simulations: 5.1 Power-frequency limited-over-frequency regulation mode (MRPFL-O) 5.2 Power-frequency limited-underfrequency regulation mode (MRPFL-U) 5.3 Power-frequency regulation mode (MRPF)	Norma técnica de supervisión de la conformidad de los módulos de generación de electricidad según el Reglamento UE 2016/631" (NTS) Norma técnica de supervisión de la conformidad de los módulos de generación de electricidad según el PO12.2 SENP (NTS SENP) "Technical standard for supervision of the compliance of electricity generation modules according to EU 2016/631" (NTS) Technical standard for conformity monitoring of electricity generation modules according to PO12.2 SENP (NTS SENP)	A

Verwendete Abkürzungen:

ABNT	Associação Brasileira de Normas Técnicas
AEMO	Australian Energy Market Operator
ANRE	Autoritatea Naţională de Reglementare în domeniul Energiei
AS	Australian Standards
BDEW	Bundesverband der Energie- und Wasserwirtschaft e.V.
CEA	Central Electricity Authority
CEC	California Energy Commission
CEI	Comitato Elettrotecnico Italiano
CER	Commission for Energy Regulation
COES	Comite de Operación Económica del Sein
CRE	Comisión Reguladora de Energía
CRF	Código de Redes Fotovoltaico
CSA	Canadian Standards Association
DEWA	Dubai Electricity & Water Authority
DIN	Deutsches Institut für Standardisierung
EEG	Erneuerbare-Energien-Gesetz
EN	European standard
ENEDIS	new name of ERDF (France)
ENTSO-E	European Network of Transmission System Operators for Electricity
ERDF	Électricité Réseau Distribution France
ETGC	Egyptian Transmission Grid Code
FGW	FGW e.V - Fördergesellschaft Windenergie und andere Erneuerbare Energien
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
IRR	Intermittent Renewable Resources
LV (BT)	Low voltage
MEA	Metropolitan Electricity Authority Thailand
MGC	Malaysian Grid Code
MV (MT)	Medium voltage
NC	National Code
NDU	Norma de Distribuicao Unificada
NGC	Nigerian Grid Code
NIE	Northern Ireland Electricity
NRS	South Africa National Standard
NTS	Norma técnica de supervisión
NZS	New Zealand Standards
OGC	Official Gazette Communique
ÖNorm	Österreichische Norm
PEA	Provincial Electricity Authority Thailand
PGC	Philippine Grid Code
PO	Procedimiento de operación Ministerio de Industria, Turismo y Comercio (Procedure of operation)
PPDS	Pravidla provozování distribuční soustavy
PSE	Polskie Sieci Elektronenergetyczne
PVVC	Procedure for Verification, Validation and Certification Spain

RD	Real Decreto Espania
SAGC	South African Grid Code
SDLWindV	Verordnung zu Systemdienstleistungen durch Wind
SEC	Saudi Electricity Company
SI	Standards Israel
ssPV	Small Scale Photovoltaic
TAB	Technische-Anschluss-Bedingung
TAR	Technische-Anschluss-Richtlinie
TNB	Tenaga Nasional Berhad Malaysia
TOR	Technische und Organisatorische Regeln Österreich
UL	Underwriters Laboratories
UNE	Normalización Española
UTE	Union Technique de L'Electricite
VDE	Verband der Elektrotechnik Elektronik Informationstechnik e.V.