



CERTIFICATE OF ACCREDITATION

This is to attest that

LYNS-TCI TECHNOLOGY GUANGDONG CO., LTD.

ROOM 1201, UNIT 2, BUILDING 18, NO. 7, SCIENCE AND TECHNOLOGY BOULEVARD, HOUJIE TOWN,
DONGGUAN CITY, GUANGDONG, 523960
PEOPLE'S REPUBLIC OF CHINA

Product Certification Agency PCA-159

has met the requirements of the applicable provisions of AC370, *IAS Accreditation Criteria for Product Certification Agencies*, has demonstrated compliance with ISO/IEC Standard 17065:2012, *Conformity assessment - Requirements for bodies certifying products, process and services*. This third-party product certification agency is accredited to provide the services specified in the scope of accreditation.

Effective Date May 10, 2024



President

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SCOPE OF ACCREDITATION

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LYNS-TCI TECHNOLOGY GUANGDONG CO., LTD.

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Accredited to ISO/IEC 17065:2012

Effective Date May 10, 2024

Products Category	Certification Scheme and Scheme Owner / Standard
Electrical Energy Systems including generating units, storage systems and components: <ul style="list-style-type: none">• Grid-tied- and islanding inverters (primary source photovoltaic, battery etc.)• Bi-directional chargers and charging stations• Uninterruptible power systems (UPS)• Electrical Generators• Network and system protection units (NS-protection)	Certification Scheme: CMPD-01, V3.2 (Scheme type 1a) and CMPD-01_NTS * Scheme Owner: LYNS-TCi and Applicable Regulations European Union: <ul style="list-style-type: none">- NC RfG: 2016 COMMISSION REGULATION (EU) 2016/631 of 14 April 2016 establishing a network code on requirements for grid connection of generators (Rozporządzenie Komisji (UE) 2016/631 z dnia 14 kwietnia 2016 r. ustanawiające kodeks sieci dotyczący wymogów w zakresie przyłączenia jednostek wytwórczych do sieci (Dz.U. UE L 112/1 z 27.4.2016))- EN 50549-1 Requirements for generating plants to be connected in parallel with distribution networks, Part 1: Connection to a LV distribution network - Generating plants up to and including Type B- EN 50549-2 Requirements for generating plants to be connected in parallel with distribution networks, Part 2: Connection to a MV distribution network - Generating plants up to and including Type B- EN 50530 Overall efficiency of grid connected photovoltaic inverters- EN 50549-10 Requirements for generating plants to be connected in parallel with distribution networks Tests for conformity assessment of generating units

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	<p>Austria:</p> <ul style="list-style-type: none"> - TOR Erzeuger Typ A TOR generator: Connection and parallel operation of Type A power plants and small generation plants (TOR Erzeuger: Anschluss und Parallelbetrieb von Stromerzeugungsanlagen des Typs A und von Kleinstenerzeugungsanlagen) - TOR Erzeuger Typ B TOR generator: Connection and parallel operation of type B power generation systems (TOR Erzeuger: Anschluss und Parallelbetrieb von Stromerzeugungsanlagen des Typs B) - TOR Erzeuger Typ C TOR generator: Connection and parallel operation of type C power generation systems (TOR Erzeuger: Anschluss und Parallelbetrieb von Stromerzeugungsanlagen des Typs C) - TOR Erzeuger Typ D TOR generator: Connection and parallel operation of type D power generation systems (TOR Erzeuger: Anschluss und Parallelbetrieb von Stromerzeugungsanlagen des Typs D) - OVE-Richtlinie R 25 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) <p>Belgium:</p> <ul style="list-style-type: none"> - C10/11 Specific technical requirements for decentralized production plants in parallel working with the distribution network (Prescriptions techniques spécifiques de raccordement d'installations de production décentralisée fonctionnant en parallèle sur le réseau de distribution)

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	<p>Czechia:</p> <ul style="list-style-type: none"> - PPDS RULES OF OPERATING OF DISTRIBUTION SYSTEMS, Annex 4 - Rules for parallel operation of products and accumulation equipment networking by distribution system operators (PRAVIDLA PROVOZOVÁNÍ DISTRIBUČNÍCH SOUSTAV, PŘÍLOHA 4 - Pravidla pro paralelní provoz výroben a akumulčních zařízení se sítí provozovatele distribuční soustavy) <p>Denmark:</p> <ul style="list-style-type: none"> - Technical regulation 3.2.1 Technical regulation 3.2.1 for power plants up to and including 11 kW - Technical regulation 3.2.2 Technical regulation 3.2.2 for PV power plants with a power output above 11 kW - Technical regulation 3.3.1 Technical regulation 3.3.1 for battery plants - GCPP LV Guide for connection of power-generating plants to the low- voltage grid (≤ 1 kV) Type A and B (Vejledning for nettilslutning af produktionsanlæg til lavspændingsnettet (≤ 1 kV) Produktionsanlæg kategori A og B) - GCPP MV/HV Guide for connection of power-generating plants to the medi-um and high-voltage grid (> 1 kV) Type B, C and D (Vejledning for nettilslutning af produktions-anlæg til mellem- og højspændingsnettet (> 1 kV) Produktionsanlæg kategori B, C og D) <p>Dubai:</p> <ul style="list-style-type: none"> - DEWA Standards for distributed renewable resources generators connected to the distribution network <p>Finland:</p> <ul style="list-style-type: none"> - VJV2018 Grid Code Specifications for Power Generating Facilities (Voimalaitosten järjestelmätekniset vaatimukset)

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	<p>France:</p> <ul style="list-style-type: none"> - UTE-C15-712-1 Low-voltage electrical installations -Practical guide- Photovoltaic installations without storage and connected to the public distribution network (Installations électriques à basse tension - Guide pratique - Installations photovoltaïques sans stockage et raccordées au réseau public de distribution) - XP C15-712-3 Photovoltaic installations with energy storage and connected to a public distribution network (Installations photovoltaïques avec dispositif de stockage et raccordées à un réseau public de distribution) - Enedis-PRO-RES_10E Description and study of decoupling protections for the connection of Generation Facilities 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) - Enedis-NOI-RES_13E Protection of production installations connected to the public distribution network. (Protections des installations de production raccordées Identification au réseau public de distribution) - Enedis-FOR-RES_18E Information Collection Sheets for a Connection Proposal before completion of the file and for a Connection Offer, to the Public Distribution Network managed by Enedis, of a Photovoltaic Production Installation with a 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 photovoltaïque de puissance supérieure à 36 kVA) - Enedis-PRO-RES_64E Procedures for monitoring the performance of Generation Facilities connected to the Public Distribution Network managed by Enedis (Modalités du contrôle de performances des Installations de Production raccordées au Réseau Public de Distribution géré par Enedis)

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	<ul style="list-style-type: none"> - UTE C15-400 Low-voltage electrical installations - Connection of electric generators in installations supplied by a 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) UTE-C15-712-2 Stand alone photovoltaic installations 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) Germany: - VDE-AR-N 4105 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 – Technische Mindestanforderungen für Anschluss und Parallelbetrieb von Erzeugungsanlagen am Niederspannungsnetz) - DIN VDE V 0124-100 Grid integration of generator plants – Low-voltage – Test requirements for generator units to be connected to and operated in parallel with low-voltage distribution networks (Netzintegration von Erzeugungsanlagen – Niederspannung – Prüfanforderungen an Erzeugungseinheiten, vorgesehen zum Anschluss und Parallelbetrieb am Niederspannungsnetz) - DIN V VDE V 0126-1-1 Automatic disconnection device between a genetator and the public low-voltage grid (Selbsttätige Schaltstelle zwischen einer netzparallelen Eigenerzeugungsanlage und dem öffentlichen Niederspannungsnetz) - DIN V VDE V 0126-1-1/A1 Automatic disconnection device between a genetator and the public low-voltage grid (Selbsttätige Schaltstelle zwischen einer netzparallelen Eigenerzeugungsanlage und dem öffentlichen Niederspannungsnetz)

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	<p>Italy:</p> <ul style="list-style-type: none"> - CEI 0-21 Reference technical rules for the connection of active and passive users to the LV electrical Utilities (Regola tecnica di riferimento per la connessione di Utenti attivi e passivi alle reti BT delle imprese distributrici di energia elettrica) - CEI 0-16 Reference technical rules for the connection of active and passive consumers to the HV and MV electrical networks of distribution Company (Regola tecnica di riferimento per la connessione di Utenti attivi e passivi alle reti AT ed MT delle imprese distributrici di energia elettrica) <p>Jordan:</p> <ul style="list-style-type: none"> - IRR-DCC-MV Intermittent Renewable Resources (Wind and PV) Distribution Connection Code (DCC) At Medium Voltage (MV) - IRR-TIC Intermittent Renewable Resources (IRR) Wind & PV Transmission Interconnection Code (TIC) <p>Poland:</p> <ul style="list-style-type: none"> - PSE:2018 General application requirements resulting from Commission Regulation (EU) 2016/631 of 14 April 2016 establishing a network code on requirements for grid connection of generators (NC RfG) (Wymogi ogólnego stosowania wynikające z Rozporządzenia Komisji (UE) 2016/631 z dnia 14 kwietnia 2016 r. ustanawiającego kodeks sieci dotyczący wymogów w zakresie przyłączenia jednostek wytwórczych do sieci (NC RfG) - zatwierdzone Decyzją Prezesa Urzędu Regulacji Energetyki DRE.WOSE.7128.550.2.2018.ZJ z dnia 2 stycznia 2019 r.) - PTPiREE Conditions and procedures for the use of certificates in the process of connecting power generation modules to electricity grids (Warunki i procedury wykorzystania certyfikatów w procesie przyłączenia modułów wytwarzania energii do sieci elektroenergetycznych)

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	<p>South Africa:</p> <ul style="list-style-type: none"> - NRS 097-2-1 Grid interconnection of embedded generation Part 2: Small-scale embedded generation Section 1: Utility Interface - NRS 097-2-3 Grid interconnection of embedded generation Part 2: Small-scale embedded generation Section 3: Simplified utility connection criteria for low-voltage connected generators <p>Spain:</p> <ul style="list-style-type: none"> - RD 1699:2011 Royal Decree 1699/2011, dated 18 November, regulating the grid connection of small-scale power plants (Real Decreto 1699/2011, de 18 de noviembre, por el que se regula la conexión a red de instalaciones de producción de energía eléctrica de pequeña potencia) - RD 661:2007 ROYAL DECREE 661/2007, of May 25, which regulates the activity of production of electricity under a special regime (REAL DECRETO 661/2007, de 25 de mayo, por el que se regula la actividad de producción de energía eléctrica en régimen especial) - RD 413:2014 Royal Decree 413, which regulates the activity of electricity production from renewable energy sources, cogeneration and waste (Real Decreto 413/2014, de 6 de junio, por el que se regula la actividad de producción de energía eléctrica a partir de fuentes de energía renovables, cogeneración y residuos) - RD 244:2019 Royal Decree 244/2019, of April 5, which regulates the administrative, technical and economic conditions of self-consumption of electric power (Real Decreto 244/2019, de 5 de abril, por el que se regulan las condiciones administrativas, técnicas y económicas del autoconsumo de energía eléctrica)

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	<ul style="list-style-type: none"> - UNE 206006 IN Performance tests for islanding detection of multiple grid-connected photovoltaic inverters in parallel (Ensayos de detección de funcionamiento en isla de múltiples inversores fotovoltaicos conectados a red en paralelo) - UNE 206007-1 IN Requirements for connecting to the power system. Part 1: Grid-connected inverters (Requisitos de conexión a la red eléctrica. Parte1: Inversores para conexión a la red de distribución) - UNE 217001 IN Requirements and tests for systems intended to avoid the energy transmission to the distribution network. (Requisitos y ensayos para sistemas que eviten el vertido de energía a la red de distribución.) - UNE 217001 Tests for systems intended to avoid the energy transmission to the distribution network (Ensayos para sistemas que eviten el vertido de energía a la red de distribución) - UNE 217002 Grid connected inverters. Testing of requirements for DC grid injection, overvoltage generation 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.) - NTS-SEPE (CMPD-01_NTS *) Technical standard for monitoring the compliance of power generating modules according to EU Regulation 2016/631 (Norma técnica de supervisión de la conformidad de los módulos de generación de electricidad según el Reglamento UE 2016/631) - NTS-SENP (CMPD-01_NTS *) Technical standard for monitoring the compliance of power generating modules according to P.O.12.2 SENP (Norma técnica de supervisión de la conformidad de los módulos de generación de electricidad según el P.O.12.2 SENP)

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	<ul style="list-style-type: none"> - RD 647:2020 Royal Decree 647/2020, of 7 July, which regulates aspects necessary for the implementation of the network codes 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.) - TED/749/2020:2020+AMD 2022 Order TED/749/2020, of 16 July, establishing the technical requirements for connection to the grid necessary for the implementation of the network connection codes. (Orden TED/749/2020, de 16 de julio, por la que se establecen los requisitos técnicos para la conexión a la red necesarios para la implementación de los códigos de red de conexión.) <p>Thailand:</p> <ul style="list-style-type: none"> - PEA Provincial Electricity Authority's Regulation on the Power Network System Interconnection Code B.E.2559 (2016) MEA Grid-Connected Inverter Regulation of Metropolitan Electricity Authority (2015) <p>United Kingdom:</p> <ul style="list-style-type: none"> - G98 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 G98/NI 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 on or after 27 April 2019 - G99 Requirements for the connection of generation equipment in parallel with public distribution networks on or after 27 April 2019

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	<ul style="list-style-type: none"> - G99/NI Requirements for the connection of generation equipment in parallel with public distribution networks in Northern Ireland on or after 27 April 2019 - G100 Technical Requirements for Customers' Export and Import Limitation Schemes <p>Israel:</p> <ul style="list-style-type: none"> - SI 4777.2 Grid connection of energy system via inverters – Part 2: Inverter requirements - SI 4777.3 Grid connection of energy system via inverters – Part 3: Grid protection requirements <p>Switzerland</p> <ul style="list-style-type: none"> - NA/EEA-NE7-CH Network connection for energy generation systems to the low-voltage network - Technical requirements for connection and parallel operation in NE7 (Netzanschluss für Energieerzeugungsanlagen an das Niederspannungsnetz - Technische Anforderungen für den Anschluss und Parallelbetrieb in NE7) <p>Norway</p> <ul style="list-style-type: none"> - RENBLAD 342 Technical functional requirements for connection and network rental agreement for feed customers in low-voltage network (Tekniske funksjonskrav til tilknytnings- og nettleieavtale for innmatingskunder i lavspenningsnett) <p>Brazil:</p> <ul style="list-style-type: none"> - ABNT NBR 16149 Photovoltaic (PV) systems - Characteristics of the utility interface (Sistemas fotovoltaicos (FV) – Características da interface de conexão com a rede elétrica de distribuição) - ABNT NBR 16150 Photovoltaic (PV) systems - Characteristics of the utility interface - Conformity test procedure (Sistemas fotovoltaicos (FV) — Características da interface de conexão com a rede elétrica de distribuição - Procedimento de ensaio de conformidade)

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	<ul style="list-style-type: none"> - Portaria INMETRO nº 4:2011 Ordinance no. 004, of 04 January 2011 (Portaria nº 004, de 04 de janeiro de 2011) - Portaria INMETRO nº 357:2014 Ordinance no. 357, of 1st August 2014 (Portaria n.º 357, de 01 de agosto de 2014) - Portaria Nº 140:2022 Ordinance No. 140, of 21 March 2022 (Portaria Nº 140, de 21 de Março de 2022) <p>The Philippines</p> <ul style="list-style-type: none"> - RESOLUTION NO.07:2013 Republic of the Philippines ENERGY REGULATORY COMMISSION, RESOLUTION NO.7, Series of 2013 A resolution adopting and approving addendum to amendment no. i of the Philippine grid code (pgc), establishing the connection and operational requirements for variable renewable energy (vre) generating facilities <p>Global (IEC / EN standards):</p> <ul style="list-style-type: none"> - IEC/EN 61727 Photovoltaic (PV) systems – Characteristics of the utility interface - IEC/EN 62116 Utility-interconnected photovoltaic inverters – Test procedure of islanding prevention measures - IEC/EN 61683 Photovoltaic systems – Power conditioners –Procedure for measuring efficiency - IEC/EN 61000-3-2 Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤16 A per phase) - IEC/EN 61000-3-3 Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤16 A per phase and not subject to conditional connection

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Products Category	Certification Scheme and Scheme Owner / Standard
	<ul style="list-style-type: none"><li data-bbox="892 357 1995 470">- IEC/EN 61000-3-11 Electromagnetic compatibility (EMC) - Part 3-11: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems - Equipment with rated current ≤ 75 A and subject to conditional connection<li data-bbox="892 495 1995 609">- IEC/EN 61000-3-12 Electromagnetic compatibility (EMC) - Part 3-12: Limits - Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current >16 A and ≤ 75 A per phase

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* Details regarding the assessment activities for certification according to Spanish NTS standards

Type of product	Certification scheme and basis for the assessment activities	Certification requirements
<p>Power generating unit (PGU):</p> <p>wind energy, photovoltaics and other energies (e.g. any synchronous power generating modules).</p> <p>Additional components of the PGM (ACPGM):</p> <ul style="list-style-type: none"> - STATCOM - Power Plant Controller - Synchronous Compensator - Battery storage systems 	<ul style="list-style-type: none"> - NTS-SEPE Technical standard for monitoring the compliance of power generating modules according to EU Regulation 2016/631 (Norma técnica de supervisión de la conformidad de los módulos de generación de electricidad según el Reglamento UE 2016/631) - NTS-SENP Technical standard for monitoring the compliance of power generating modules according to P.O.12.2 SENP (Norma técnica de supervisión de la conformidad de los módulos de generación de electricidad según el P.O.12.2 SENP) <p>Assessment of technical requirements and the possible forms of assessment according to the type of PGM defined in Table 1:</p> <ul style="list-style-type: none"> • compliance tests • compliance simulations • equipment certificates • supplementary simulations if required • manufacturer declarations <ul style="list-style-type: none"> • Section 4.6.1 • Section 4.6.2 • Section 4.6.3 • Section 4.6.4 	<p>Method of tests and simulations for the assessment of technical requirements described in section 5.</p> <p>Compliance assessment procedure described in section 4.</p> <p>Validation of the simulation model described in section 6.</p> <p>Details of technical requirements defined in Table 1.</p>

Notes:

1. The product certification used most closely resembles a product certification scheme type as described in ISO/IEC 17067 (2013), Conformity assessment — Fundamentals of product certification and guidelines for product certification schemes.

a. **Type 1a:** In this scheme, one or more samples of the product are subjected to the determination activities. A certificate of conformity or other statement of conformity (e.g. a letter) is issued for the product type, the characteristics of which are detailed in the certificate or a document referred to in the certificate.

Subsequent production items are not covered by the certification body's attestation of conformity. The samples are representative of subsequent production items which could be referred to by the manufacturer as being manufactured in accordance with the certified type. The certification body may grant to the manufacturer the right to use the type certificate or other statement of conformity (e.g. letter) as a basis for the manufacturer to declare that subsequent production items conform to the specified requirements.