Certificate of compliance

Applicant:	**GoodWe Technologies Co., Ltd.** No.90 Zijin Rd., New District, Suzhou, 215011 **China**
Product:	**Photovoltaic (PV) and battery inverter**
Model:	**GW8000-ES-C10,** **GW10K-ES-C10,** **GW12K-ES-C10**

The device is designed to work as a generation unit of the type: A and B

Inverter for single phase parallel connection to the public grid. The network monitoring and disconnection device is an integral part of the above-mentioned model.

Applied rules and standards:

EN 50549-1:2019/A1:2023
Requirements for parallel connection of installations with distribution networks - Part 1: Connection to an LV distribution network - Production of installations up to and including Type B

4.4 Normal operating range
4.5 Immunity to disturbances*
4.6 Active response to frequency deviation
4.7 Power response to voltage variations and voltage changes
4.8 EMC and power quality
4.9 Interface protection
4.10 Connection and starting to generate electrical power
4.11 Ceasing and reduction of active power on set point
4.12 Remote information exchange
4.13 Requirements regarding single fault tolerance of interface protection system and interface switch

EN 50549-10:2022
Requirements for generating plants to be connected in parallel with distribution networks - Part 10: Tests for conformity assessment of generating units

Commission Regulation (EU) 2016/631 of 14 April 2016
Establishing a network code on requirements for grid connection of generators (NC RFG).
Type approval for generation units to use in Type A and B* plants.

* 4.5 Immunity to disturbances, only limited grid support mode was tested (zero current mode) for FRT function.

At the time of issue of this certificate, the safety concept of an aforementioned representative product corresponds to the valid safety specifications for the specified use in accordance with regulations.

Report number: **PV2408WDG0030-1-R1** **Certification Program:** **NSOP-0032-DEU-ZE-V10**

Certificate number: **U25-0299** **Date of issue:** **2025-04-03**

Certification body **Accreditation**

Domenik Koll
Head of Energy Systems Germany

DAkkS Deutsche Akkreditierungsstelle D-ZE-12024-01-00

Accredited certification body by Deutsche Akkreditierungsstelle GmbH (DAkkS) according to ISO/IEC 17065. The accreditation is valid only for the scope listed in the annex of the accreditation certificate D-ZE-12024-01-00. The Deutsche Akkreditierungsstelle GmbH (DAkkS) is signatory of the multilateral arrangements of EA, ILAC and IAF for mutual recognition.

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Type Approval and declaration of compliance with the requirements of EN 50549-1 and Commission Regulation (EU) 2016/631 of 14 April 2016				
Manufacturer	**GoodWe Technologies Co., Ltd.** No.90 Zijin Rd., New District, Suzhou, 215011 **China**			
Product type	**Photovoltaic (PV) and battery inverter**			
Static converter model	**GW8000-ES-C10**	**GW10K-ES-C10**	**GW12K-ES-C10**	--
Input DC (photovoltaic)				
MPP voltage range [V]	60-550	60-550	60-550	--
Max. input voltage [V]	600	600	600	--
Max. input current per MPPT [A]	32/16	32/32	32/32	--
Input DC (battery)				
DC voltage range [V]	40-60	40-60	40-60	--
Max. DC voltage [V]	60	60	60	--
Max. DC current per DC input [A]	160	200	240	--
Output AC				
Rated AC voltage [V]	230, 50Hz, L/N/PE	230, 50Hz, L/N/PE	230, 50Hz, L/N/PE	--
Max. output current [A]	40,0	50,0	60,0	--
Nom. converter output (P_{NINV}) [W]	8000	10000	12000	--
Rated apparent power [VA]	8000	10000	12000	--
In on-grid battery mode AC				
P_{smax} (max. discharge power) [W]	8800	11000	13200	--
P_{cmax} (max. charging power) [W]	8000	10000	12000	--
Type	Bidirectional	Bidirectional	Bidirectional	--
In off-grid battery mode				
P_{sn} (nom. discharge power) [W]	8000	10000	12000	--
P_{smax} (max. discharge power) [W]	8800	11000	13200	--

Interface protection system and interface switch (Network and system protection "NS-protection")	
Type of protection	Integrated NS-protection
Assigned to generation unit type	GW8000-ES-C10, GW10K-ES-C10, GW12K-ES-C10
Integrated interface switch	Type of switching equipment 1: Relay (Model CHAR-C 75A) Type of switching equipment 2: Relay (Model CHAR-C 75A)
	Note: The output is switched off by the inverter bridge and two relay in series in each line and neutral.
Firmware version	030310

Note

The settings of the interface protection are password protected adjustable.

In case the above stated generators are used with an external protection device, the protection settings of the inverters are to be adjusted according to the manufacturer's declaration.

The above stated generators are tested according to the requirements in the EN 50549-1:2019 Commission Regulation (EU) 2016/631 of 14 April 2016. Any modification that affects the stated tests must be named by the manufacturer/supplier of the product to ensure that the product meets all requirements.