

Unit Certificate

Guangzhou Felicity Solar Technology Co., Ltd.
(Airport Baiyun)No.2, 4, 6, 8, 10 and 12 Donghua Huaye Road, Renhe Town,
Baiyun District, Guangzhou, Guangdong,
P. R. China

Type of equipment	Hybrid Inverter (type 2)	
Product Name	IVGM50KHP3G2, IVGM40KHP3G2, IVGM30KHP3G2, IVGM29K9HP3G2, IVGM25KHP3G2	
Technical data	rated active power:	P_{rE} = 25.0-50.0 kW
	maximum active power:	$P_{E\max}$ = 27.5-55.0 kW
	max. apparent power:	$S_{E\max}$ = 27.5-55.0 kVA
	rated voltage:	U_r = 400 V
	Rated current (AC):	I_r = 36.3-72.5 A
	Initial short-circuit AC current:	I_k'' = 43.6-87.0 A
Certification scheme	P30VA01 Rev. 11/10.25	TÜV NORD Certification Process for Grid Integration Certification
Network connection rule	VDE-AR-N 4105 2018-11	Generators connected to the low-voltage distribution network customer installations to the medium voltage network operation with low- voltage distribution networks
Test requirement	DIN VDE V 0124-100 2020-06	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

The power generating units comply with the requirements of the network connection rule specified above. For further details and technical specifications, please refer to Annex 1, which consists of 4 pages.

Certificate Registration No. 44 798 23053426 valid from 2026-01-26
 Evaluation Report No. 35411423 Type 1a Certificate

Essen, 2026-01-26
 Rev. 2.0



Certification body of TÜV NORD CERT GmbH

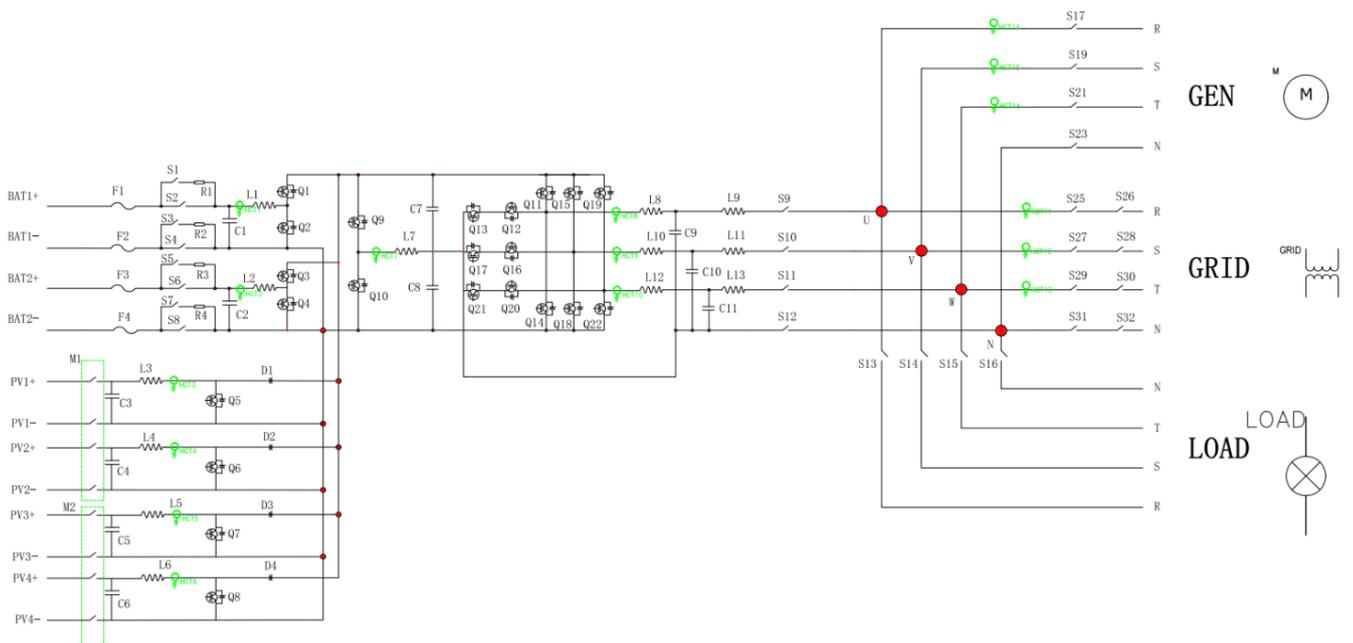


ANNEX 1

to the Unit Certificate with the Registration No. 44 798 23053426

Guangzhou Felicity Solar Technology Co., Ltd.
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Schematic structure of the units:



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Technical data of the units

General					
Type of EZE	Type 2 / Hybrid Inverter				
Designation	IVGM25KHP3G2	IVGM29K9HP3G2	IVGM30KHP3G2	IVGM40KHP3G2	IVGM50KHP3G2
On-grid variables					
Rated apparent power S_{rE}	25000VA 27500VA (max)	29900VA 29900VA (max)	30000VA 33000VA (max)	40000VA 44000VA (max)	50000VA 55000VA (max)
Rated effective power P_{rE}	25000W 27500W (max)	29900W 29900W (max)	30000W 33000W (max)	40000W 44000W (max)	50000W 55000W (max)
Max. effective power $P_{E_{max}}$	27488.09W (0.999 $P_{E_{max}}$)	29899.91W (0.999 $P_{E_{max}}$)	32999.31W (0.999 $P_{E_{max}}$)	43965.05W (0.999 $P_{E_{max}}$)	55070.20W (1.001 $P_{E_{max}}$)
Max. apparent power $S_{E_{max}}$	27803.09VA (1.011 $S_{E_{max}}$)	29899.98VA (0.999 $S_{E_{max}}$)	32999.99VA (0.999 $S_{E_{max}}$)	43997.95VA (0.999 $S_{E_{max}}$)	55070.57VA (1.001 $S_{E_{max}}$)
Rated voltage U_r	230/400, 3W+N+PE				
Rated current I_r	36.3A	43.4A	43.5A	58.0A	72.5A
Initial short-circuit alternating current I''_k	43.6A	52.1A	52.2A	69.6A	87.0A
Reactive power adjustment range $\cos \varphi$	0.8 leading to 0.8 lagging				
Rated frequency f_n	50/60Hz				
PV – Input Variables					
Min. MPP voltage	150V				
Max. MPP voltage	850V				
Max. DC input voltage	1000V				
Number of MPPT	2	3		4	
Max. input current	36.0A +36.0A	36.0A +36.0A +36.0A		36.0A +36.0A +36.0A +36.0A	
Isc PV	55.0A+55.0A	55.0A +55.0A +55.0A		55.0A +55.0A +55.0A +55.0A	
DC – Input variables					

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Type /IGBT module	IKW50N120CH7, IKW75N65EH5, IKW75N120CH7
Quantity DC Link Capacitor	34
Clock frequency	15.6kHz
Type of power control	SPWM
Max. Output current (only for IGBT)	80A
Software versions	Master: V201, Slave: V101
Generation unit Control	
Manufacturer	Guangzhou Felicity Solar Technology Co., Ltd.
Software version	Master: V201, Slave: V101
Protection device	
Manufacturer	Churfod Electronics Co., Ltd.
Type	Integrated guard
Switch-off unit (AC)	CHAR-112A200
Software versions	Master: V201, Slave: V101

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Remarks

Additional technical data is given in the evaluation report (appendix A1).

The use of a modified software version is permitted if the changes to the above-mentioned software versions have been checked by TÜV NORD CERT GmbH. The validity of a new software version is confirmed to the manufacturer in writing. This confirmation then forms part of the certificate.

Quality Management System

The manufacturer has proven for the manufacturing facility of the power generating units a certification of its quality management system according to ISO 9001. The manufacturer confirmed in a manufacturer declaration that the certification of the management system will be valid parallel to the period of this unit certificate.

Restriction

N/A

Appendix to the Certificate

- A1. Evaluation report no. 35411423 version 1.0
- A2. Extracts from the test report VDE-AR-N 4105 Annex E.5
Dongguan BALUN Testing Technology Co., Ltd., extract No. BL-DG2560064-205
A2 from Dec. 12, 2025
- A3. Extracts from the test report VDE-AR-N 4105 Annex E.7
Dongguan BALUN Testing Technology Co., Ltd., extract No. BL-DG2560064-205
A1 from Dec. 12, 2025

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Certification body of TÜV NORD CERT GmbH

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