GPa_PGU_CM_rev.2



Product Certificate Number	20827-CER-E1	
Applicant	NCLAVE Renewable S.L.U Av. de Burgos 114, 2º. 28050. Madrid, Spain	
Аррисанс	Trina Solar Co. Ltd. No. 2 Tianhe Road, Trina PV Industrial Park, New District Changzhou, Jiangsu. China. 213031.	
Model	VANGUARD	
Type of unit	Horizontal single axis tracker	
Technical Data	See page 2 and 3	
Standard	IEC 62817:2014+A1:2017 Photovoltaic system – Design qualification of solar trackers	

Having assessed the report number: 20827-TR performed by Certification Entity for Renewable Energies and test report number 70.407.21.055.01-00 performed by TÜV SÜD Certification and Testing (China) Co., Ltd. based on the requirements of the ISO/IEC 17025:2017.

The above-mentioned solar tracker complies with the requirements of the:

IEC 62817:2014+A1:2017 Photovoltaic system – Design qualification of solar trackers

This certification is according the CERE internal process PET-CERE-09 Rev 30 based on the requirements of the EN ISO/IEC 17065:2012. For this certification process the conformity assessment activities were based on:

- Audit of quality system according ISO 9001 with certificate number: ES105154-1 issued by a certification body accredited according EN ISO/IEC 17021.
- Inspection of the manufacturing process.

This certificate cancels and supersedes the certificate number 20827-CER issue on December 22, 2020

Madrid, May 21, 2021. This certificate is valid until October 21, 2023

Miguel Martinez Certification Manager



Characteristics table

Manufacturer License holder NCLAVE RENEWABLE S.L.U / Trina Solar Co. Ltd. Model Number VANGUARD Type of Tracker HSAT horizontal single axis tracker Payload characteristics Minimum/maximum mass supported Payload center of mass restrictions Maximum payload surface area Nominal payload surface area Maximum dynamic torques allowed while moving Maximum static torques allowed while in stow position Installation Characteristics Allowable foundation Direct ram / micropyle Foundation tolerance in primary axis NANGUARD Until 3200 kg per line Until 3200 kg per line Without restrictions Without restrictions 240 m2/per line 22,5 kN m per actuator 83 kN m per actuator	Characteristic	Data			
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Emergency stow provided YES					
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Stow time 5 minutes and 30 seconds		, , ,			
Clock accuracy Maximum deviation of 2 minutes per month, synchronize	Clock accuracy		•	er month, synchronized	
every day by communications					



Hard limit switches	Limit of angle by overcurrent	
Mechanical design		
Actuation type	Distributed	
Drive type	Electric drive	
Actuators	AHM3S / AHM2S	
	AC 0,18 kW / DC 0,15 kW	
	PA11 / PA13 / PA14 / PA15	
	26Vdc / 6,0A (max)	
Range of motion, primary axis	-55° to +55°	
Environmental conditions		
Maximum allowable wind speed during	15 m/s	
tracking		
Maximum allowable wind speed in stow	30 m/s	
Temperature operational range	-30°C to +60°C	
Temperature survival range	-40°C to +60°C	
Snow rating	< 20 cm	
Maintenance and Reliability		
Maintenance schedule	attached in manual	

The inspection of manufacturing process was performed in:
On June 10, 2020

NCLAVE Manufacturing S.L.U Pol. Ind. La Peña Crta. NA 134. Km-93 31230. Viana, Navarra. Spain

Inspection Report Number:

11461-20-1-IF

RECORD OF CHANGES

Revision	Modification / Changes	Date
0	Initial version / update certificate 20557-CER-E1	22/12/2020
1	Update to include new linear actuator	21/05/2021