Test Report issued under the responsibility of:

TEST REPORT
IEC 61215 Series: 2016
Terrestrial photovoltaic (PV) modules – Design qualification and type approval

Report Number. .....:	**E528387-4790378634-D1**
Date of issue .....:	**2022-11-23**
Total number of pages.....:	**97**
Name of Testing Laboratory preparing the Report.....:	**UL India Pvt Ltd.**
Applicant's name.....:	**Novasys Greenergy Private Limited**
Address .....:	**KHASRA NO. 185, MOUZA: MAHALGAON, TAHSIL-KAMPTEE, NAGPUR-441202, MAHARASHTRA, India**
Test specification:	
Standard.....:	■ IEC 61215-1:2016 ■ IEC 61215-2:2016 ■ IEC 61215-1-1:2016 ☐ IEC 61215-1-2:2016 ☐ IEC 61215-1-3:2016 ☐ IEC 61215-1-4:2016
Test procedure .....:	CB Scheme
Non-standard test method.....:	N/A
TRF template used ..... :	IECEE OD-2020-F1:2020, Ed.1.3
Test Report Form No.....:	IEC61215E_SE
Test Report Form(s) Originator ....:	TÜV SÜD Product Service GmbH
Master TRF.....:	2021-06-03

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General disclaimer:

The test results presented in this report relate only to the object tested.
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Test item description ..... :	Photovoltaic (PV) Module(s)
Trade Mark ..... :	NOVA SYS Every day is a SUN day
Manufacturer ..... :	Novasys Greenergy Private Limited KHASRA NO. 185, MOUZA: MAHALGAON, TAHSIL-KAMPTEE, NAGPUR-441202, MAHARASHTRA, India
Model/Type reference ..... :	**Mono Crystalline (PERC):** **156 Half-cut Cell:** NOVAxxxMP156 (xxx stands for power, xxx= 590, 585, 580, 575, 570, 565, 560, 555, 550) **144 Half-cut Cell:** NOVAxxxMP144 (xxx stands for power, xxx= 545, 540, 535, 530, 525, 520, 515, 510, 505, 500, 495) **132 Half-cut Cell:** NOVAxxxMP132 (xxx stands for power, xxx= 505, 500, 495, 490, 485, 480, 475, 470, 465, 460, 455) **120 Half-cut Cell:** NOVAxxxMP120 (xxx stands for power, xxx= 460, 455, 450, 445, 440, 435, 430, 425, 420, 415) **108 Half-cut Cell:** NOVAxxxMP108 (xxx stands for power, xxx= 415, 410, 405, 400, 395, 390, 385, 380, 375) **96 Half-cut Cell:** NOVAxxxMP96 (xxx stands for power, xxx= 365, 360, 355, 350, 345, 340, 335, 330, 325) **72 Half-cut Cell:** NOVAxxxMP72 (xxx stands for power, xxx= 275, 270, 265, 260, 255, 250, 245)
Ratings ..... :	Maximum System Voltage= 1500V Maximum over current protection rating= 25A Voltage and currents ratings may vary. See specific model ratings in General product information.

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**CB Testing Laboratory:**	UL India Pvt Ltd.	
Testing location/ address.....:		Kalyani Platina Campus, Survey No 129/4, EPIP Zone, Phase-II, Whitefield, IN-560066, Bangalore, India	
Tested by (name, function, signature).....:		Supratik Ghosh/Project Handler	SGhosh
Approved by (name, function, signature)...:		Moumita Debnath/ Reviewer	Mdnath
☐	**Testing procedure: CTF Stage 1:**		
Testing location/ address.....:			
Tested by (name, function, signature).....:			
Approved by (name, function, signature)...:			
☐	**Testing procedure: CTF Stage 2:**		
Testing location/ address.....:			
Tested by (name + signature).....:			
Witnessed by (name, function, signature) .:			
Approved by (name, function, signature)...:			
☐	**Testing procedure: CTF Stage 3:**		
☐	**Testing procedure: CTF Stage 4:**		
Testing location/ address.....:			
Tested by (name, function, signature).....:			
Witnessed by (name, function, signature) .:			
Approved by (name, function, signature)...:			
Supervised by (name, function, signature) :			

List of Attachments (including a total number of pages in each attachment):	
	attachment number / number of pages
Installation manual	Annex 5, Enclosure 2-01/ 22 pages
Drawings mechanical	Annex 5, Enclosures 5-01, 5-02/ 11 pages
Circuit diagram	Annex 5, Enclosure 5-03 / 5 pages
Photographs	Annex 5, Enclosures 1-01~05/ 4 pages
Component datasheets / certificates	Annex 5, Enclosures 3-01~03 & 4-01~02 /7 pages
Others:	Annex 5, Enclosure 6-01 / 1 page
Product Description Sheet (Manufacturers and type references)	Annex 1, _7_ pages
Test table for verifying other stabilization procedure	Annex 2, __ N/A
Lower and higher output power modules	Annex 3, _2_ pages
List of test equipment used	Annex 4, _28_ pages

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
Model NOVA545MP144, NOVA570MP156, NOVA590MP156 and NOVA550MP156 from Mono Crystalline(PERC) cell families was used for full test purposes and considered representative model of full series with same components. All the modules are same in construction, except number of cells, overall dimension, output power.	UL-CCIC COMPANY LIMITED No. 2, Chengwan Road, Suzhou Industrial Park, Suzhou 215122 ,China
MQT 01 Visual Inspection	
MQT 02 Maximum Power determination	
MQT 03 Insulation Test	
MQT 04 Measurement of Temperature Coefficients	
MQT 06.1 Performance at STC	
MQT 07 Performance at Low Irradiance	
MQT 08 Outdoor exposure test	
MQT 09 Hot-spot endurance test	
MQT 10 UV precondition test	
MQT 11 Thermal cycling test (50) or (200)	
MQT 12 Humidity freeze test	
MQT 13 Damp heat test	
MQT 14 Retention of junction box test	
MQT 15 Wet leakage current test	
MQT 17 Hail test	
MQT 18.1 Bypass diode thermal test	
MQT 18.2 Bypass diode functionality test	
MQT 19.1 Initial Stabilization	

Summary of compliance with National Differences (List of countries addressed):

No national or group differences declared for EU Group.

The text of IEC 61215-1: 2016 was approved by EU Group as EN 61215-1: 2016 without any modification.
The text of IEC 61215-1-1: 2016 was approved by EU Group as EN 61215-1-1: 2016 without any modification.
The text of IEC 61215-2: 2016 was approved by EU Group as EN 61215-2: 2017 without any modification.

☒ **The product fulfils the requirements of EN 61215-1: 2016, EN 61215-1-1: 2016, EN 61215-2: 2017.**