

Zertifikat

Certificate



Zertifikat Nr. *Certificate No.*
R 50516506

Blatt *Sheet*
0001

Ihr Zeichen *Client Reference*

Mr. I.D. Kim

Unser Zeichen *Our Reference*

ZKR1-DYK-KR21BQGG 001

Ausstellungsdatum

01.09.2021

Date of Issue

(day/mo/yr)

Genehmigungsinhaber *License Holder*

Hanwha Solutions Corporation
23F 24F,
86, Cheonggyecheon-ro, Jung-gu,
Seoul 04541
Republic of Korea

Fertigungsstätte *Manufacturing Plant*

DongYang E&P Inc.
76, Jinwisandan-ro, Jinwi-myeon,
Pyeongtaek-si, Gyeonggi-do, 17709
Republic of Korea

Prüfzeichen *Test Mark*



Geprüft nach *Tested acc. to*

IEC 62040-1:2017
EN IEC 62040-1:2019

Zertifiziertes Produkt (Geräteidentifikation)

Certified Product (Product Identification)

Lizenzentgelte - Einheit

License Fee - Unit

Energy Storage system Energy Storage System

Type Designations

: Q.VOLT H4.6S, Q.VOLT A4.6S
Q.SAVE B6.8S

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PV MPPT Voltage Range [V]

: 90-550

PV Max. Voltage [V]

: 600

PV Max. Current [A]

: 15 * 2

PV Isc [A]

: 20 * 2

PV Max. total power [W]

: 4000 * 2

Overvoltage Category for PV

: II

Grid Nominal Voltage [V]

: 230

Grid Nominal Frequency [Hz]

: 50, 60

Grid Max. Current [A]

: 25

Grid Max. Current in nominal Voltage [A]

: 20

Grid Max. AC Power [VA]

: 4600

Power Factor

: 0.95 leading - 0.95 lagging

Overvoltage Category for Grid Input/Output

: III

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ANLAGE (Appendix): 1.0

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde und es bestätigt die Konformität des Produktes mit den oben genannten Standards und Prüfgrundlagen. Zusätzliche Anforderungen in Ländern, in denen das Produkt in Verkehr gebracht werden soll, müssen zusätzlich betrachtet werden. Die Herstellung des zertifizierten Produktes wird überwacht.

This certificate is based on our Testing and Certification Regulation and states the conformity of the product with the standards and testing requirements as indicated above. Any additional requirements in countries where the product is going to be marketed have to be considered additionally. The manufacturing of the certified product is subject to surveillance.

TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg

Tel.: +49 221 806-1371 e-mail: cert-validity@de.tuv.com

Fax: +49 221 806-3935 http://www.tuv.com/safety

Zertifizierungsstelle



Young-Yul Hwang

Zertifikat

Certificate



Zertifikat Nr. *Certificate No.*
R 50516506

Blatt *Sheet*
0002

Ihr Zeichen *Client Reference*
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Unser Zeichen *Our Reference*
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Energy Storage system Energy Storage System

as page 0002 continuation

Battery Rated Voltage[V] : 202.8
Battery Voltage Range[V] : 168.0 to 228.2
Battery Max. Charging Current[A] : 20
Battery Max. Discharging Current[A] : 20
Overvoltage Category for Battery : II

Protective Class : Class I
Ingress Protection : IP65
Pollution Degree : PD2
Operating Temperature[°C] : -10 to 45 (-20 to 60 for PCS)
Altitude[m] : 2000
Type of Inverter : Non-isolated

Remark(s) : The installation has to be carried out according to the attached installation instruction. Any additional requirements in countries where the product is going to be marketed have to be considered additionally.

ANLAGE (Appendix): 1.0

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Zertifizierungsstelle



Young-Yul Hwang

Hanwha Solutions Corporation
Mr. Ildo (James) Kim Associate
System Business Planning Team
23F 24F,
86, Cheonggyecheon-ro, Jung-gu,
Seoul 04541
Republic of Korea

Date : 01.09.2021
Our ref. : DYK ZKR1
Your ref.: Mr. I.D. Kim

Ref : R TÜV-Mark Approval

Type of Equipment : Energy Storage System
Model Designation : See Certificate
Certificate No. : R 50516506 0001
Report No. : KR21BQGG 001

Dear Mr. Ildo (James) Kim,

The above specified technical equipment has been tested and found to be in accordance with the relevant requirements.

Please find enclosed your certificate.

As the photo documentation is the evidence of certification, you need to keep the authorized copy for reference purposes as long as your certificate remains valid and the products are being sold.

If cancellation of the certificate is submitted by 15 November in a given year, no fee will be charged for the following year.

We appreciate your support and would like to offer our assistance in the approval of your future products through our extensive range of technical services. Please feel free to contact us whatever your requirements may be.

With kind regards,

Certification Body



Young-Yul Hwang

Enclosure