

JIANGSU HUANXIN SEMICONDUCTOR
CO., LTD
Shao Shifei

Date : 25.08.2022
Our ref. : ZQI 01
Your ref.: S.S.F.

WENZHUANG ROAD, YIXING ECONOMIC
DEVELOPMENT ZONE, Wuxi City,
Jiangsu
P.R. China

Ref : R TÜV-Bauart-Zeichen o. Akkred. Nr.

Type of Equipment : PV Components for BOS - electrical
Model Designation : See Certificate
Certificate No. : R 50553059 0001
Report No. : CN223LKJ 001

Dear Shao Shifei,

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

Please find enclosed your certificate as specified above.

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

The certificate is issued with the reservation that the license holder applies all information required in § 6 of the ProdSG related to name and address of the manufacturer or his authorized representative / importer, including their respective contact addresses on the product prior to marketing of the product in the European Economic Area. In case you have a change regarding your involved local representative for the certificate, please inform us in due time.

With kind regards,

Certification Body


Dipl.-Ing. (FH) Bernd Scheirer

Enclosure

TÜV Rheinland Thailand Ltd.
18/F, Tararom Business Tower
2445/36-38 New Petchburi Road,
Bangkapi, Huay Kwang,
Bangkok 10320
Tel +66 (0) 2326-1333
Fax +66 (0) 2326-1334-5
Email info@tha.tuv.com
Web www.tuv.com

TÜV Rheinland Thailand Ltd.
Global Technology Assessment Center Bangkok
Ladkrabang Industrial Estate
123/1 Soi Chalongsung 31, Lamplatew,
Ladkrabang, Bangkok 10520
Tel +66 (0) 2326-1333
Fax +66 (0) 2326-1334-5
Email info@tha.tuv.com
Web www.tuv.com

TÜV Rheinland Thailand Ltd.
Hatyai Branch Office
7,9,11,13,15 3/F, Chaiyong Building, Room 3 C
Juti-Uthit 1 Road, Hatyai,
Songkhla 90110
Tel +66 (0) 74 247550-2, +66 (0) 2326-1333
Fax +66 (0) 74 247553
Email info@tha.tuv.com
Web www.tuv.com

Zertifikat

Certificate



Zertifikat Nr. *Certificate No.*
R 50553059

Blatt *Sheet*
0001

Ihr Zeichen *Client Reference*
S.S.F.

Unser Zeichen *Our Reference*
01-ZQI-CN223LKJ 001

Ausstellungsdatum *Date of Issue*
25.08.2022 (day/mo/yr)

Genehmigungsinhaber *License Holder*

JIANGSU HUANXIN SEMICONDUCTOR
CO., LTD
WENZHUANG ROAD, YIXING ECONOMIC
DEVELOPMENT ZONE, Wuxi City,
Jiangsu
P.R. China

Fertigungsstätte *Manufacturing Plant*

Niu-Power (Suzhou) Corporation
NO 16 North Chajiabang
Suzhou
215000 Jiangsu
P.R. China

Prüfzeichen *Test Mark*



Bauart geprüft
Sicherheit
Regelmäßige
Produktions-
überwachung

www.tuv.com
ID 1111257375

Geprüft nach *Tested acc. to*
IEC 62852:2014+A1
EN 62852:2015+A1

**Zertifiziertes Produkt (Geräteidentifikation)
*Certified Product (Product Identification)***

**Lizenzentgelte - Einheit
*License Fee - Unit***

PV Komponente (elektrisch) für BOS (PV Components for BOS - electrical)

Type Designation : H4 (JIANGSU HUANXIN (LOGO)) 5
Rated Voltage : 1500VDC
Rated Current : 40A
Ambient Temperature : -40°C to +85°C
Upper Limit Temperature: +100°C
Protection Degree : IP65/IP68 (1m, 1h)
Cross Section Range : 1 x 4,0mm²
Application Class : Class A

Remark: The labelling requirements acc. to EU Directive
2001/95 have to be observed for distribution within
the EEA.

5

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

http://www.tuv.com/safety E-mail: markcheck@tuv.com
Fax: +49 221 806-3935



Dipl.-Ing. (FH) Bernd Scheirer

| | | | | | |
|------------------------|-----------------|----------------------|---------------------|---------------------|-----|
| Certificate No. | R 50553059 0001 | Our Reference | 01-QIZ-CN223LKJ 001 | Appendix No. | 1.0 |
|------------------------|-----------------|----------------------|---------------------|---------------------|-----|

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| Constructional Data Form (CDF) | page 1 of 3 |
|---------------------------------------|-------------|

License holder: JIANGSU HUANXIN SEMICONDUCTOR CO.,LTD.
 (full address).....: WENZHUANG ROAD, YIXING ECONOMIC DEVELOPMENT ZONE Wuxi City, Jiangsu P.R. China
 Production factory1.....: Niu-Power(Suzhou)Corporation
 (full address): NO 16 North Chajiang Suzhou 215000 Jiangsu P.R. China
 Type of appliance: Connector for Photovoltaic System
 Trademark: **HUAN XIN**

Type name or model no.....: H4
 Rated voltage: 1500VDC
 Rated impulse voltage.....: 16kV
 Rated insulation voltage: 8kV
 Rated current.....: 40A
 Standard: IEC 62852:2014 + Amd.1:2020; EN 62852:2015 + Amd.1:2020
 Application class.....: Class A / B / C
 Protection class: Class II
 Existence of an enclosure: Enclosed connector
 Design of the connector.....: Free connector
 Pollution degree.....: 1 / 2 / 3 / 4 (inside of enclosure)
 Over voltage category: I / II / III / IV
 Operating cycles.....: 50 / 100 / 500 / 1000 / 2000 / 5000
 Bendings.....: 100 / 500 / 1000 / 2000 / 5000 / 20000
 Lower ambient temperature.....: -40°C
 Upper ambient temperature.....: +85°C
 Upper limit Temperature.....: 100°C
 Type of conductor.....: Flexible
 Termination and connection: Crimped connection
 Values for cable clamp: 5,5mm~6,8mm
 Number of poles: 1
 Wire cross section area or cross section range: 1 x 4,0mm²

| | | | | | |
|----------------------------|-------------|---|-------------|---|------------------|
| TÜV Rheinland Group | | JIANGSU HUANXIN SEMICONDUCTOR CO.,LTD | | | |
| 03.08.2022 | Qiao Zhen |  | 03.08.2022 |  | |
| Date | Name | Signature | Date | Name | Signature |

| | | |
|--|--|-------------------------|
| Certificate No. R 50553059 0001 | Our Reference 01-QIZ-CN223LKJ 001 | Appendix No. 1.0 |
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| Constructional Data Form (CDF) | page 2 of 3 |
|---------------------------------------|-------------|

Degree of protection: IP65/IP68(1m, 1h)
 Rewirable.....: ~~Yes~~ No
 Additional characteristics.....: Connector with cable clamp
 (Optional) Accessories: N/A
 Additional Information (e.g. system configuration, difference between models, construction materials, output voltage, etc.)
 Attachments: Data-Sheets of critical components

List of Critical Components

| Ref | Object / Part No. | Manufacturer | Type | Technical data | Approval |
|-----|---|--|---------------------|-------------------------------|----------|
| 1.0 | Insulation Material | ASAHI KASEI CHEMICALS CORP | m-PPE, PV40Z(f1) | UL94 V-0 CTI: 0 RTI: 105°C | E82268 |
| | | SABIC JAPAN LLC | EXL9334P(BK19) (f1) | UL94 V-0 CTI: 0 RTI: 130°C | E207780 |
| 2.0 | Screw Cap | BASF SE | PA66, A3XZG5(f1) | UL94 V-0 CTI: 0 RTI: 120°C | E41871 |
| | | KINGFA SCI & TECH CO LTD | PA66-RPG25 | UL94 V-0 CTI: 0 RTI: 115°C | E171666 |
| 3.0 | Cable Clamp | KINGFA SCI & TECH CO LTD | PA66-RNG00(r4) (f1) | UL94 V-0 CTI: 0 RTI: 120°C | E171666 |
| | | ASAHI KASEI CHEMICALS CORP | PA66, FR370(j) | UL94 V-0 CTI: 0 RTI: 105°C | E48285 |
| 4.0 | Carry Current Part | NIU-Power Suzhou Corporation | T2 Copper | Tin-plated | // |
| | | JIANGSU HUANXIN SEMICONDUCTOR CO.,LTD. | | | |
| 5.0 | Metal Ring on Carry Current Part for Fixing | NIU-Power Suzhou Corporation | SUS301 | // | // |
| | | JIANGSU HUANXIN SEMICONDUCTOR CO.,LTD. | | | |

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|----------------------------|--|
| TÜV Rheinland Group | JIANGSU HUANXIN SEMICONDUCTOR CO.,LTD |
| 03.08.2022 | 03.08.2022 |
| Qiao Zhen | [Signature] |
| Date | Date |
| Name | Name |
| Signature | Signature |

| | |
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| Constructional Data Form (CDF) | page 3 of 3 |
|---------------------------------------|-------------|

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|-----|----------------|---|---|------------------------|-------------------|
| 6.0 | Drum Terminal | NIU-Power Suzhou Corporation | Beryllium copper | Tin-plated | // |
| | | JIANGSU HUANXIN SEMICONDUCTOR CO.,LTD. | | | |
| 7.0 | Sealing Gasket | CHANGZHOU WUYUAN PLASTIC CO.LTD | Silicon Rubber | Φ6,5 x 8,7mm | // |
| 8.0 | O Sealing Ring | Changzhou Wuyuan plastic Co.,LTD | Silicon Rubber | Φ1,4 x 6,7mm | // |
| | | Changzhou New district Baoxin Rubber Products Co., Ltd. | | | // |
| 9.0 | PV Cable | SUZHOU YONGHAO CABLE CO.,LTD. | 62930 IEC 131 1 x 2,5...35mm ² | 1 x 4,0mm ² | TÜV R 50401233 |
| | | NINGBO KIBOR WIRE&CABLE CO.,LTD | 62930 IEC 131 1 x 1,5...240mm ² | 1 x 4,0mm ² | TÜV R 50413678 |

PHOTO DOCUMENTATION

CN223LKJ 001

For

Junction Box for PV Module

H4

JIANGSU HUANXIN SEMICONDUCTOR CO.,LTD.



This documentation consists of 5 pages (excluding this cover page)

Report Number: CN223LKJ 001
Model: H4



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