

ist Hersteller und verantwortlich für:

Konformitätserklärung / Declaration of Conformity

Produkt-Typ:	Plug & Play Photovoltaik-Set für Netzparallelbetrieb steckbar mittels Haushaltsstecker in Endstromkreis
Modell:	1780 Wp Plug & Play (CN), 4 Panels / Solarflow 800 Pro
Komponenten:	<ul style="list-style-type: none"> • 4x Jinko JKM445N-54HL4R-B / 445 Wp / IP-67 / Schutzklasse II • 1x Zendure Solarflow 800 Pro, Max. DC 2640, VDC 15-55V, Max. AC 600W (Firmware per Standort-Erkennung / Netzprofil CH_NA EEA-NE7-CH2020 gedrosselt) • 1x Anschlusskabel vorkonfektioniert 5m / 3x1,5mm² Leitung / AC Seitig CH-Typ 13 Stecker IP 55

Konform nach ESTI-Mitteilung 07/2014 und in Übereinstimmung mit der Verordnung über elektrische Niederspannungserzeugnisse (NEV; SR 734.26) (Stand 23.04.2026).

Dazu angewandte Normen:

Jinko JKM445N-54HL4R-B	N 61215-1:2016, EN 61215-1-1:2016, IEC 61215-2:2016, EN 61215-2:2017, IEC 61730-1:2016, EN IEC 61730-1:2018, EN IEC 61730-1:2018/AC:2018-06, IEC 61730-2:2016, EN IEC 61730-2:2018, EN IEC 61730-2:2018/AC:2018-06
Zendure Solarflow 800 Pro	2014/53/EU (RED), 2011/65/EU (RoHS), 2015/863/EU (RoHS), EN 62109-1:2010, EN 62109-2:2011, ETSI EN 301 489-1 V2.2.3 (2019-11), ETSI EN 301 489-3 V2.1.1 (2019-03), ETSI EN 301 489-17 V3.2.4 (2020-09), EN 55032:2015+A11:2020, EN 55035:2017+A11:2020, ETSI EN 300 328 V2.2.2 (2019-07), ETSI EN 300 440 V2.2.1 (2018-07), IEC 62321-3-1:2013, IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-6:2015, IEC 62321-7-1:2015, IEC 62321-7-2:2017, IEC 62321-8:2017
Zendure Anschlusskabel vorkonfektioniert 5m	Betteri Buchse Wechselrichterseite, Schutzart IEC EN 60529 IP67, Anschlusskabel 5m oder 10m H07RN-F, EN 50525-2-21: 2011, Stecker CH Typ 13: IEC 60884-1 (Ed 4.0): 2022 / SN 441011-1: 2019 +Corr2019 / SN 441011-2-1:2021, IP55
ROHS Konformität	Gesamtes Set konform gemäss IEC EN 63000: 2018

Michael Sebel, Geschäftsführung
 erneuer.bar services GmbH



1780 Wp Plug & Play (CN), 4 Panels / Solarflow 800 Pro / Version 1.0 / Datum: 23.04.2026



Product Service

CERTIFICATE

No. Z2 118443 0003 Rev. 00

Holder of Certificate: **Jinko Solar Co., Ltd.**
No.1, Yingbin Road, Economic Development Zone
334100 Shangrao City, Jiangxi
PEOPLE'S REPUBLIC OF CHINA

Certification Mark:



Product: **Crystalline Silicon Terrestrial Photovoltaic (PV) Modules**
Crystalline Silicon Photovoltaic Module

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition, the certification holder must not transfer the certificate to third parties. This certificate is valid until the listed date, unless it is cancelled earlier. All applicable requirements of the testing and certification regulations of TÜV SÜD Group have to be complied. For details see: www.tuvsud.com/ps-cert

Test report no.: 704062217001-05

Valid until: 2027-10-16

Date, 2022-10-28

(Zhulin Zhang)

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Model(s):

1500VDC system voltage:

JKMxxxM-72-V, JKMxxxM-72B-V, JKMxxxM-72(Plus)-V, JKMxxxM-72L-V,
 JKMxxxM-72BL-V, JKMSxxxM-72-V, JKMSxxxM-72-V-J, JKMSxxxM-72-V-TI,
 JKMSxxxM-72L-V-TI, JKMSxxxM-72B-V-TI, JKMSxxxM-72BL-V-TI
 (xxx=335-410, in steps of 5, 72 cells)
 JKMxxxM-60-V, JKMxxxM-60B-V, JKMxxxM-60(Plus)-V, JKMxxxM-60L-V,
 JKMxxxM-60BL-V, JKMSxxxM-60-V, JKMSxxxM-60-V-J, JKMSxxxM-60-V-TI,
 JKMSxxxM-60L-V-TI, JKMSxxxM-60B-V-TI, JKMSxxxM-60BL-V-TI
 (xxx=270-340, in steps of 5, 60 cells)
 JKMxxxM-72H-V, JKMxxxM-72HL-V, JKMxxxM-72HB-V, JKMxxxM-72HBL-V,
 JKMSxxxM-72H-V-TI, JKMSxxxM-72HL-V-TI, JKMSxxxM-72HB-V-TI,
 JKMSxxxM-72HBL-V-TI (xxx=335-425, in steps of 5, 144 cells)
 JKMxxxM-60H-V, JKMxxxM-60HL-V, JKMxxxM-60HB-V, JKMxxxM-60HBL-V,
 JKMSxxxM-60H-V-TI, JKMSxxxM-60HL-V-TI, JKMSxxxM-60HB-V-TI,
 JKMSxxxM-60HBL-V-TI (xxx=270-350, in steps of 5, 120 cells)
 MMxxx-72LA-MBV, MMxxx-72LA-ABV, SMMxxx-72LA-MBV,
 SMMxxx-72LA-MBV-TI, SMMxxx-72LA-ABV-TI (xxx=335-410,
 in steps of 5, 72 cells)
 MMxxx-60LA-MBV, MMxxx-60LA-ABV, SMMxxx-60LA-MBV-TI,
 SMMxxx-60LA-ABV-TI (xxx=270-340, in steps of 5, 60 cells)
 JKMxxxM-72HL-V-Q, JKMSxxxM-72HL-V-TI-Q, MMxxx-72HLA-MBV,
 MMxxx-72HLA-ABV, SMMxxx-72HLA-MBV-TI, SMMxxx-72HLA-ABV-TI
 (xxx=335-425, in steps of 5, 144 cells)
 JKMxxxM-60HL-V-Q, JKMSxxxM-60HL-V-TI-Q, MMxxx-60HLA-MBV,
 MMxxx-60HLA-ABV, SMMxxx-60HLA-MBV-TI, SMMxxx-60HLA-ABV-TI
 (xxx=270-350, in steps of 5, 120 cells)
 JKMxxxPP-72-V, JKMxxxPP-72B-V, JKMxxxPP-72(Plus)-V, JKMSxxxPP-72-V,
 JKMSxxxPP-72-V-J (xxx=320-355, in steps of 5, 72 cells)
 JKMxxxPP-60-V, JKMxxxPP-60B-V, JKMxxxPP-60(Plus)-V, JKMSxxxPP-60-V,
 JKMSxxxPP-60-V-J (xxx=260-290, in steps of 5, 60 cells)
 JKMxxxPP-72H-V, JKMxxxPP-72HB-V (xxx=330-380, in steps of 5, 144 cells)
 JKMxxxPP-60H-V, JKMxxxPP-60HB-V (xxx=260-315, in steps of 5, 120 cells)
 JKMxxxM-72H-TV, JKMxxxM-72HL-TV (xxx=375-425, in steps of 5, 144 cells)
 JKMxxxM-60H-TV, JKMxxxM-60HL-TV (xxx=315-355, in steps of 5, 120 cells)
 JKMxxxM-72HL-TV-Q, MMxxx-72HLA-BBV (xxx=375-425,
 in steps of 5, 144 cells)
 JKMxxxM-60HL-TV-Q, MMxxx-60HLA-BBV (xxx=315-355,
 in steps of 5, 120 cells)
 JKMxxxN-72H-TV, JKMxxxN-72HL-TV (xxx=375-425, in steps of 5, 144 cells)
 JKMxxxN-60H-TV, JKMxxxN-60HL-TV (xxx=315-355, in steps of 5, 120 cells)
 JKMSxxxM-72-V-MX3, JKMSxxxM-72B-V-MX3, JKMSxxxM-72L-V-MX3,
 JKMSxxxM-72BL-V-MX3 (xxx=335-395, in steps of 5, 72 cells)
 JKMSxxxM-60-V-MX3, JKMSxxxM-60B-V-MX3, JKMSxxxM-60L-V-MX3,
 JKMSxxxM-60BL-V-MX3 (xxx=270-340, in steps of 5, 60 cells)
 SMMxxx-72LA-MBV-MX3, SMMxxx-72LA-ABV-MX3
 (xxx=335-395, in steps of 5, 72 cells)
 SMMxxx-60LA-MBV-MX3, SMMxxx-60LA-ABV-MX3
 (xxx=270-340, in steps of 5, 60 cells)
 JKMSxxxM-72H-V-MX3, JKMSxxxM-72HB-V-MX3, JKMSxxxM-72HL-V-MX3,
 JKMSxxxM-72HBL-V-MX3 (xxx=335-395, in steps of 5, 144cells)
 JKMSxxxM-60H-V-MX3, JKMSxxxM-60HB-V-MX3, JKMSxxxM-60HL-V-MX3,
 JKMSxxxM-60HBL-V-MX3 (xxx=270-340, in steps of 5, 120 cells)
 JKMSxxxM-72HL-V-MX3-Q, SMMxxx-72HLA-MBV-MX3,
 SMMxxx-72HLA-ABV-MX3 (xxx=335-395, in steps of 5, 144cells)
 JKMSxxxM-60HL-V-MX3-Q, SMMxxx-60HLA-MBV-MX3,
 SMMxxx-60HLA-ABV-MX3 (xxx=270-340, in steps of 5, 120 cells)
 JKMSxxxPP-72-V-MX3, JKMSxxxPP-72B-V-MX3, JKMSxxxPP-72L-V-MX3,
 JKMSxxxPP-72BL-V-MX3 (xxx=320-355, in steps of 5, 72 cells)
 JKMSxxxPP-60-V-MX3, JKMSxxxPP-60B-V-MX3, JKMSxxxPP-60L-V-MX3,
 JKMSxxxPP-60BL-V-MX3 (xxx=260-290, in steps of 5, 60 cells)
 JKMSxxxPP-72H-V-MX3, JKMSxxxPP-72HB-V-MX3, JKMSxxxPP-72HL-V-MX3,
 JKMSxxxPP-72HBL-V-MX3 (xxx=330-380, in steps of 5, 144cells)
 JKMSxxxPP-60H-V-MX3, JKMSxxxPP-60HB-V-MX3, JKMSxxxPP-60HL-V-MX3,
 JKMSxxxPP-60HBL-V-MX3 (xxx=260-315, in steps of 5, 120 cells)
 JKMxxxN-72H-MBB-TV (xxx=390-420, in steps of 5, 144 cells)
 JKMxxxN-60H-MBB-TV (xxx=330-350, in steps of 5, 120 cells)
 MNxxx-72HLA-BBV-MBB (xxx=390-420, in steps of 5, 144 cells)
 MNxxx-60HLA-BBV-MBB (xxx=330-350, in steps of 5, 120 cells)
 JKMxxxM-72H-MBB-TV (xxx=385-405, in steps of 5, 144 cells)
 JKMxxxM-60H-MBB-TV (xxx=320-335, in steps of 5, 120 cells)

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MM-72HLA-BBV-MBB, MMxxx-72HLA-BBV-MBB (xxx=385-405, in steps of 5, 144 cells)
 MM-60HLA-BBV-MBB, MMxxx-60HLA-BBV-MBB (xxx=320-335, in steps of 5, 120 cells)
 JKMSxxxM-72H-MBB-V, JKMSxxxM-72H-MBB-V-TI, JKMSxxxM-72H-MBB-V-MX3 (xxx=385-425, in steps of 5, 144 cells)
 JKMSxxxM-60H-MBB-V, JKMSxxxM-60H-MBB-V-TI, JKMSxxxM-60H-MBB-V-MX3 (xxx=320-355, in steps of 5, 120 cells)
 MM-72HLA-MBV-MBB, SMM-72HLA-MBV-MBB-TI, MMxxx-72HLA-MBV-MBB, SMMxxx-72HLA-MBV-MBB-TI (xxx=385-425, in steps of 5, 144 cells)
 MM-60HLA-MBV-MBB, SMM-60HLA-MBV-MBB-TI, MMxxx-60HLA-MBV-MBB, SMMxxx-60HLA-MBV-MBB-TI (xxx=320-355, in steps of 5, 120 cells)
 JKSN3-DCCA-xxx (xxx=410-440, in steps of 5, 156 cells)
 JKSN3-CCCA-xxx (xxx=345-370, in steps of 5, 132 cells)
 JKSM3-DCCA-xxx (xxx=400-450, in steps of 5, 156 cells)
 JKSM3-CCCA-xxx (xxx=340-380, in steps of 5, 132 cells)
 JKSM3-DACA-xxx (xxx=400-440, in steps of 5, 156 cells)
 JKSM3-CACA-xxx (xxx=335-370, in steps of 5, 132 cells)
 JKMSxxxM-78H-V, JKMSxxxM-78H-V-TI (xxx=405-465, in steps of 5, 156 cells)
 JKMSxxxM-66H-V, JKMSxxxM-66H-V-TI (xxx=340-390, in steps of 5, 132 cells)
 JKMSxxxM-78H-V-Q, JKMSxxxM-78H-V-TI-Q, MMxxx-78HLA-MBV, SMMxxx-78HLA-MBV-TI (xxx=405-465, in steps of 5, 156 cells)
 JKMSxxxM-66H-V-Q, JKMSxxxM-66H-V-TI-Q, MMxxx-66HLA-MBV, SMMxxx-66HLA-MBV-TI (xxx=340-390, in steps of 5, 132 cells)
 JKMSxxxM-78HB-V, JKMSxxxM-78HB-V-TI (xxx=405-435, in steps of 5, 156 cells)
 JKMSxxxM-66HB-V, JKMSxxxM-66HB-V-TI (xxx=340-365, in steps of 5, 132 cells)
 MMxxx-78HLA-ABV, SMMxxx-78HLA-ABV-TI (xxx=405-435, in steps of 5, 156 cells)
 MMxxx-66HLA-ABV, SMMxxx-66HLA-ABV-TI (xxx=340-365, in steps of 5, 132 cells)
 JKMSxxxM-78H-TV-Q, MMxxx-78HLA-BBV (xxx=405-455, in steps of 5, 156 cells)
 JKMSxxxM-66H-TV-Q, MMxxx-66HLA-BBV (xxx=340-385, in steps of 5, 132 cells)
 JKMSxxxN-78H-TV (xxx=410-460, in steps of 5, 156 cells)
 JKMSxxxN-66H-TV (xxx=345-385, in steps of 5, 132 cells)
 JKMSxxxM-7RL3-V, JKMSxxxM-7RL3-V-J, JKMSxxxM-7RL3-V-TI, JKMSxxxM-7RL3-S-V, JKMSxxxM-7RL3-S-V-J (xxx=430-495, in steps of 5, 156 cells)
 JKMSxxxM-6RL3-V, JKMSxxxM-6RL3-V-J, JKMSxxxM-6RL3-V-TI, JKMSxxxM-6RL3-S-V, JKMSxxxM-6RL3-S-V-J, JKMSxxxM-6RL3-V-MX3 (xxx=360-415, in steps of 5, 132 cells)
 JKMSxxxM-6TL3-V, JKMSxxxM-6TL3-V-TI, JKMSxxxM-6TL3-S-V, JKMSxxxM-6TL3-V-MX3 (xxx=335-380, in steps of 5, 120 cells)
 MMxxx-7RLC-MBV, SMMxxx-7RLC-MBV-TI (xxx=430-475, in steps of 5, 156 cells)
 MMxxx-6RLC-MBV, SMMxxx-6RLC-MBV-TI (xxx=360-400, in steps of 5, 132 cells)
 MMxxx-6TLC-MBV, SMMxxx-6TLC-MBV-TI (xxx=335-365, in steps of 5, 120 cells)
 JKMSxxxN-7RL3-V, JKMSxxxN-7RL3-V-J, JKMSxxxN-7RL3-V-TI (xxx=430-500, in steps of 5, 156 cells)
 JKMSxxxN-6RL3-V, JKMSxxxN-6RL3-V-J, JKMSxxxN-6RL3-V-TI, JKMSxxxN-6RL3-V-MX3 (xxx=360-420, in steps of 5, 132 cells)
 JKMSxxxN-6TL3-V, JKMSxxxN-6TL3-V-TI, JKMSxxxN-6TL3-V-MX3 (xxx=335-390, in steps of 5, 120 cells)
 MNxxx-7RLC-MBV, SMNxxx-7RLC-MBV-TI (xxx=430-475, in steps of 5, 156 cells)
 MNxxx-6RLC-MBV, SMNxxx-6RLC-MBV-TI (xxx=360-400, in steps of 5, 132 cells)
 MNxxx-6TLC-MBV, SMNxxx-6TLC-MBV-TI (xxx=335-365, in steps of 5, 120 cells)
 JKMSxxxM-7RL3-TV, JKMSxxxM-7RL3-TV-J, JKMSxxxM-7RL3-S-TV, JKMSxxxM-7RL3-S-TV-J (xxx=420-475, in steps of 5, 156 cells)
 JKMSxxxM-6RL3-TV, JKMSxxxM-6RL3-TV-J, JKMSxxxM-6RL3-S-TV, JKMSxxxM-6RL3-S-TV-J (xxx=355-400, in steps of 5, 132 cells)
 JKMSxxxM-6TL3-TV, JKMSxxxM-6TL3-S-TV (xxx=325-365, in steps of 5, 120 cells)

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cells)

MMxxx-7RLC-BBV (xxx=420-475, in steps of 5, 156 cells)
 MMxxx-6RLC-BBV (xxx=355-400, in steps of 5, 132 cells)
 MMxxx-6TLC-BBV (xxx=325-365, in steps of 5, 120 cells)
 JKMSxxxN-7RL3-TV, JKMSxxxN-7RL3-TV-J, JKMSxxxN-7RL3-S-TV,
 JKMSxxxN-7RL3-S-TV-J (xxx=425-500, in steps of 5, 156 cells)
 JKMSxxxN-6RL3-TV, JKMSxxxN-6RL3-TV-J, JKMSxxxN-6RL3-S-TV,
 JKMSxxxN-6RL3-S-TV-J (xxx=355-420, in steps of 5, 132 cells)
 JKMSxxxN-6TL3-TV, JKMSxxxN-6TL3-S-TV (xxx=325-380, in steps of 5, 120 cells)
 MNxxx-7RLC-BBV (xxx=425-475, in steps of 5, 156 cells)
 MNxxx-6RLC-BBV (xxx=355-400, in steps of 5, 132 cells)
 MNxxx-6TLC-BBV (xxx=325-365, in steps of 5, 120 cells)
 JKMSxxxN-72H-MBB-V, JKMSxxxN-72H-MBB-V-TI
 (xxx=385-425, in steps of 5, 144 cells)
 JKMSxxxN-60H-MBB-V, JKMSxxxN-60H-MBB-V-TI
 (xxx=320-350, in steps of 5, 120 cells)
 MNxxx-72HLA-MBV-MBB, SMNxxx-72HLA-MBV-MBB-TI
 (xxx=385-425, in steps of 5, 144 cells)
 MNxxx-60HLA-MBV-MBB, SMNxxx-60HLA-MBV-MBB-TI
 (xxx=320-350, in steps of 5, 120 cells)
 JKMSxxxM-7RL3-B-V, JKMSxxxM-7RL3-S-B-V, JKMSxxxM-7RL3-B-V-TI
 (xxx=425-480, in steps of 5, 156 cells)
 JKMSxxxM-6RL3-B-V, JKMSxxxM-6RL3-S-B-V, JKMSxxxM-6RL3-B-V-TI
 (xxx=360-405, in steps of 5, 132 cells)
 JKMSxxxM-6TL3-B-V, JKMSxxxM-6TL3-S-B-V, JKMSxxxM-6TL3-B-V-TI
 (xxx=320-365, in steps of 5, 120 cells)
 MMxxx-7RLC-ABV, SMMxxx-7RLC-ABV-TI (xxx=425-480,
 in steps of 5, 156 cells)
 MMxxx-6RLC-ABV, SMMxxx-6RLC-ABV-TI (xxx=360-405,
 in steps of 5, 132 cells)
 MMxxx-6TLC-ABV, SMMxxx-6TLC-ABV-TI (xxx=320-365, in steps of 5, 120 cells)
 JKMSxxxN-7RL3-B-V, JKMSxxxN-7RL3-B-V-TI, JKMSxxxN-7RL3-S-B-V
 (xxx=425-480, in steps of 5, 156 cells)
 JKMSxxxN-6RL3-B-V, JKMSxxxN-6RL3-B-V-TI, JKMSxxxN-6RL3-S-B-V
 (xxx=360-405, in steps of 5, 132 cells)
 JKMSxxxN-6TL3-B-V, JKMSxxxN-6TL3-B-V-TI, JKMSxxxN-6TL3-S-B-V
 (xxx=320-365, in steps of 5, 120 cells)
 MNxxx-7RLC-ABV, SMNxxx-7RLC-ABV-TI (xxx=425-480, in steps of 5, 156 cells)
 MNxxx-6RLC-ABV, SMNxxx-6RLC-ABV-TI (xxx=360-405, in steps of 5, 132 cells)
 MNxxx-6TLC-ABV, SMNxxx-6TLC-ABV-TI (xxx=320-365, in steps of 5, 120 cells)
 JKMSxxxN-72H-MBB-B-V, JKMSxxxN-72H-MBB-B-V-TI (xxx=380-400,
 in steps of 5, 144 cells)
 JKMSxxxN-60H-MBB-B-V, JKMSxxxN-60H-MBB-B-V-TI (xxx=315-330,
 in steps of 5, 120 cells)
 MNxxx-72HLA-ABV-MBB, SMNxxx-72HLA-ABV-MBB-TI (xxx=380-400,
 in steps of 5, 144 cells)
 MNxxx-60HLA-ABV-MBB, SMNxxx-60HLA-ABV-MBB-TI (xxx=315-330,
 in steps of 5, 120 cells)
 JKMSxxxM-72HLM-V, JKMSxxxM-72HLM-V-MX3 (xxx=420-465,
 in steps of 5, 144 cells)
 JKMSxxxM-60HLM-V, JKMSxxxM-60HLM-V-MX3 (xxx=350-385,
 in steps of 5, 120 cells)
 MMxxx-72HLM-MBV (xxx=420-465, in steps of 5, 144 cells)
 MMxxx-60HLM-MBV (xxx=350-385, in steps of 5, 120 cells)
 JKMSxxxM-78H-MBB-V, JKMSxxxM-78H-MBB-V-MX3 (xxx=440-465,
 in steps of 5, 156 cells)
 JKMSxxxM-66H-MBB-V, JKMSxxxM-66H-MBB-V-MX3 (xxx=370-390,
 in steps of 5, 132 cells)
 MM-78HLA-MBV-MBB, MMxxx-78HLA-MBV-MBB (xxx=440-465,
 in steps of 5, 156 cells)
 MM-66HLA-MBV-MBB, MMxxx-66HLA-MBV-MBB (xxx=370-390,
 in steps of 5, 132 cells)
 JKMSxxxM-78HL4-V, JKMSxxxM-78HL4-S-V (xxx=565-605, in steps of 5, 156 cells)
 JKMSxxxM-72HL4-V, JKMSxxxM-72HL4-V-J, JKMSxxxM-72HL4-S-V,

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JKMxxxM-72HL4-S-V-J (xxx=475-570, in steps of 5, 144 cells)
JKMxxxM-66HL4-V, JKMxxxM-66HL4-S-V (xxx=440-505, in steps of 5, 132 cells)
JKMxxxM-60HL4-V, JKMxxxM-60HL4-S-V (xxx=400-470, in steps of 5, 120 cells)
JKMxxxM-54HL4-V, JKMxxxM-54HL4-S-V (xxx=360-420, in steps of 5, 108 cells)
MMxxx-78HLD-MBV (xxx=565-605, in steps of 5, 156 cells)
MMxxx-72HLD-MBV (xxx=475-570, in steps of 5, 144 cells)
MMxxx-66HLD-MBV (xxx=440-505, in steps of 5, 132 cells)
MMxxx-60HLD-MBV (xxx=400-470, in steps of 5, 120 cells)
MMxxx-54HLD-MBV (xxx=360-420, in steps of 5, 108 cells)
JKMxxxM-78HL4-TV, JKMxxxM-78HL4-S-TV (xxx=555-595, in steps of 5, 156 cells)
JKMxxxM-72HL4-TV, JKMxxxM-72HL4-TV-J, JKMxxxM-72HL4-S-TV, JKMxxxM-72HL4-S-TV-J (xxx=475-565, in steps of 5, 144 cells)
JKMxxxM-66HL4-TV, JKMxxxM-66HL4-S-TV (xxx=440-500, in steps of 5, 132 cells)
JKMxxxM-66HL4-TV, JKMxxxM-66HL4-S-TV (xxx=440-500, in steps of 5, 132 cells)
JKMxxxM-60HL4-TV, JKMxxxM-60HL4-S-TV (xxx=400-455, in steps of 5, 120 cells)
JKMxxxM-54HL4-TV, JKMxxxM-54HL4-S-TV (xxx=360-410, in steps of 5, 108 cells)
JKMxxxM-7RL4-V, JKMxxxM-7RL4-V-J (xxx=535-590, in steps of 5, 156 cells)
JKMxxxM-7TL4-V, JKMxxxM-7TL4-V-J (xxx=495-570, in steps of 5, 144 cells)
JKMxxxM-6RL4-V (xxx=455-495, in steps of 5, 132 cells)
JKMxxxM-6TL4-V (xxx=415-450, in steps of 5, 120 cells)
JKMxxxM-5RL4-V (xxx=375-405, in steps of 5, 108 cells)
MMxxx-7RLD-MBV (xxx=535-590, in steps of 5, 156 cells)
MMxxx-7TLD-MBV (xxx=495-540, in steps of 5, 144 cells)
MMxxx-6RLD-MBV (xxx=455-495, in steps of 5, 132 cells)
MMxxx-6TLD-MBV (xxx=415-450, in steps of 5, 120 cells)
MMxxx-5RLD-MBV (xxx=375-405, in steps of 5, 108 cells)
JKMxxxM-7RL4-TV, JKMxxxM-7RL4-TV-J (xxx=525-590, in steps of 5, 156 cells)
JKMxxxM-7TL4-TV, JKMxxxM-7TL4-TV-J (xxx=485-570, in steps of 5, 144 cells)
JKMxxxM-6RL4-TV (xxx=445-495, in steps of 5, 132 cells)
JKMxxxM-6TL4-TV (xxx=405-450, in steps of 5, 120 cells)
JKMxxxM-5RL4-TV (xxx=365-405, in steps of 5, 108 cells)
JKMxxxM-78HL4-V (xxx=570-625, in steps of 5, 156 cells)
JKMxxxN-72HL4-V (xxx=485-600, in steps of 5, 144 cells)
JKMxxxN-72HL4R-V (xxx=485-600, in steps of 5, 144 cells)
JKMxxxN-66HL4-V (xxx=445-525, in steps of 5, 132 cells)
JKMxxxN-60HL4-V (xxx=405-500, in steps of 5, 120 cells)
JKMxxxN-60HL4R-V (xxx=405-500, in steps of 5, 120 cells)
JKMxxxN-54HL4-V, JKMxxxN-54HL4R-V (xxx=365-455, in steps of 5, 108 cells)
MNxxx-72HLD-MBV (xxx=485-555, in steps of 5, 144 cells)
MNxxx-66HLD-MBV (xxx=445-505, in steps of 5, 132 cells)
MNxxx-60HLD-MBV (xxx=405-460, in steps of 5, 120 cells)
MNxxx-54HLD-MBV (xxx=365-415, in steps of 5, 108 cells)
JKMxxxN-78HL4-TV (xxx=570-625, in steps of 5, 156 cells)
JKMxxxN-72HL4-TV (xxx=480-605, in steps of 5, 144 cells)
JKMxxxN-72HL4R-TV (xxx=480-605, in steps of 5, 144 cells)
JKMxxxN-66HL4-TV (xxx=440-525, in steps of 5, 132 cells)
JKMxxxN-60HL4-TV (xxx=400-480, in steps of 5, 120 cells)
JKMxxxN-54HL4-TV (xxx=360-430, in steps of 5, 108 cells)
MNxxx72HLD-BBV (xxx=480-545, in steps of 5, 144 cells)
MNxxx66HLD-BBV (xxx=440-495, in steps of 5, 132 cells)
MNxxx60HLD-BBV (xxx=400-450, in steps of 5, 120 cells)
MNxxx54HLD-BBV (xxx=360-405, in steps of 5, 108 cells)
JKMxxxN-7RL4-V (xxx=535-590, in steps of 5, 156 cells)
JKMxxxN-7TL4-V (xxx=495-570, in steps of 5, 144 cells)
JKMxxxN-6RL4-V (xxx=455-495, in steps of 5, 132 cells)
JKMxxxN-6TL4-V (xxx=415-450, in steps of 5, 120 cells)
JKMxxxN-5RL4-V (xxx=375-460, in steps of 5, 108 cells)
MNxxx7RLD-MBV (xxx=535-590, in steps of 5, 156 cells)

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MNxxx7TLD-MBV (xxx=495-540, in steps of 5, 144 cells)
 MNxxx6RLD-MBV (xxx=455-495, in steps of 5, 132 cells)
 MNxxx6TLD-MBV (xxx=415-450, in steps of 5, 120 cells)
 MNxxx5RLD-MBV (xxx=375-405, in steps of 5, 108 cells)
 JKMSxxxN-7RL4-TV (xxx=520-585, in steps of 5, 156 cells)
 JKMSxxxN-7TL4-TV (xxx=480-570, in steps of 5, 144 cells)
 JKMSxxxN-6RL4-TV (xxx=440-495, in steps of 5, 132 cells)
 JKMSxxxN-6TL4-TV (xxx=400-450, in steps of 5, 120 cells)
 JKMSxxxN-5RL4-TV (xxx=365-405, in steps of 5, 108 cells)
 MNxxx7RLD-BBV (xxx=520-585, in steps of 5, 156 cells)
 MNxxx7TLD-BBV (xxx=480-540, in steps of 5, 144 cells)
 MNxxx6RLD-BBV (xxx=440-495, in steps of 5, 132 cells)
 MNxxx6TLD-BBV (xxx=400-450, in steps of 5, 120 cells)
 MNxxx5RLD-BBV (xxx=365-405, in steps of 5, 108 cells)
 JKMSxxxM-72HL4-B-V, JKMSxxxM-72HL4-S-B-V
 (xxx=510-535, in steps of 5, 144 cells)
 JKMSxxxM-66HL4-B-V, JKMSxxxM-66HL4-S-B-V
 (xxx=465-490, in steps of 5, 132 cells)
 JKMSxxxM-60HL4-B-V, JKMSxxxM-60HL4-S-B-V
 (xxx=425-445, in steps of 5, 120 cells)
 JKMSxxxM-54HL4-B-V, JKMSxxxM-54HL4-S-B-V
 (xxx=380-400, in steps of 5, 108 cells)
 JKMSxxxN-72HL4-B-V (xxx=510-535, in steps of 5, 144 cells)
 JKMSxxxN-66HL4-B-V (xxx=465-490, in steps of 5, 132 cells)
 JKMSxxxN-60HL4-B-V (xxx=425-445, in steps of 5, 120 cells)
 JKMSxxxN-54HL4-B-V (xxx=380-400, in steps of 5, 108 cells)
 JKMSxxxM-7RL4-B-V (xxx=540-575, in steps of 5, 156 cells)
 JKMSxxxM-7TL4-B-V (xxx=495-530, in steps of 5, 144 cells)
 JKMSxxxM-6RL4-B-V (xxx=455-485, in steps of 5, 132 cells)
 JKMSxxxM-6TL4-B-V (xxx=415-440, in steps of 5, 120 cells)
 JKMSxxxM-5RL4-B-V (xxx=375-395, in steps of 5, 108 cells)
 JKMSxxxN-7RL4-B-V (xxx=540-575, in steps of 5, 156 cells)
 JKMSxxxN-7TL4-B-V (xxx=495-530, in steps of 5, 144 cells)
 JKMSxxxN-6RL4-B-V (xxx=455-485, in steps of 5, 132 cells)
 JKMSxxxN-6TL4-B-V (xxx=415-440, in steps of 5, 120 cells)
 JKMSxxxN-5RL4-B-V (xxx=375-395, in steps of 5, 108 cells)
 JKMSxxxM-72HLM-TV (xxx=425-460, in steps of 5, 144 cells)
 JKMSxxxM-60HLM-TV (xxx=355-380, in steps of 5, 120 cells)
 JKMSxxxM-72HLM-B-V, JKMSxxxM-72HLM-B-V-MX3
 (xxx=415-445, in steps of 5, 144 cells)
 JKMSxxxM-60HLM-B-V, JKMSxxxM-60HLM-B-V-MX3
 (xxx=350-370, in steps of 5, 120 cells)
 JKxxxM-66R5-MWV (xxx=630-665, in steps of 5, 132 cells)
 JKxxxM-66R5-BTV (xxx=630-660, in steps of 5, 132 cells)
 JKxxxM-66H5-MWV (xxx=635-670, in steps of 5, 132 cells)
 JKxxxM-66H5-BTV (xxx=630-665, in steps of 5, 132 cells)
 JKxxxN-66H5-BTV (xxx=635-670, in steps of 5, 132 cells)

1000VDC system voltage:
 JKMSxxxM-72, JKMSxxxM-72(Plus), JKMSxxxM-72L, JKMSxxxM-72B,
 JKMSxxxM-72BL, JKMSxxxM-72, JKMSxxxM-72-J, JKMSxxxM-72-TI,
 JKMSxxxM-72L-TI, JKMSxxxM-72B-TI, JKMSxxxM-72BL-TI
 (xxx=335-410, in steps of 5, 72 cells)
 JKMSxxxM-60, JKMSxxxM-60(Plus), JKMSxxxM-60L, JKMSxxxM-60B,
 JKMSxxxM-60BL, JKMSxxxM-60, JKMSxxxM-60-J, JKMSxxxM-60-TI,
 JKMSxxxM-60L-TI, JKMSxxxM-60B-TI, JKMSxxxM-60BL-TI
 (xxx=270-340, in steps of 5, 60 cells)
 SMMxxx-72LA-MB, SMMxxx-72LA-AB, SMMxxx-72LA-MB, SMMxxx-72LA-MB-TI,
 SMMxxx-72LA-AB-TI (xxx=335-410, in steps of 5, 72 cells)
 SMMxxx-60LA-MB, SMMxxx-60LA-AB, SMMxxx-60LA-MB-TI,
 SMMxxx-60LA-AB-TI (xxx=270-340, in steps of 5, 60 cells)
 JKMSxxxM-72H, JKMSxxxM-72HL, JKMSxxxM-72HB, JKMSxxxM-72HBL,
 JKMSxxxM-72H-TI, JKMSxxxM-72HL-TI, JKMSxxxM-72HB-TI,
 JKMSxxxM-72HBL-TI (xxx=335-425, in steps of 5, 144 cells)
 JKMSxxxM-60H, JKMSxxxM-60HL, JKMSxxxM-60HB, JKMSxxxM-60HBL,
 JKMSxxxM-60H-TI, JKMSxxxM-60HL-TI, JKMSxxxM-60HB-TI,
 JKMSxxxM-60HBL-TI (xxx=270-350, in steps of 5, 120 cells)
 MMxxx-72HLA-MB, MMxxx-72HLA-AB, SMMxxx-72HLA-MB-TI,
 SMMxxx-72HLA-AB-TI (xxx=335-425, in steps of 5, 144 cells)
 MMxxx-60HLA-MB, MMxxx-60HLA-AB, SMMxxx-60HLA-MB-TI,
 SMMxxx-60HLA-AB-TI (xxx=270-340, in steps of 5, 60 cells)

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SMMxxx-60HLA-AB-TI (xxx=270-350, in steps of 5, 120 cells)
JKMxxxM-72HL-Q, JKMSxxxM-72HBL-Q, JKMSxxxM-72HL-TI-Q,
JKMSxxxM-72HBL-TI-Q (xxx=335-425, in steps of 5, 144 cells)
JKMxxxM-60HL-Q, JKMSxxxM-60HBL-Q, JKMSxxxM-60HL-TI-Q,
JKMSxxxM-60HBL-TI-Q (xxx=270-350, in steps of 5, 120 cells)
JKMxxxPP-72, JKMSxxxPP-72(Plus), JKMSxxxPP-72B, JKMSxxxPP-72,
JKMSxxxPP-72-J (xxx=320-355, in steps of 5, 72 cells)
JKMxxxPP-60, JKMSxxxPP-60(Plus), JKMSxxxPP-60B, JKMSxxxPP-60,
JKMSxxxPP-60-J (xxx=260-290, in steps of 5, 60 cells)
JKMxxxPP-72H, JKMSxxxPP-72HB (xxx=330-380, in steps of 5, 144 cells)
JKMxxxPP-60H, JKMSxxxPP-60HB (xxx=260-315, in steps of 5, 120 cells)
JKMxxxM-72H-T, JKMSxxxM-72HL-T (xxx=375-425, in steps of 5, 144 cells)
JKMxxxM-60H-T, JKMSxxxM-60HL-T (xxx=315-355, in steps of 5, 120 cells)
JKMxxxM-72HL-T-Q, JKMSxxxM-72HLA-BB (xxx=375-425, in steps of 5, 144 cells)
JKMxxxM-60HL-T-Q, JKMSxxxM-60HLA-BB (xxx=315-355, in steps of 5, 120 cells)
JKMxxxN-72H-T, JKMSxxxN-72HL-T (xxx=375-425, in steps of 5, 144 cells)
JKMxxxN-60H-T, JKMSxxxN-60HL-T (xxx=315-355 in steps of 5, 120 cells)
JKMSxxxM-72-MX3, JKMSxxxM-72B-MX3, JKMSxxxM-72L-MX3,
JKMSxxxM-72BL-MX3 (xxx=335-395, in steps of 5, 72 cells)
JKMSxxxM-60-MX3, JKMSxxxM-60B-MX3, JKMSxxxM-60L-MX3,
JKMSxxxM-60BL-MX3 (xxx=270-340, in steps of 5, 60 cells)
SMMxxx-72LA-MB-MX3, SMMxxx-72LA-AB-MX3 (xxx=335-395,
in steps of 5, 72 cells)
SMMxxx-60LA-MB-MX3, SMMxxx-60LA-AB-MX3 (xxx=270-340,
in steps of 5, 60 cells)
JKMSxxxM-72H-MX3, JKMSxxxM-72HB-MX3, JKMSxxxM-72HL-MX3,
JKMSxxxM-72HBL-MX3 (xxx=335-395, in steps of 5, 144 cells)
JKMSxxxM-60H-MX3, JKMSxxxM-60HB-MX3, JKMSxxxM-60HL-MX3,
JKMSxxxM-60HBL-MX3 (xxx=270-340, in steps of 5, 120 cells)
JKMSxxxM-72HL-MX3-Q, JKMSxxxM-72HBL-MX3-Q, SMMxxx-72HLA-MB-MX3,
SMMxxx-72HLA-AB-MX3, (xxx=335-395, in steps of 5, 144 cells)
JKMSxxxM-60HL-MX3-Q, JKMSxxxM-60HBL-MX3-Q, SMMxxx-60HLA-MB-MX3,
SMMxxx-60HLA-AB-MX3 (xxx=270-340, in steps of 5, 120 cells)
JKMSxxxPP-72-MX3, JKMSxxxPP-72B-MX3, JKMSxxxPP-72L-MX3,
JKMSxxxPP-72BL-MX3 (xxx=320-355, in steps of 5, 72 cells)
JKMSxxxPP-60-MX3, JKMSxxxPP-60B-MX3, JKMSxxxPP-60L-MX3,
JKMSxxxPP-60BL-MX3 (xxx=260-290, in steps of 5, 60 cells)
JKMSxxxPP-72H-MX3, JKMSxxxPP-72HB-MX3, JKMSxxxPP-72HL-MX3,
JKMSxxxPP-72HBL-MX3 (xxx=330-380, in steps of 5, 144 cells)
JKMSxxxPP-60H-MX3, JKMSxxxPP-60HB-MX3, JKMSxxxPP-60HL-MX3,
JKMSxxxPP-60HBL-MX3 (xxx=260-315, in steps of 5, 120 cells)
JKMxxxM-72H-MBB, JKMSxxxM-72H-MBB-TI, JKMSxxxM-72H-MBB-MX3
(xxx=385-425, in steps of 5, 144 cells)
JKMxxxM-60H-MBB, JKMSxxxM-60H-MBB-TI, JKMSxxxM-60H-MBB-MX3
(xxx=320-355, in steps of 5, 120 cells)
MMxxx-72HLA-MB-MBB, SMMxxx-72HLA-MB-MBB-TI
(xxx=385-425, in steps of 5, 144 cells)
MMxxx-60HLA-MB-MBB, SMMxxx-60HLA-MB-MBB-TI
(xxx=320-355, in steps of 5, 120 cells)
JKMxxxM-72H-MBB-T (xxx=385-405, in steps of 5, 144 cells)
JKMxxxM-60H-MBB-T (xxx=320-335, in steps of 5, 120 cells)
JKMxxxN-72H-MBB-T (xxx=390-420, in steps of 5, 144 cells)
JKMxxxN-60H-MBB-T (xxx=330-350, in steps of 5, 120 cells)
JKSM3-DFCA-xxx (xxx=400-440, in steps of 5, 156 cells)
JKSM3-CFCA-xxx (xxx=335-370, in steps of 5, 132 cells)
JKSM3-DHCA-xxx (xxx=400-450, in steps of 5, 156 cells)
JKSM3-CHCA-xxx (xxx=340-380, in steps of 5, 132 cells)
JKSN3-DHCA-xxx (xxx=410-440, in steps of 5, 156 cells)
JKSN3-CHCA-xxx (xxx=345-370, in steps of 5, 132 cells)
JKMxxxM-78H, JKMSxxxM-78H-TI (xxx=405-465, in steps of 5, 156 cells)
JKMxxxM-66H, JKMSxxxM-66H-TI (xxx=340-390, in steps of 5, 132 cells)
MMxxx-78HLA-MB, SMMxxx-78HLA-MB-TI (xxx=405-465,
in steps of 5, 156 cells)
MMxxx-66HLA-MB, SMMxxx-66HLA-MB-TI (xxx=340-390,
in steps of 5, 132 cells)
JKMxxxM-78HB, JKMSxxxM-78HB-TI (xxx=405-435, in steps of 5, 156
cells)
JKMxxxM-66HB, JKMSxxxM-66HB-TI (xxx=340-365, in steps of 5, 132 cells)
MMxxx-78HLA-AB, SMMxxx-78HLA-AB-TI (xxx=405-435, in steps of 5, 156
cells)

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MMxxx-66HLA-AB, SMMxxx-66HLA-AB-TI (xxx=340-365, in steps of 5, 132 cells)
 JKMxxxM-78H-T (xxx=405-455, in steps of 5, 156 cells)
 JKMxxxM-66H-T (xxx=340-385, in steps of 5, 132 cells)
 JKMxxxN-78H-T (xxx=410-460, in steps of 5, 156 cells)
 JKMxxxN-66H-T (xxx=345-385, in steps of 5, 132 cells)
 JKMxxxM-7RL3, JKMxxxM-7RL3-J, JKMSxxxM-7RL3-TI
 (xxx=430-495, in steps of 5, 156 cells)
 JKMxxxM-6RL3, JKMxxxM-6RL3-J, JKMSxxxM-6RL3-TI, JKMSxxxM-6RL3-MX3
 (xxx=360-415, in steps of 5, 132 cells)
 JKMxxxM-6TL3, JKMSxxxM-6TL3-TI, JKMSxxxM-6TL3-MX3
 (xxx=335-380, in steps of 5, 120 cells)
 MMxxx-7RLC-MB, SMMxxx-7RLC-MB-TI (xxx=430-475, in steps of 5, 156 cells)
 MMxxx-6RLC-MB, SMMxxx-6RLC-MB-TI (xxx=360-400, in steps of 5, 132 cells)
 MMxxx-6TLC-MB, SMMxxx-6TLC-MB-TI (xxx=335-365, in steps of 5, 120 cells)
 JKMxxxN-7RL3, JKMxxxN-7RL3-J, JKMSxxxN-7RL3-TI
 (xxx=430-500, in steps of 5, 156 cells)
 JKMxxxN-6RL3, JKMxxxN-6RL3-J, JKMSxxxN-6RL3-TI,
 JKMSxxxN-6RL3-MX3 (xxx=360-420, in steps of 5, 132 cells)
 JKMxxxN-6TL3, JKMSxxxN-6TL3-TI, JKMSxxxN-6TL3-MX3
 (xxx=335-390, in steps of 5, 120 cells)
 MNxxx-7RLC-MB, SMNxxx-7RLC-MB-TI (xxx=430-490, in steps of 5, 156 cells)
 MNxxx-6RLC-MB, SMNxxx-6RLC-MB-TI (xxx=360-410, in steps of 5, 132 cells)
 MNxxx-6TLC-MB, SMNxxx-6TLC-MB-TI (xxx=335-375, in steps of 5, 120 cells)
 JKMxxxM-7RL3-T, JKMxxxM-7RL3-T-J (xxx=420-475, in steps of 5, 156 cells)
 JKMxxxM-6RL3-T, JKMxxxM-6RL3-T-J (xxx=355-400, in steps of 5, 132 cells)
 JKMxxxM-6TL3-T (xxx=325-365, in steps of 5, 120 cells)
 JKMxxxN-7RL3-T, JKMxxxN-7RL3-T-J (xxx=425-475, in steps of 5, 156 cells)
 JKMxxxN-6RL3-T, JKMxxxN-6RL3-T-J (xxx=355-400, in steps of 5, 132 cells)
 JKMxxxN-6TL3-T (xxx=325-365, in steps of 5, 120 cells)
 JKMxxxN-72H-MBB, JKMSxxxN-72H-MBB-TI (xxx=385-425, in steps of 5, 144 cells)
 JKMxxxN-60H-MBB, JKMSxxxN-60H-MBB-TI (xxx=320-350, in steps of 5, 120 cells)
 MNxxx-72HLA-MB-MBB, SMNxxx-72HLA-MB-MBB-TI
 (xxx=385-425, in steps of 5, 144 cells)
 MNxxx-60HLA-MB-MBB, SMNxxx-60HLA-MB-MBB-TI
 (xxx=320-350, in steps of 5, 120 cells)
 JKMxxxM-7RL3-B, JKMSxxxM-7RL3-B-TI (xxx=425-480, in steps of 5, 156 cells)
 JKMxxxM-6RL3-B, JKMSxxxM-6RL3-B-TI, JKMSxxxM-6RL3-B-MX3
 (xxx=360-405, in steps of 5, 132 cells)
 JKMxxxM-6TL3-B, JKMSxxxM-6TL3-B-TI, JKMSxxxM-6TL3-B-MX3
 (xxx=320-365, in steps of 5, 120 cells)
 MMxxx-7RLC-AB, SMMxxx-7RLC-AB-TI (xxx=425-480, in steps of 5, 156 cells)
 MMxxx-6RLC-AB, SMMxxx-6RLC-AB-TI (xxx=360-405, in steps of 5, 132 cells)
 MMxxx-6TLC-AB, SMMxxx-6TLC-AB-TI (xxx=320-365, in steps of 5, 120 cells)
 JKMxxxN-7RL3-B, JKMSxxxN-7RL3-B-TI (xxx=425-480, in steps of 5, 156 cells)
 JKMxxxN-6RL3-B, JKMSxxxN-6RL3-B-TI, JKMSxxxN-6RL3-B-MX3
 (xxx=360-425, in steps of 5, 132 cells)
 JKMxxxN-6TL3-B, JKMSxxxN-6TL3-B-TI, JKMSxxxN-6TL3-B-MX3
 (xxx=320-385, in steps of 5, 120 cells)
 MNxxx-7RLC-AB, SMNxxx-7RLC-AB-TI (xxx=425-480, in steps of 5, 156 cells)
 MNxxx-6RLC-AB, SMNxxx-6RLC-AB-TI (xxx=360-405, in steps of 5, 132 cells)
 MNxxx-6TLC-AB, SMNxxx-6TLC-AB-TI (xxx=320-365, in steps of 5, 120 cells)
 JKMxxxN-72H-MBB-B, JKMSxxxN-72H-MBB-B-TI
 (xxx=380-400, in steps of 5, 144 cells)
 JKMxxxN-60H-MBB-B, JKMSxxxN-60H-MBB-B-TI
 (xxx=315-330, in steps of 5, 120 cells)
 JKMxxxN-48H-MBB-B (xxx=255-265, in steps of 5, 96 cells)
 JKMxxxN-32H-MBB-B (xxx=170-175, in steps of 5, 64 cells)
 MNxxx-72HLA-AB-MBB, SMNxxx-72HLA-AB-MBB-TI
 (xxx=380-400, in steps of 5, 144 cells)
 MNxxx-60HLA-AB-MBB, SMNxxx-60HLA-AB-MBB-TI
 (xxx=315-330, in steps of 5, 120 cells)
 JKMxxxM-72HLM, JKMSxxxM-72HLM-MX3 (xxx=420-465,

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in steps of 5, 144 cells)
JKMxxxM-60HLM, JKMSxxxM-60HLM-MX3 (xxx=350-385,
in steps of 5, 120 cells)
MMxxx-72HLM-MB (xxx=420-465, in steps of 5, 144 cells)
MMxxx-60HLM-MB (xxx=350-385, in steps of 5, 120 cells)
JKMxxxM-72HL4, JKMSxxxM-72HL4-J (xxx=475-570, in steps of 5, 144 cells)
JKMxxxM-66HL4 (xxx=440-505, in steps of 5, 132cells)
JKMxxxM-60HL4 (xxx=400-470, in steps of 5, 120 cells)
JKMxxxM-54HL4 (xxx=360-420, in steps of 5, 108 cells)
MMxxx-72HLD-MB (xxx=475-570, in steps of 5, 144 cells)
MMxxx-66HLD-MB (xxx=440-505, in steps of 5, 132cells)
MMxxx-60HLD-MB (xxx=400-470, in steps of 5, 120 cells)
MMxxx-54HLD-MB (xxx=360-420, in steps of 5, 108 cells)
JKMxxxM-7RL4, JKMSxxxM-7RL4-J (xxx=535-590, in steps of 5, 156 cells)
JKMxxxM-7TL4, JKMSxxxM-7TL4-J (xxx=495-570, in steps of 5, 144 cells)
JKMxxxM-6RL4 (xxx=455-495, in steps of 5, 132 cells)
JKMxxxM-6TL4 (xxx=415-450, in steps of 5, 120 cells)
JKMxxxM-5RL4 (xxx=375-405, in steps of 5, 108 cells)
MMxxx-7RLD-MB (xxx=535-590, in steps of 5, 156 cells)
MMxxx-7TLD-MB (xxx=495-540, in steps of 5, 144 cells)
MMxxx-6RLD-MB (xxx=455-495, in steps of 5, 132 cells)
MMxxx-6TLD-MB (xxx=415-450, in steps of 5, 120 cells)
MMxxx-5RLD-MB (xxx=375-405, in steps of 5, 108 cells)
JKMxxxM-78H-MBB, JKMSxxxM-78H-MBB-MX3 (xxx=440-465,
in steps of 5, 156 cells)
JKMxxxM-66H-MBB, JKMSxxxM-66H-MBB-MX3 (xxx=370-390,
in steps of 5, 132 cells)
MMxxx-78HLA-MB-MBB (xxx=440-465, in steps of 5, 156 cells)
MMxxx-66HLA-MB-MBB (xxx=370-390, in steps of 5, 132 cells)
JKMxxxN-78HL4 (xxx=570-625, in steps of 5, 156 cells)
JKMxxxN-72HL4 (xxx=485-600, in steps of 5, 144 cells)
JKMxxxN-72HL4R (xxx=485-600, in steps of 5, 144 cells)
JKMxxxN-66HL4 (xxx=445-525, in steps of 5, 132 cells)
JKMxxxN-60HL4 (xxx=405-500, in steps of 5, 120 cells)
JKMxxxN-60HL4R (xxx=405-500, in steps of 5, 120 cells)
JKMxxxN-54HL4, JKMSxxxN-54HL4R (xxx=365-455, in steps of 5, 108 cells)
MNxxx-72HLD-MB (xxx=485-555, in steps of 5, 144 cells)
MNxxx-66HLD-MB (xxx=445-505, in steps of 5, 132 cells)
MNxxx-60HLD-MB (xxx=405-460, in steps of 5, 120 cells)
MNxxx-54HLD-MB (xxx=365-415, in steps of 5, 108 cells)
JKMxxxN-7RL4 (xxx=535-590, in steps of 5, 156 cells)
JKMxxxN-7TL4 (xxx=495-570, in steps of 5, 144 cells)
JKMxxxN-6RL4 (xxx=455-495, in steps of 5, 132 cells)
JKMxxxN-6TL4 (xxx=415-450, in steps of 5, 120 cells)
JKMxxxN-5RL4 (xxx=375-460, in steps of 5, 108 cells)
MNxxx-7RLD-MB (xxx=535-590, in steps of 5, 156 cells)
MNxxx-7TLD-MB (xxx=495-540, in steps of 5, 144 cells)
MNxxx-6RLD-MB (xxx=455-495, in steps of 5, 132 cells)
MNxxx-6TLD-MB (xxx=415-450, in steps of 5, 120 cells)
MNxxx-5RLD-MB (xxx=375-405, in steps of 5, 108 cells)
JKMxxxM-72HL4-B (xxx=510-535, in steps of 5, 144 cells)
JKMxxxM-66HL4-B (xxx=465-490, in steps of 5, 132 cells)
JKMxxxM-60HL4-B (xxx=425-445, in steps of 5, 120 cells)
JKMxxxM-54HL4-B (xxx=380-405, in steps of 5, 108 cells)
JKMxxxN-72HL4-B (xxx=510-535, in steps of 5, 144 cells)
JKMxxxN-66HL4-B (xxx=465-490, in steps of 5, 132 cells)
JKMxxxN-60HL4-B (xxx=425-470, in steps of 5, 120 cells)
JKMxxxN-54HL4-B, JKMSxxxN-54HL4R-B
(xxx=380-450, in steps of 5, 108 cells)
JKMxxxM-7RL4-B (xxx=540-575, in steps of 5, 156 cells)
JKMxxxM-7TL4-B (xxx=495-530, in steps of 5, 144 cells)
JKMxxxM-6RL4-B (xxx=455-485, in steps of 5, 132 cells)
JKMxxxM-6TL4-B (xxx=415-440, in steps of 5, 120 cells)
JKMxxxM-5RL4-B (xxx=375-395, in steps of 5, 108 cells)
JKMxxxN-7RL4-B (xxx=540-575, in steps of 5, 156 cells)
JKMxxxN-7TL4-B (xxx=495-530, in steps of 5, 144 cells)
JKMxxxN-6RL4-B (xxx=455-485, in steps of 5, 132 cells)
JKMxxxN-6TL4-B (xxx=415-440, in steps of 5, 120 cells)
JKMxxxN-5RL4-B (xxx=375-455, in steps of 5, 108 cells)



CERTIFICATE

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JKMxxxN-72HL3-MBB-B (xxx=400-445, in steps of 5, 144 cells)
 JKMxxxN-60HL3-MBB-B (xxx=330-370, in steps of 5, 120 cells)
 JKMxxxN-48HL3-MBB-B (xxx=270-295, in steps of 5, 96 cells)
 JKMxxxN-32HL3-MBB-B (xxx=180-195, in steps of 5, 64 cells)
 JKMxxxM-72HLM-B, JKMSxxxM-72HLM-B-MX3 (xxx=415-445, in steps of 5, 144 cells)
 JKMxxxM-60HLM-B, JKMSxxxM-60HLM-B-MX3 (xxx=350-370, in steps of 5, 120 cells)
 JKxxxM-66R5-MW (xxx=630-665, in steps of 5, 132 cells)
 JKxxxM-66H5-MW (xxx=635-670, in steps of 5, 132 cells)
 JKMxxxM-36H (xxx=195-205, in steps of 5, 72 cells)
 xxx is standing for rated output power at STC

Parameters:

Fire Safety Class:	Class C according to UL790.
Safety Class:	Class II
Max. System Voltage:	1500V DC or 1000V DC
Construction:	Framed, with Junction box, cable and connector.

Production

Facility(ies):

074043, 105416, 115863, 115864, 115883, 115858, 115859, 115861, 115876, 116025, 096853, 118612, 097323, 098143, 115860, 115856, 115862, 004170, 075612, 077075

Tested according to:

IEC 61215-1:2016
 IEC 61215-1-1:2016
 IEC 61215-2:2016
 IEC 61730-1:2016
 IEC 61730-2:2016
 EN 61215-1:2016
 EN 61215-1-1:2016
 EN 61215-2:2017
 EN IEC 61730-1:2018
 EN IEC 61730-1:2018/AC:2018-06
 EN IEC 61730-2:2018
 EN IEC 61730-2:2018/AC:2018-06



CERTIFICATE n. 23-223-B

Issued by: **SUPSI - PV LAB**
SAS accredited laboratory ISO 17025 n. 0531

Based on the test report: n. 23-223/B-REP1-rev0 dated 2024.03.06

Issued by: **SUPSI – PV LAB**
Campus Mendrisio, CH - 6850 Mendrisio – Switzerland

We declare that the building component: photovoltaic module with associated mounting system, mod.

Jinko Solar Co., Ltd.- Model/Type: JKM435N-54HL4R-V

PV Module Type	Cells n.	Cell technology	Glass / superstrate	Module size (gross)	Power [W]
JKM435N-54HL4R-V	108	Mono-crystalline Si-mono-facial N-Type - half-cut	tempered solar glass with anti-reflective coating - thickness 3.2 mm	1762 x 1134 x 30 mm	435

Extended by similarity, without retesting to:

PV Module Type	Cells n.	Cell technology	Glass / superstrate	Module size (gross)	Power [W]
JKM435N-54HL4R	108	Mono-crystalline Si-monofacial N-Type - half-cut	tempered solar glass with anti-reflective coating - thickness 3.2 mm	1762 x 1134 x 30 mm	435
JKM425N-54HL4R					425
JKM425N-54HL4R-V					
JKM430N-54HL4R					430
JKM430N-54HL4R-V					
JKM440N-54HL4R					440
JKM440N-54HL4R-V					
JKM445N-54HL4R					445
JKM445N-54HL4R-V					
JKM450N-54HL4R					450
JKM450N-54HL4R-V					

Manufactured by:	Jinko Solar Co., Ltd. - No.1, Yingbin Road, Economic Development Zone, Shangrao City, 334100 Jiangxi, P.R. - CHINA
License holder:	JinkoSolar GmbH - Konrad Zuse Platz 8 81929 München GERMANY

has been tested according to:

HAIL RESISTANCE CLASS HW 4

(According to VKF - Prüfbestimmung Nr. 25 - Photovoltaik Module - ver. 1.03)

The relevant technical data, materials and components descriptions are listed in the report. Any changes of the design, materials, components or processing may require the repetition of testing.

Mendrisio, 2024.03.06

Giovanni Bellenda
Head of SUPSI PVLab

2024-03-08 09:21

Digitally signed by Giovanni Bellenda

Mauro Caccivio

Head of SUPSI PV sector

2024-03-13 07:31

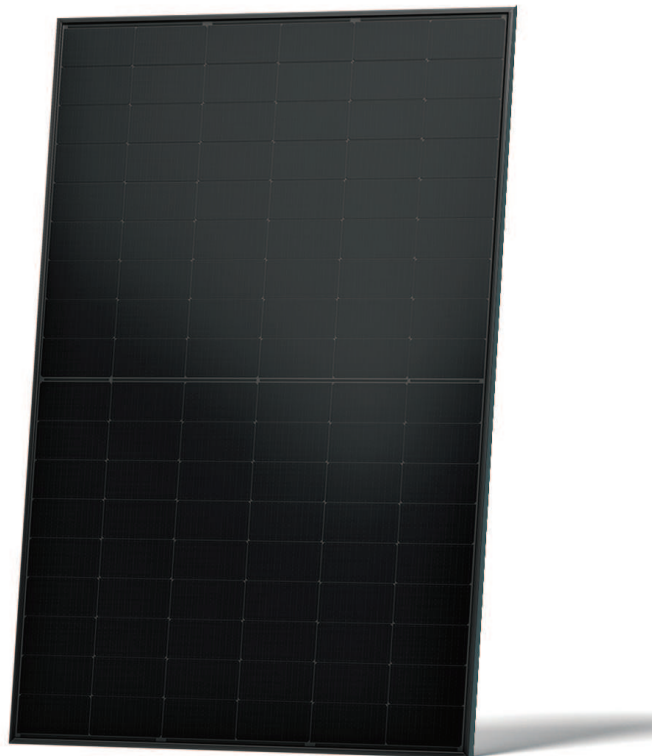
Digitally signed by Mauro Caccivio

TIGER Neo

54HL4R-B

430-455 Watt

ALL-BLACK MONOFAZIALES MODUL



N-Typ



N-Typ Technologie

N-Typ Module mit Tunnel-Oxid Passivierungskontakten (TOPCon) bieten eine geringere LID/LeTID-Degradation und eine bessere Leistung bei schwachem Licht.



HOT 3.0 Technologie

N-Typ-Module mit der HOT 3.0-Technologie von JinkoSolar bieten eine höhere Zuverlässigkeit und Effizienz.



Beständigkeit gegen extreme Umweltbedingungen

Hohe Salznebel- und Ammoniak-Beständigkeit.



Mechanische Belastung Erhöht

Zertifiziert, um zu widerstehen:
6000 Pa maximale statische Prüflast auf der Vorderseite
4000 Pa Rückseite max. statische Prüflast



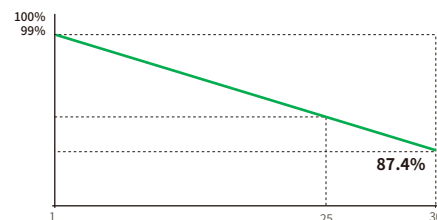
SMBB Technologie

Mehr Modulleistung und Zuverlässigkeit dank verbesserter Lichtabsorption und verbesserten Stromtransport.



Anti-PID-Garantie

Minimiert die durch PID-Phänomene verursachte Degradationsgefahr durch Optimierung der Zellproduktionstechnologie und der Materialkontrolle.



25 Jahre Produktgarantie

30 Jahre lineare Leistungsgarantie

1% Degradierung im ersten Jahr

0.4% jährliche Degradation über 30 Jahre

- IEC61215:2021 / IEC61730:2023
- IEC61701 / IEC62716 / IEC60068 / IEC62804
- ISO9001:2015: Qualitätsmanagementsystem
- ISO14001:2015: Umweltmanagementsystem
- ISO45001:2018: Managementsysteme für Sicherheit und Gesundheit bei der Arbeit



EU-JKM430-455N-54HL4R-B-F8-DE

54HL4R-B 430-455 Watt

Mechanische Eigenschaften

Zellentyp	Monokristallin N-Typ
Zellenanzahl	108 (54×2)
Maße	1762×1134×30 mm
Gewicht	21.0 kg
Glas Vorderseite	3.2 mm, Antireflexionsbeschichtung, hohe Transmission, eisenarm, gehärtetes Glas
Rahmen	Anodisierte Aluminiumlegierung
Anschlusskasten	Schutzklasse IP68
Schutzklasse	Klasse II
IEC-Brandschutz Typ	Klasse C
Anschlusskabel	4.0 mm ² (+): 400 mm , (-): 200 mm oder kundenspezifische Länge

Verpackungseinheiten

Abmessungen der Paletten	1792×1140×1249 mm
Details zur Verpackung (Zwei Paletten = Ein Stapel)	37 Stück/Paletten, 74 Stück/Stapel, 962 Stück/40'HQ Container

Spezifikationen (STC)

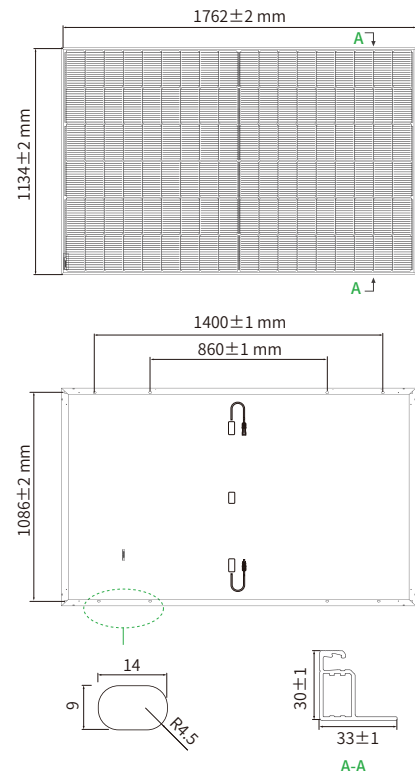
Maximale Leistung - Pmax [Wp]	430	435	440	445	450	455
Maximale Spannung - Vmp [V]	32.58	32.78	32.99	33.19	33.39	33.58
Maximale Strom - Imp [A]	13.20	13.27	13.34	13.41	13.48	13.55
Leerlaufspannung - Voc [V]	39.16	39.36	39.57	39.77	39.97	40.17
Kurzschlussstrom - Isc [A]	13.65	13.72	13.80	13.87	13.94	14.01
Modulwirkungsgrad STC [%]	21.52	21.77	22.02	22.27	22.52	22.77
Leistungstoleranz	0 ~ + 3 %					
Temperaturkoeffizient Pmax	-0.29 %/°C					
Temperaturkoeffizient Voc	-0.25 %/°C					
Temperaturkoeffizient Isc	0.045 %/°C					

STC: Bestrahlungsstärke 1000W/m², Zelltemperatur 25°C, AM=1.5

Anwendungsbedingungen

Betriebstemperatur	-40 v°C ~ +70 °C
Maximale Systemspannung	1000 VDC (IEC)
Rückstromsicherung	25 A

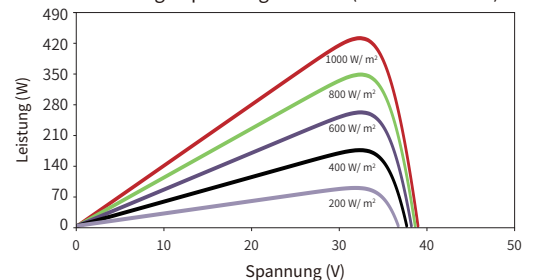
Technische Zeichnungen



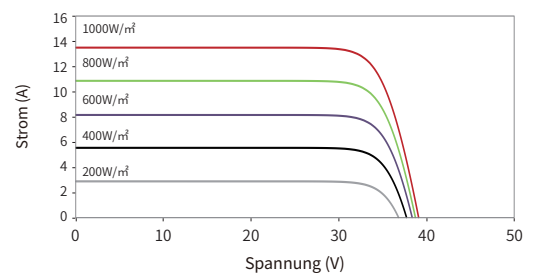
Hinweis: Die spezifischen Abmessungen und Toleranzbereiche sind den entsprechenden Detailzeichnungen der Module zu entnehmen.

Elektrische Leistung

Leistungs-Spannungs-Kurven (54HL4R-B 445W)



Strom-Spannungs-Kurven (54HL4R-B 445W)



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Hinweis: Bitte lesen Sie die Sicherheits- und Installationsanleitung, bevor Sie das Produkt verwenden. Wir behalten uns das Recht auf endgültige Auslegung vor, die Spezifikationen in diesem Datenblatt können ohne vorherige Ankündigung geändert werden.

Dieses Dokument ist eine unverbindliche Übersetzung aus dem Englischen. Im Falle einer Abweichung vom Originaltext ist immer die englische Version maßgebend.

EU-JKM430-455N-54HL4R-B-F8-DE

www.jinkosolar.com
www.jinkosolar.eu


Certificate of Conformity

Certificate Number: CN-PVES-250223

On the basis of the tests undertaken, the sample<s> of the below product have been found to comply with the requirements of the referenced specification<s>/standard<s> at the time the tests were carried out. It does not imply that Intertek has performed any surveillance or control of the manufacture(s). The manufacturer(s) shall ensure that the manufacturing process assures compliance of the production units with the examined products mentioned in this certificate.

Applicant:	Zendure USA Inc. 1765 E BAYSHORE RD # 201 EAST PALO ALTO, CA 94303-5501 USA
Product:	SolarFlow 800 Pro Power Station SolarFlow 800 AC+ Power Station
Ratings & Principle Characteristics:	See appendix of Certificate of Conformity
Model:	ZDSF800P, ZDSF800AC
Brand Name<s>:	ZENDURE SuperCharged+-
Product Complies with:	NA/EEA-NE7:2020, Grid connection for power generation systems to the low-voltage grid Type approval for Type A2
Certificate Issuing Office Name & Address:	Intertek Testing Services Ltd. Shanghai West Area, 2 nd Floor, No. 707, Zhangyang Road China (Shanghai) Pilot Free Trade Zone, Shanghai, P. R. China Accredited by ACCREDIA in accordance with ISO/IEC 17065:2012
Test Report No.<s>:	250103067GZU-002, 20 May 2025

Additional information in Appendix.



Signature

Certification Manager: Grady Ye
Date: 27 May 2025



PRD N° 306B

APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PVES-250223

Model	ZDSF800P	ZDSF800AC
PV Input		
Max. input Voltage	55 Vdc	--
MPPT voltage Range	14 -55 Vdc	--
Max. input current	4*18 Adc	--
PV Isc	4*22.5 Adc	--
AC Side		
Nominal input/output voltage	230 Vac	
Nominal input/output Frequency	50 Hz	
Max. output current (on-grid)	3.5 Aac	
Max. output power(on-grid)	800 W	
Max. output current (off-grid)	4.35 Aac	
Max. output power(off-grid)	1000 VA	
Max. input current	4.35 Aac	
Max. input power	1000 W	
Power factor range	0.8leading~0.8lagging	
Battery Side		
Battery Type	LiFePO	
Battery Rated Energy	1920 Wh	
Battery Rated Voltage	48 V dc	
Charge/Discharge Voltage Range	37.5~54.75 Vdc	
Max. Charge/Discharge Power (Without Extra Battery)	1440 W	
Max. Charge/Discharge Current (Without Extra Battery)	30 Adc	
Max. Charge/Discharge Power (With Extra Battery)	2000 W	
Max. Charge/Discharge Current (With Extra Battery)	40 Adc	
General information		
Safety level	Class I	
Ingress Protection	IP 65	
Operation Ambient Temperature	-20°C - +55°C	
Software version	V1	

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.