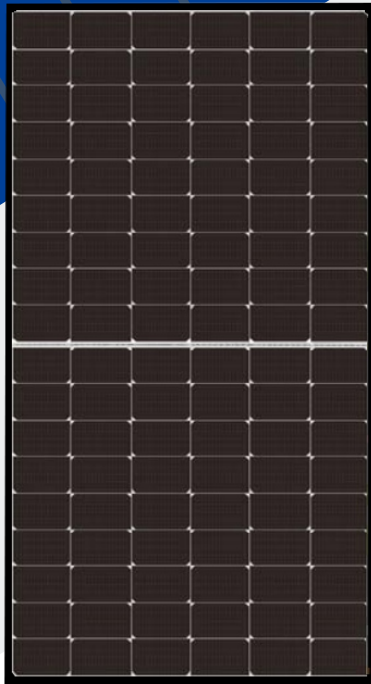


# n-type TOPCon

## HIGH PERFORMANCE MODULE



### RSM108-9-415N-440N

**108 CELL**  
n-type Module

**415-440Wp**  
Power Output Range

**1500VDC**  
Maximum System Voltage

**22.5%**  
Maximum Efficiency

### KEY SALIENT FEATURES



Global Tier1 PV module manufacturer



n-type solar cell without LID caused by B-O, power degradation in 1<sup>st</sup> year is no more than 1%



Better Temperature Coefficient



Excellent low irradiance performance



Excellent PID resistance



Positive power tolerance of 0~+3%



Double EL testing ensuring defect-free products



Module Imp binning radically reduces string mismatch loss



Excellent wind load 2400Pa & snow load 5400Pa under certain installation method



Comprehensive product and system certification

- ♦ IEC61215:2016; IEC61730-1/-2:2016;
- ♦ ISO 9001:2015 Quality Management System
- ♦ ISO 14001:2015 Environmental Management System
- ♦ ISO 45001:2018 Occupational Health and Safety Management System



\* As there are different certification requirements in different markets, please contact your local Risen Energy sales representative for the specific certificates applicable to the products in the region in which the products are to be used.

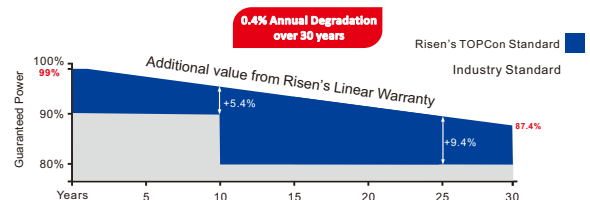
#### RISEN ENERGY CO., LTD.

Risen Energy is a leading, global tier 1 manufacturer of high-performance solar photovoltaic products and provider of total business solutions for residential, commercial and utility-scale power generation. The company, founded in 1986, and publicly listed in 2010, compels value generation for its chosen global customers. Techno-commercial innovation, underpinned by consummate quality and support, encircle Risen Energy's total Solar PV business solutions which are among the most powerful and cost-effective in the industry. With local market presence and strong financial bankability status, we are committed, and able, to building strategic, mutually beneficial collaborations with our partners, as together we capitalise on the rising value of green energy.

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Tel: +86-574-59953239 Fax: +86-574-59953599  
E-mail: marketing@risenenenergy.com Website: www.risenenergy.com

### LINEAR PERFORMANCE WARRANTY

15 year Product Warranty / 30 year Linear Power Warranty



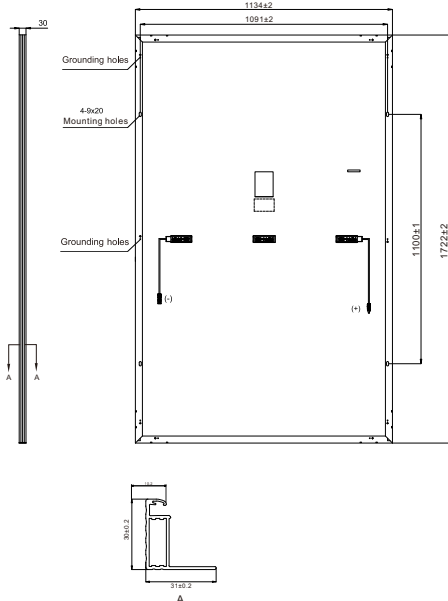
\* Please check the valid version of Limited Product Warranty which is officially released by Risen Energy Co., Ltd



Preliminary  
For Global Market

### Dimensions of PV Module

Unit: mm



### ELECTRICAL DATA (STC)

Model Number	RSM108-9-415N	RSM108-9-420N	RSM108-9-425N	RSM108-9-430N	RSM108-9-435N	RSM108-9-440N
Rated Power in Watts-Pmax(Wp)	415	420	425	430	435	440
Open Circuit Voltage-Voc(V)	38.67	38.87	39.07	39.27	39.47	39.67
Short Circuit Current-Isc(A)	13.70	13.78	13.86	13.94	14.00	14.06
Maximum Power Voltage-Vmpp(V)	32.37	32.56	32.75	32.95	33.15	33.34
Maximum Power Current-Imp(A)	12.84	12.92	13.00	13.07	13.13	13.18
Module Efficiency (%) ★	21.3	21.5	21.8	22.0	22.3	22.5

STC: Irradiance 1000 W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5 according to EN 60904-3.  
★ Module Efficiency (%): Rounding to the nearest number

### ELECTRICAL DATA (NMOT)

Model Number	RSM108-9-415N	RSM108-9-420N	RSM108-9-425N	RSM108-9-430N	RSM108-9-435N	RSM108-9-440N
Maximum Power-Pmax (Wp)	314.8	318.6	322.5	326.1	329.5	332.8
Open Circuit Voltage-Voc (V)	35.78	36.15	36.34	36.52	36.71	36.89
Short Circuit Current-Isc (A)	11.16	11.30	11.37	11.43	11.48	11.53
Maximum Power Voltage-Vmpp (V)	29.86	30.22	30.40	30.57	30.76	30.94
Maximum Power Current-Imp (A)	10.48	10.54	10.61	10.67	10.71	10.76

NMOT: Irradiance at 800 W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1 m/s.

### MECHANICAL DATA

Solar cells	n-type
Cell configuration	108 cells (6×9+6×9)
Module dimensions	1722×1134×30mm
Weight	22kg
Superstrate	High Transmission, Low Iron, Tempered ARC Glass
Substrate	White Back-sheet
Frame	Anodized Aluminium Alloy, Black
J-Box	Potted, IP68, 1500VDC, 3 Schottky bypass diodes
Cables	4.0mm <sup>2</sup> (12AWG), Positive(+)350mm, Negative(-)230mm (Connector Included)
Connector	Risen Twinsel PV-SY02, IP68

### TEMPERATURE & MAXIMUM RATINGS

Nominal Module Operating Temperature (NMOT)	44°C±2°C
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Isc	0.046%/°C
Temperature Coefficient of Pmax	-0.30%/°C
Operational Temperature	-40°C~+85°C
Maximum System Voltage	1500VDC
Max Series Fuse Rating	25A
Limiting Reverse Current	25A

### PACKAGING CONFIGURATION

	40ft(HQ)	20ft
Number of modules per container	936	216
Number of modules per pallet	36	36
Number of pallets per container	26	6
Packaging box dimensions (LxWxH) in mm	1738×1140×1260	1738×1140×1260
Box gross weight[kg]	835	835

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.  
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No special undertaking or warranty for the suitability of special purpose or being installed in extraordinary surroundings is granted unless as otherwise specifically committed by manufacturer in contract document.

THE POWER OF RISING VALUE

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