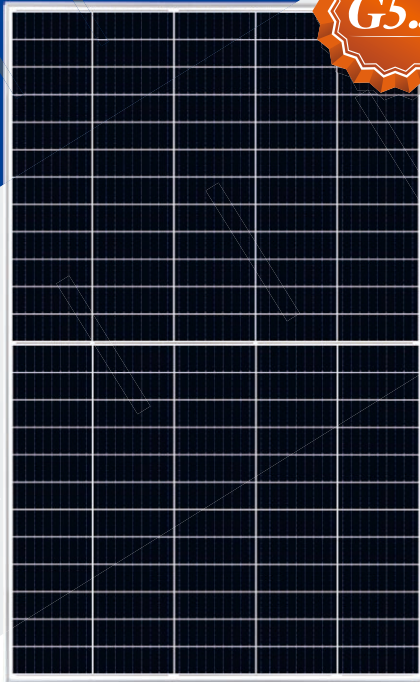


TITAN S

HIGH PERFORMANCE
MONOCRYSTALLINE PERC MODULE

Draft

000



RSM40-8-390M-410M

120 CELL

Mono PERC Module

390-410Wp

Power Output Range

1500VDC

Maximum System Voltage

21.3%

Maximum Efficiency

KEY SALIENT FEATURES



Global, Tier 1 bankable brand, with independently certified state-of-the-art automated manufacturing



Industry leading lowest thermal co-efficient of power



Industry leading 12 years product warranty



Excellent low irradiance performance



Excellent PID resistance



Positive tight power tolerance



Dual stage 100% EL Inspection warranting defect-free product



Module Imp binning radically reduces string mismatch losses



Warranted reliability and stringent quality assurances well beyond certified requirements



Certified to withstand severe environmental conditions

- Anti-reflective & anti-soiling surface minimise power loss from dirt and dust
- Severe salt mist, ammonia & blown sand resistance, for seaside, farm and desert environments
- Excellent mechanical resistance: wind load 2400Pa & snow load 5400Pa



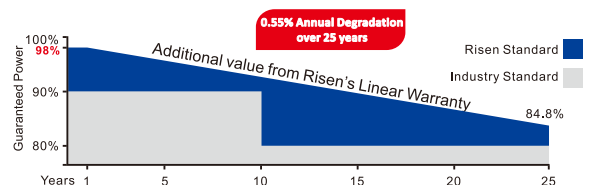
RISEN ENERGY CO., LTD.

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.

Tashan Industry Zone, Meilin, Ninghai 315609, Ningbo | PRC
Tel: +86-574-59953239 Fax: +86-574-59953599
E-mail: marketing@risenenergy.com Website: www.risenenergy.com

LINEAR PERFORMANCE WARRANTY

12 year Product Warranty / 25 year Linear Power Warranty

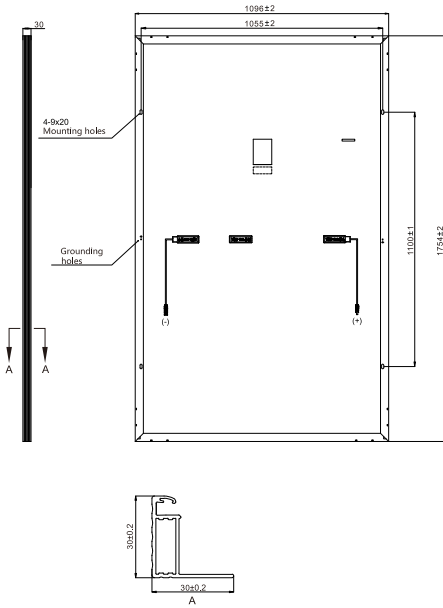


★ Please check the valid version of Limited Product Warranty which is officially released by Risen Energy Co., Ltd



Preliminary
For Global Market

Dimensions of PV Module Unit: mm



ELECTRICAL DATA (STC)

Model Number	RSM40-8-390M	RSM40-8-395M	RSM40-8-400M	RSM40-8-405M	RSM40-8-410M
Rated Power in Watts-Pmax(Wp)	390	395	400	405	410
Open Circuit Voltage-Voc(V)	40.69	41.00	41.30	41.60	41.90
Short Circuit Current-Isc(A)	12.21	12.27	12.34	12.40	12.47
Maximum Power Voltage-Vmpp(V)	33.88	34.14	34.39	34.64	34.89
Maximum Power Current-Impp(A)	11.52	11.58	11.64	11.70	11.76
Module Efficiency (%) *	20.3	20.5	20.8	21.1	21.3

STC: Irradiance 1000 W/m², Cell Temperature 25°C, Air Mass AM1.5 according to EN 60904-3.

* Module Efficiency (%): Round-off to the nearest number

ELECTRICAL DATA (NMOT)

Model Number	RSM40-8-390M	RSM40-8-395M	RSM40-8-400M	RSM40-8-405M	RSM40-8-410M
Maximum Power-Pmax (Wp)	295.6	299.4	303.1	306.9	310.7
Open Circuit Voltage-Voc (V)	37.84	38.13	38.41	38.69	38.97
Short Circuit Current-Isc (A)	10.01	10.07	10.12	10.17	10.22
Maximum Power Voltage-Vmpp (V)	31.44	31.68	31.91	32.15	32.38
Maximum Power Current-Impp (A)	9.40	9.45	9.50	9.55	9.60

NMOT: Irradiance at 800 W/m², Ambient Temperature 20°C, Wind Speed 1 m/s.

MECHANICAL DATA

Solar cells	Monocrystalline
Cell configuration	120 cells (5×12+5×12)
Module dimensions	1754×1096×30mm
Weight	21.5kg
Superstrate	High Transmission, Low Iron, Tempered ARC Glass
Substrate	White Back-sheet
Frame	Anodized Aluminium Alloy type 6005-2T6, Silver Color
J-Box	Potted, IP68, 1500VDC, 3 Schottky bypass diodes
Cables	4.0mm ² (12AWG), Positive(+)350mm, Negative(-)350mm (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	0.04%/°C
Temperature Coefficient of Pmax	-0.34%/°C
Operational Temperature	-40°C~+85°C
Maximum System Voltage	1500VDC
Max Series Fuse Rating	20A
Limiting Reverse Current	20A

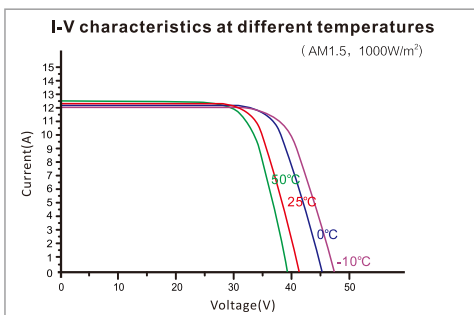
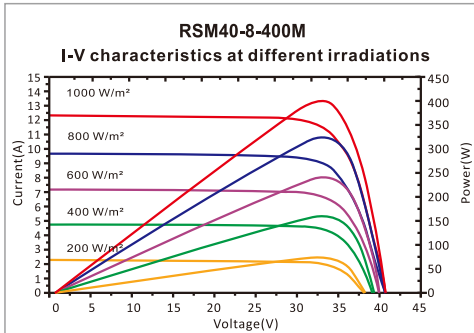
PACKAGING CONFIGURATION

	40ft(HQ)	20ft
Number of modules per container	936	180
Number of modules per pallet	36	36
Number of pallets per container	26	5
Box gross weight[kg]	820	820

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

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THE POWER OF RISING VALUE












Our Partners:



AMASSTORE BATTERY

GTX3000

-  Remote diagnosis and real-time data monitoring
-  Support soft startup
-  Support battery system direct parallel, up to 4 parallels
-  Support charging activation
-  Long cycle life energy storage battery (6000 times)
-  Certification of IEC62619, UN38.3, IEC62040-1, SAA etc
-  Simple stack installation, time and cost saving
-  Han's Laser automated PACK production line, stable and reliable production quality
-  One-button automatic assignment battery module ID, simple and convenient operation

Datasheet

GTX 3000-H4 GTX 3000-H5 GTX 3000-H6 GTX 3000-H7 GTX 3000-H8 GTX 3000-H9 GTX 3000-H10

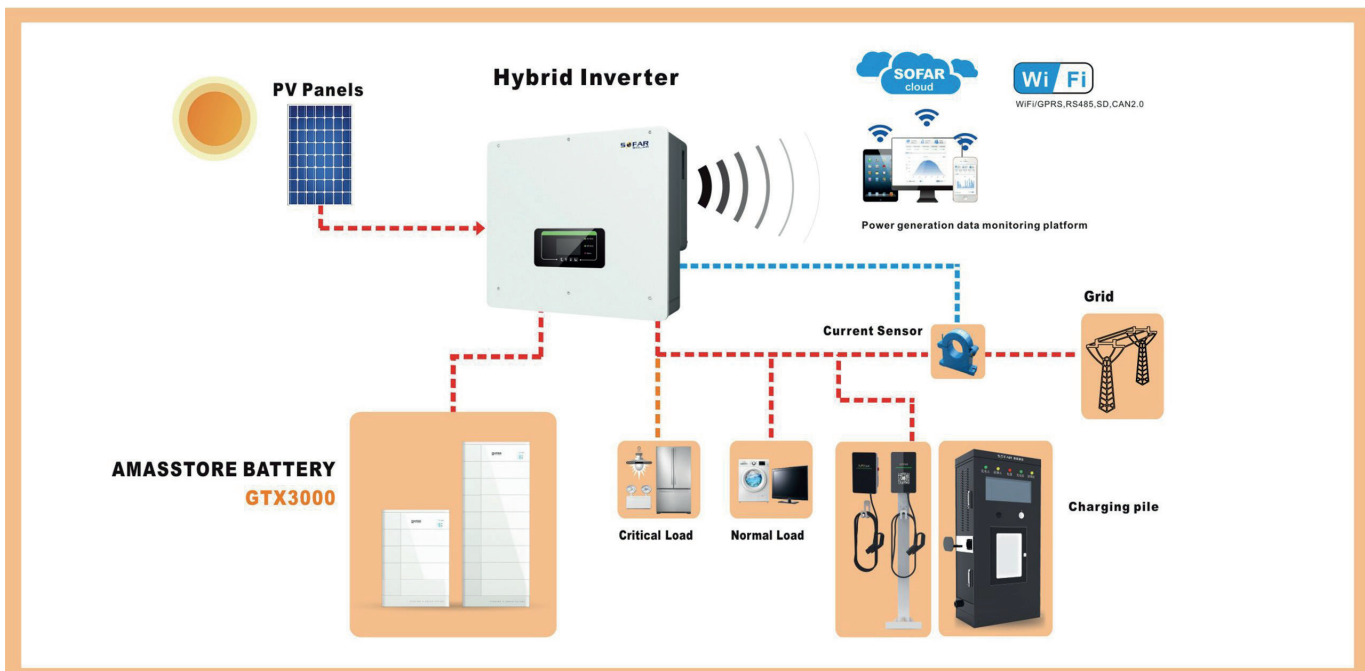
Parameters

	4	5	6	7	8	9	10	
Battery Module Quantity	4	5	6	7	8	9	10	
Nominal Voltage	204.8V	256V	307.2V	358.4V	409.6V	460.8V	512V	
MAX. Charge Voltage	230.4V	288V	345.6V	403.2V	460.8V	518.4V	576V	
MIN. Discharge Voltage	182.4V	228V	273.6V	319.2V	364.8V	410.4V	456V	
Nominal Energy	10kWh	12.5kWh	15kWh	17.5kWh	20kWh	22.5kWh	25kWh	
Available Energy(90%DOD)	9kWh	11.25kWh	13.5kWh	15.75kWh	18kWh	20.25kWh	22.5kWh	
Dimension(mm)	515*480*770	515*480*895	515*480*1020	515*480*1145	515*480*1270	515*480*1395	515*480*1520	
Weight	138kg	168kg	198kg	228kg	258kg	288kg	318kg	
Protection Class							IP65	
Cooling							Natural	
Nominal Charging Current							25A	
Max. Continuous Charging Current							30A	
Nominal Discharge Current							25A	
Max. Continuous Discharge Current							30A	
Working Temperature							-20°C ~ 60°C	
Storage Temperature							≤25°C, 12 months	
							≤35°C, 6 months	
							≤45°C, 3 months	
Environmental humidity							≤ 95%RH (No condensation)	
Operating Altitude							≤2000 m	
Scale							Suggest no more than 4 parallel	
Certificates							UN38.3, IEC62619, IEC62040-1, SAA etc.	
Cycle Life							6000 @ 80% DOD / 25°C / 0.5C / 60% EOL	

Battery module parameters

Battery Type	LiFePO4, Lithium Iron Phosphate
Nominal Voltage	51.2V
Nominal Capacity	50AH
Weight	30kg
Dimension	515*478.8*125 mm
Protection	IP65

Hybrid Solar System



Authorized Distributor

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10-547 Olsztyn, Poland

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m: corab@corab.com.pl
u: corab.pl



HYD 5K~20KTL-3PH

5000/6000/8000/10000/15000/20000

Three-Phase Energy storage integrated inverter



2 MPPT inputs, more flexible configuration



Maximum two battery inputs



Diversified work patterns and rapid gains



Full digital control, higher control accuracy



Multiple parallel systems, more flexible system solutions



Off-grid output can be connected to unbalanced load, three-phase separate output is supported



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Datasheet	HYD 5KTL-3PH	HYD 6KTL-3PH	HYD 8KTL-3PH	HYD 10KTL-3PH	HYD 15KTL-3PH	HYD 20KTL-3PH
Battery Input Data						
Battery type	Li-Ion					
No. of battery input	1	1	1	2	2	2
Battery voltage range	180V-800V					
Battery voltage range for full load	200V-800V	240V-800V	320V-800V	200V-800V	300V-800V	400V-800V
Nominal charging/discharging power	5000W	6000W	8000W	10000W	15000W	20000W
Max. charging/discharging current	25A	25A	25A	50A(25A/25A)	50A(25A/25A)	50A(25A/25A)
Peak charging/discharging current, Duration	40A, 60s	40A, 60s	40A, 60s	70A(35A/35A), 60s	70A(35A/35A), 60s	70A(35A/35A), 60s
Charging strategy for battery	Self-adaptation to BMS					
Communication interfaces	CAN(RS485)					
PV String Input Data						
Recommended Max. PV input power	7500Wp(6000Wp/6000Wp)	9000Wp(6600Wp/6600Wp)	12000Wp(6600Wp/6600Wp)	15000Wp(7500Wp/7500Wp)	22500Wp(11250Wp/11250Wp)	30000Wp(15000Wp/15000Wp)
Max. DC voltage	1000V					
Start-up operating voltage	200V					
MPPT voltage range	180V-960V					
Nominal DC voltage	600V					
Full power MPPT voltage range	250V-850V	320V-850V	360V-850V	220V-850V	350V-850V	450V-850V
Max. input current	12.5A/12.5A	12.5A/12.5A	12.5A/12.5A	25A/25A	25A/25A	25A/25A
Max. short current	15A/15A	15A/15A	15A/15A	30A/30A	30A/30A	30A/30A
No. of MPP trackers	2					
No. of strings per MPP tracker	1	1	1	2	2	2
AC Output Data (On-grid)						
Nominal AC power	5000W	6000W	8000W	10000W	15000W	20000W
Max. AC power output to utility grid	5500VA	6600VA	8800VA	11000VA	16500VA	22000VA
Max. AC power from utility grid	10000VA	12000VA	16000VA	20000VA	30000VA	40000VA
Max. AC current output to utility grid	8A	10A	13A	16A	24A	32A
Max. AC current from utility grid	15A	17A	24A	29A	44A	58A
Nominal grid voltage	3/N/PE, 220/380Vac, 230/400Vac					
Grid voltage range	184Vac~276Vac					
Nominal grid frequency	50/60Hz					
Grid frequency range	45Hz~55Hz/55Hz~65Hz					
Output power factor	~ 1(0.8 leading to 0.8 lagging)					
Output THDi (@Nominal output)	< 3%					
AC Output Data (Back-up)						
Nominal output power	5000W	6000W	8000W	10000W	15000W	20000W
Max. output power	5500VA	6600VA	8800VA	11000VA	16500VA	22000VA
Peak output power, Duration	10000VA, 60s	12000VA, 60s	16000VA, 60s	20000VA, 60s	22000VA, 60s	22000VA, 60s
Max. output current	8A	10A	13A	16A	24A	32A
Peak output current, Duration	15A, 60s	18A, 60s	24A, 60s	30A, 60s	32A, 60s	32A, 60s
Nominal output voltage	3/N/PE, 220/380Vac, 230/400Vac					
Nominal output frequency	50/60Hz					
Output THDv (@Liner load)	< 3%					
Switch time	< 20ms					
Efficiency						
MPPT efficiency	99.9%					
Euro efficiency	97.5%	97.5%	97.5%	97.7%	97.7%	97.7%
Max. efficiency	98.0%	98.0%	98.0%	98.2%	98.2%	98.2%
Max. battery charge/discharge efficiency	97.6%	97.6%	97.6%	97.8%	97.8%	97.8%
Protection						
DC switch	Yes					
PV reverse polarity protection	Yes					
Output over current protection	Yes					
Output over voltage protection	Yes					
Anti-islanding protection	Yes					
Residual current detection	Yes					
Insulation resistor detection	Yes					
Surge protection level	II					
Battery reverse protection	Yes					
General Data						
Dimension	571.4*515*264.1mm					
Weight	33kg	33kg	33kg	37kg	37kg	37kg
Inverter topology	Transformerless					
Standby self-consumption	< 15W					
Operating temperature range	-30°C ~ +60°C					
Relative humidity	0~100%					
Noise	< 45dB					
Operating altitude	< 4000m					
Cooling	Natural	Natural	Natural	Forced airflow	Forced airflow	Forced airflow
Protection degree	IP65					
Feature						
DC terminal	MC4					
Grid AC terminal	5P Connector					
Back-up AC terminal	5P Connector					
Display	LCD Display					
Monitoring interfaces	Bluetooth / RS485 / WIFI / GPRS (optional)					
Parallel operation	Yes					
Standard warranty	Standard 5 years					
Certifications & Standards						
EMC	EN61000-6-1, EN61000-6-3					
Safety	IEC62109-1, IEC62109-2, NB-T32004/IEC62040-1					
Grid	AS/NZS 4777, VDE V 0124-100, V0126-1-1, VDE-AR-N 4105, CEI 0-16/CEI 0-21, EN50549, G98/G99, UTE C15-712-1					



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