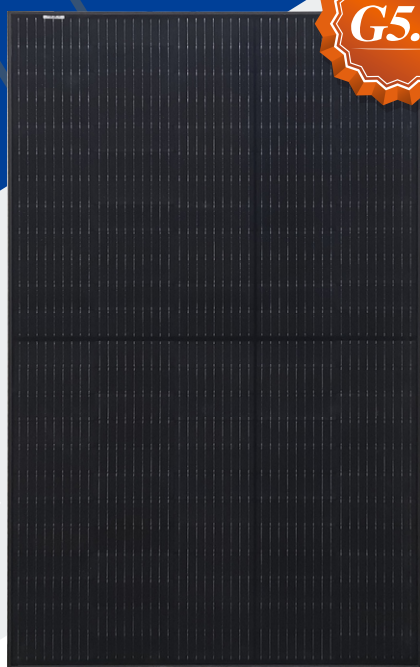


# TASHAN

**HIGH PERFORMANCE  
MONOCRYSTALLINE PERC MODULE**



## RSM40-8-385MB-405MB

<b>120 CELL</b> Mono PERC Module	<b>385-405Wp</b> Power Output Range
<b>1500VDC</b> Maximum System Voltage	<b>21.1%</b> 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 15 years product warranty
- Excellent low irradiance performance
- Excellent PID resistance
- Positive power tolerance of 0~+3%
- Dual stage 100% EL Inspection warranting defect-free product
- Module Imp binning radically reduces string mismatch losses
- 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.

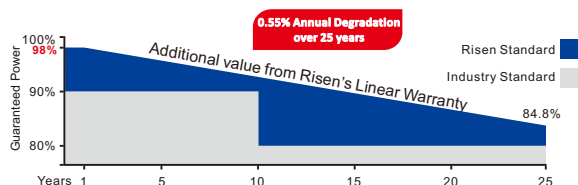
#### RISEN ENERGY CO., LTD.

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.

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

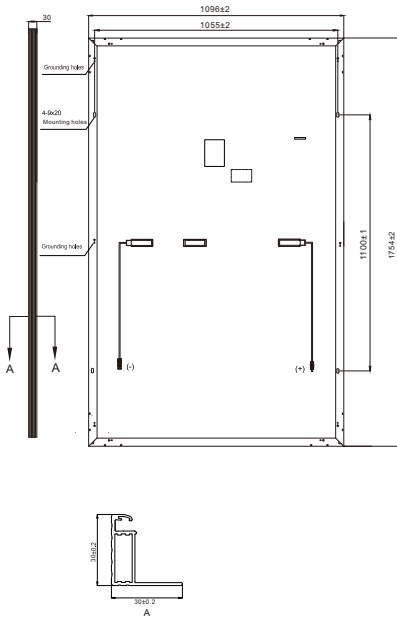
15 year Product Warranty / 25 year Linear Power Warranty



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



### Dimensions of PV Module Unit: mm



### ELECTRICAL DATA (STC)

Model Number	RSM40-8-385MB	RSM40-8-390MB	RSM40-8-395MB	RSM40-8-400MB	RSM40-8-405MB
Rated Power in Watts-Pmax(Wp)	<b>385</b>	<b>390</b>	<b>395</b>	<b>400</b>	<b>405</b>
Open Circuit Voltage-Voc(V)	40.38	40.69	41.00	41.30	41.60
Short Circuit Current-Isc(A)	12.15	12.21	12.27	12.34	12.40
Maximum Power Voltage-Vmpp(V)	33.62	33.88	34.14	34.39	34.64
Maximum Power Current-Impp(A)	11.46	11.52	11.58	11.64	11.70
Module Efficiency (%) *	20.0	20.3	20.5	20.8	21.1

STC: Irradiance 1000 W/m<sup>2</sup>, 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	RSM40-8-385MB	RSM40-8-390MB	RSM40-8-395MB	RSM40-8-400MB	RSM40-8-405MB
Maximum Power-Pmax (Wp)	291.8	295.6	299.4	303.1	306.9
Open Circuit Voltage-Voc (V)	37.55	37.84	38.13	38.41	38.69
Short Circuit Current-Isc (A)	9.96	10.01	10.07	10.12	10.17
Maximum Power Voltage-Vmpp (V)	31.20	31.44	31.68	31.91	32.15
Maximum Power Current-Impp (A)	9.35	9.40	9.45	9.50	9.55

NMOT: Irradiance at 800 W/m<sup>2</sup>, 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	21kg
Superstrate	High Transmission, Low Iron, Tempered ARC Glass
Substrate	Back-sheet (Front side: Black, Back side: White)
Frame	Anodized Aluminium Alloy type 6005-2T6, Black
J-Box	Potted, IP68, 1500VDC, 3 Schottky bypass diodes
Cables	4.0mm <sup>2</sup> (12AWG), Positive(+)1200mm, Negative(-)1200mm (Connector Included)
Connector	MC4 EVO2, 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

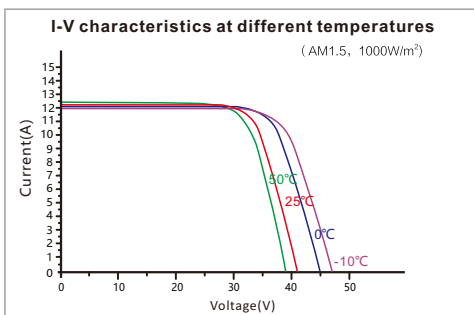
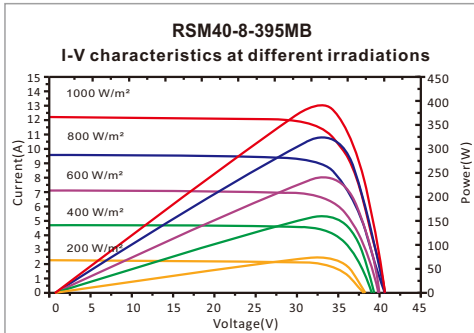
### PACKAGING CONFIGURATION

	40ft(HQ)	20ft
Number of modules per container	936	216
Number of modules per pallet	36	36
Number of pallets per container	26	6
Packaging box dimensions (LxWxH) in mm	1770×1120×1236	1770×1120×1236
Box gross weight[kg]	800	800

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

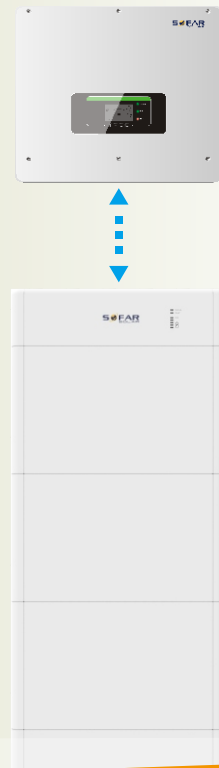
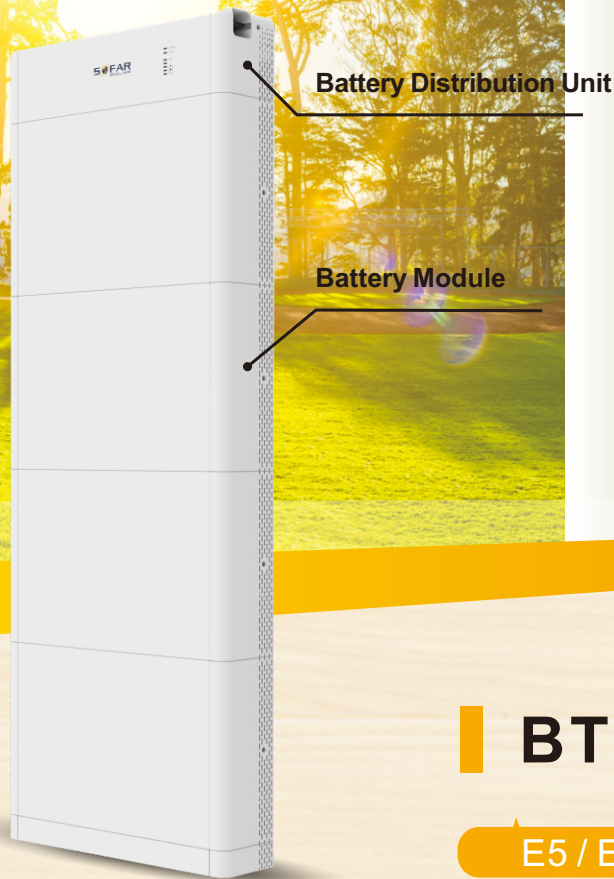
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THE POWER OF RISING VALUE



### Our Partners:

## Intelligent Batteries System



## BTS E5~20-DS5

E5 / E10 / E15 / E20



Modular and integrated design for easy transportation and installation



More available battery energy with pack optimization



Batteries flexible expansion in stages



Extremely low battery self-consumption in sleep mode



Batteries one-button shutdown



Model	BTS E5-DS5	BTS E10-DS5	BTS E15-DS5	BTS E20-DS5
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### System Parameters

System Schematic				
Battery type	LFP			
Battery distribution unit	BTS 5K-BDU			
Qty.of battery distribution unit	1			
Battery module	BTS 5K			
Qty.of battery modules	1	2	3	4
Battery total energy [1]	5kWh	10kWh	15kWh	20kWh
Rated power	2.5kW	5kW	7.5kW	10kW
Rated voltage	400V			
Voltage range	350V~435V			
Rated charge/ discharge current	7A	14A	21A	28A
Degree of protection	IP65			
Ambient temperature range	-10°C ~ +45°C			
Allowable relative humidity range	5%~95%			
Max. operating altitude [2]	4000m			
Weight	59kg	110kg	161kg	212kg
Dimension (W*D*H)	708*170*680mm	708*170*1100mm	708*170*1520mm	708*170*1940mm
Installation	Floor stand			
Cooling	Natural			
Display	LED indicator			
Communication	CAN			
Warranty [3]	10 Years			
Compatible inverters	Refer to BTS E5~20-DS5 configuration list			

### Battery Module

Model	BTS 5K
Battery module energy [1]	5kWh
Depth of discharge (DOD)	90.0%
Rated power	2500W
Dimension (W*D*H)	708*170*420mm
Weight	50kg

### Battery Distribution Unit

Model	BTS 5K-BDU
Max. charge/ discharge current	35A
Dimension (W*D*H)	708*170*200mm
Weight	7.5kg

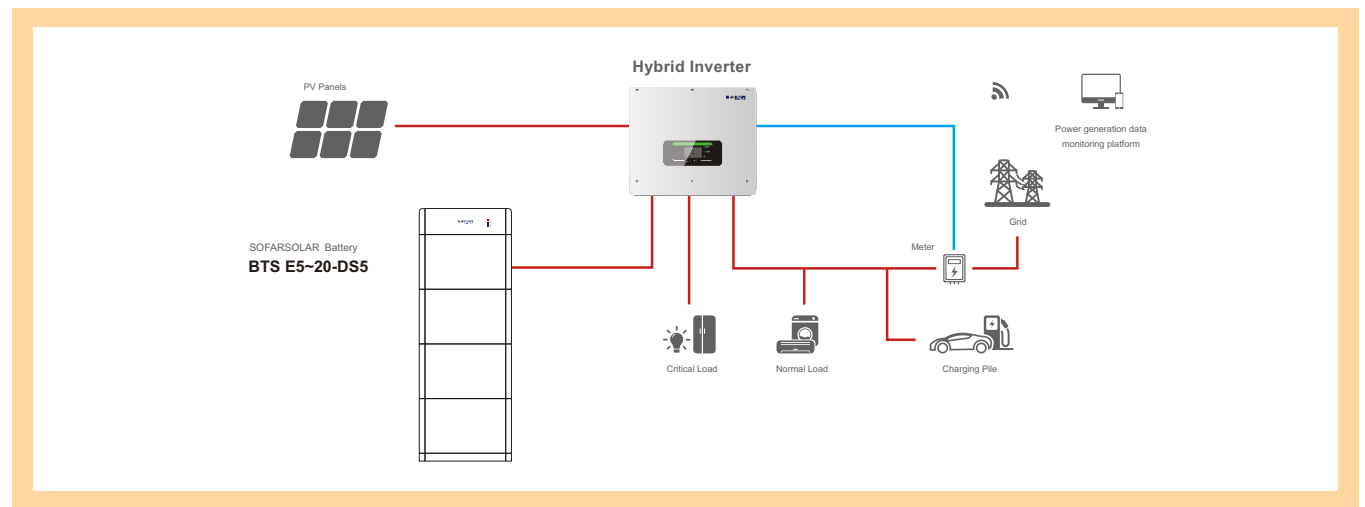
### Standard

Certificates	UN38.3, IEC62619, IEC62040-1, SAA etc.
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[1] Test conditions:0.2C charge/discharge at 25°C,100%DOD.  
 [2] If the altitude is > 2000m, derating operation is required, refer to the derating curve.  
 [3] Conditions apply. Refer to Sofar battery warranty letter.

BTS E5 / E10 / E15 / E20-DS5\_EN\_202203\_V1

## Hybrid Solar System





# 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



**Authorized Distributor**

Corab S.A.  
ul. Michała Kajki 4,  
10-547 Olsztyn, Poland

t: +48 (89) 535 17 90  
m: corab@corab.com.pl  
u: corab.pl

Datasheet	HYD 5KTL-3PH	HYD 6KTL-3PH	HYD 8KTL-3PH	HYD 10KTL-3PH	HYD 15KTL-3PH	HYD 20KTL-3PH
<b>Battery Input Data</b>						
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-adaption to BMS					
Communication interfaces	CAN(RS485)					
<b>PV String Input Data</b>						
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
<b>AC Output Data (On-grid)</b>						
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%					
<b>AC Output Data (Back-up)</b>						
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					
<b>Efficiency</b>						
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%
<b>Protection</b>						
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					
<b>General Data</b>						
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					
<b>Feature</b>						
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					
<b>Certifications &amp; Standards</b>						
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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