

Mono

390W MBB Half-Cell Module JAM60S20 365-390/MR Series

Introduction

Assembled with multi-busbar PERC cells, the half-cell configuration of the modules offers the advantages of higher power output, better temperature-dependent performance, reduced shading effect on the energy generation, lower risk of hot spot, as well as enhanced tolerance for mechanical loading.



Higher output power



Lower LCOE



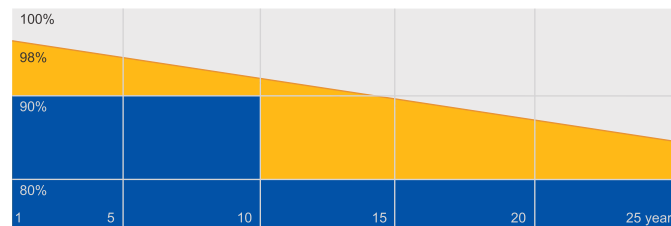
Less shading and lower resistive loss



Better mechanical loading tolerance

Superior Warranty

- 12-year product warranty
- 25-year linear power output warranty



■ JA Linear Power Warranty ■ Industry Warranty

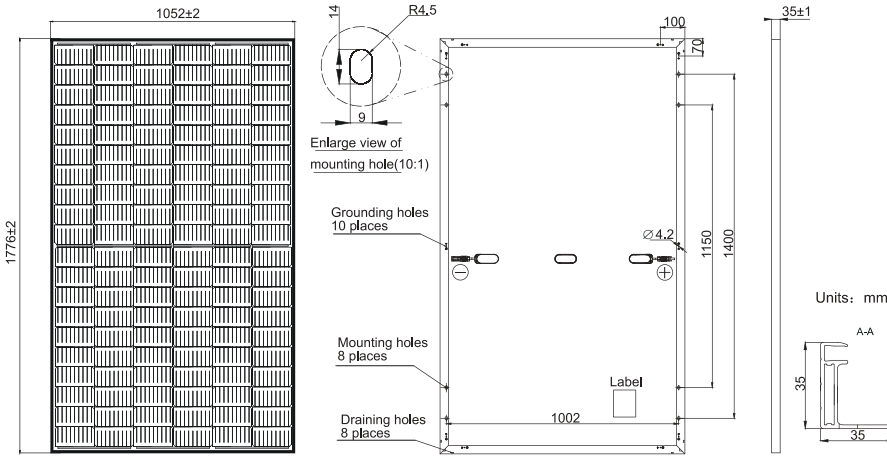
Comprehensive Certificates

- IEC 61215, IEC 61730, UL 61215, UL 61730
- ISO 9001: 2015 Quality management systems
- ISO 14001: 2015 Environmental management systems
- OHSAS 18001: 2007 Occupational health and safety management systems
- IEC TS 62941: 2016 Terrestrial photovoltaic (PV) modules – Guidelines for increased confidence in PV module design qualification and type approval



MECHANICAL DIAGRAMS

SPECIFICATIONS



Remark: customized frame color and cable length available upon request

Cell	Mono
Weight	20.7kg±3%
Dimensions	1776±2mm×1052±2mm×35±1mm
Cable Cross Section Size	4mm ² (IEC) ,12 AWG(UL)
No. of cells	120(6×20)
Junction Box	IP68, 3 diodes
Connector	MC4
Cable Length (Including Connector)	1000mm(+)/1000mm(-)
Packaging Configuration	31pcs/Pallet 744pcs/40ft Container

ELECTRICAL PARAMETERS AT STC

TYPE	JAM60S20 -365/MR	JAM60S20 -370/MR	JAM60S20 -375/MR	JAM60S20 -380/MR	JAM60S20 -385/MR	JAM60S20 -390/MR
Rated Maximum Power(Pmax) [W]	365	370	375	380	385	390
Open Circuit Voltage(Voc) [V]	41.13	41.30	41.45	41.62	41.78	41.94
Maximum Power Voltage(Vmp) [V]	33.96	34.23	34.50	34.77	35.04	35.33
Short Circuit Current(Isc) [A]	11.30	11.35	11.41	11.47	11.53	11.58
Maximum Power Current(Imp) [A]	10.75	10.81	10.87	10.93	10.99	11.04
Module Efficiency [%]	19.5	19.8	20.1	20.3	20.6	20.9
Power Tolerance	0~+5W					
Temperature Coefficient of Isc(α _{Isc})	+0.044%/°C					
Temperature Coefficient of Voc(β _{Voc})	-0.272%/°C					
Temperature Coefficient of Pmax(γ _{Pmp})	-0.350%/°C					
STC	Irradiance 1000W/m ² , cell temperature 25°C, AM1.5G					

Remark: Electrical data in this catalog do not refer to a single module and they are not part of the offer.They only serve for comparison among different module types.

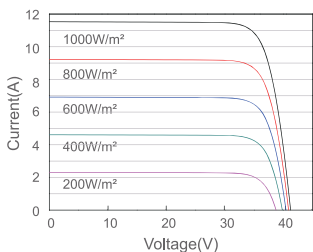
ELECTRICAL PARAMETERS AT NOCT

OPERATING CONDITIONS

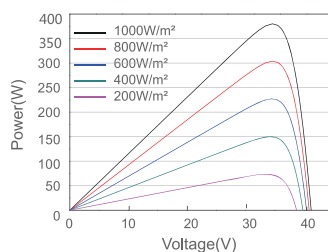
TYPE	JAM60S20 -365/MR	JAM60S20 -370/MR	JAM60S20 -375/MR	JAM60S20 -380/MR	JAM60S20 -385/MR	JAM60S20 -390/MR	
Rated Max Power(Pmax) [W]	276	280	284	287	291	295	Maximum System Voltage
Open Circuit Voltage(Voc) [V]	38.41	38.65	38.89	39.14	39.38	39.63	1000V/1500V DC
Max Power Voltage(Vmp) [V]	32.05	32.30	32.55	32.72	32.96	33.20	Operating Temperature
Short Circuit Current(Isc) [A]	9.15	9.20	9.25	9.30	9.35	9.40	-40°C~+85°C
Max Power Current(Imp) [A]	8.61	8.66	8.71	8.78	8.83	8.88	Maximum Series Fuse
NOCT	Irradiance 800W/m ² , ambient temperature 20°C, wind speed 1m/s, AM1.5G						20A
							Maximum Static Load,Front
							5400Pa (112 lb/ft ²)
							Maximum Static Load,Back
							2400Pa (50 lb/ft ²)
							NOCT
							45±2°C
							Safety Class
							Class II
							Fire Performance
							UL Type 1

CHARACTERISTICS

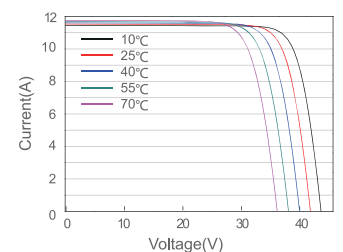
Current-Voltage Curve JAM60S20-380/MR



Power-Voltage Curve JAM60S20-380/MR



Current-Voltage Curve JAM60S20-380/MR



3~6KW HYBRID INVERTER

HYD (3000/3600/4000/5000/6000) -ES



High-yield

- Real time precise MPPT algorithm for max power generation
- Wide input voltage operation range
- Independent dual MPPT tracking, flexible solar roof system design

Reliable and Safe

- High efficiency low energy loss, Low maintenance
- High frequency isolation between battery & PV/grid
- Advanced battery management technology to protect the battery life.

Easier Operation

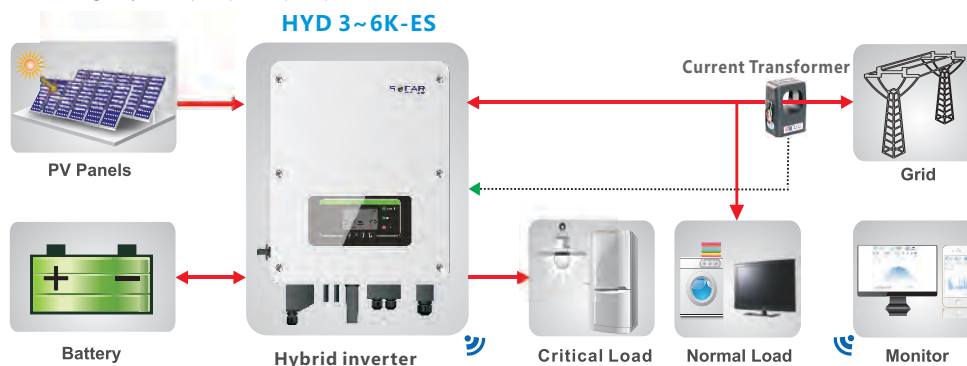
- Free site selection due to IP65
- 4" LCD clear, easy-to-read display
- Easy monitoring on phone (APP) & PC (web)

Multiple working modes

- PV & storage all in one, increases self consumption to 80%+, decreases reliance on the electrical grid, decreases the electricity bill.
- Stand alone mode (like UPS) available, ensures safe operation of critical loads
- Multiple operation modes selection: auto mode, time-of-use mode, timing mode, passive mode etc.

Intelligent grid management

- Reactive power capability
- Limits AC output when grid frequency is too high or to low
- Limits AC output when grid voltage is too high
- Built in zero export function (optional)



HYBRID INVERTER



HYD 3000-ES / HYD 3600-ES / HYD 4000-ES / HYD 5000-ES / HYD 6000-ES

Datasheet

HYD 3000-ES

HYD 3600-ES

HYD 4000-ES

HYD 5000-ES

HYD 6000-ES

Battery Parameters

Battery Type	Lithium-ion,Lead-acid				
Nominal battery Voltage	48V				
Battery voltage range	42-58V				
Battery Capacity	50-2000AH				
Maximum Charging /Discharging Power	3000W				
Maximum Charging Current	60A (programmable)				
Maximum Discharging Current	60A (programmable)				
Charging curve(Lithium-ion)	BMS				
Charging curve(Lead-acid)	3-stage adaptive with maintenance				
Depth of discharge	Lithium-ion:0-90% DOD adjustable Lead-acid:0-50% DOD adjustable				

Input DC(PV side)

The max input power	3500W	4000W	4400W	5500W	6600W
Max DC power for single MPPT	2000W(160V-520V)	2400W(180V-520V)	2600W(200V-520V)	3000W(250V-520V)	3500W(300V-520V)
The max DC input voltage	600V				
Start-up DC voltage	120V				
Nominal DC Voltage	360V				
MPPT operating voltage range	90-580V				
Full load DC voltage range	160V-520V	180V-520V	200V-520V	250V-520V	300V-520V
MPPT number	2				
The max DC input current	12A/12A				
The max DC input short current	15A/15A				

Output AC(Grid side)

Rated Power	3000W	3680W	4000W	5000W	6000W
Max. Output Power	3000VA	3680VA	4000VA	5000VA	6000VA
Nominal Grid Voltage	L/N/PE,220,230,240				
Operation phase	Single(L-N-PE)				
Max. Input/Output current	13.7A	16A	18.2A	22.8A	27.3A
AC voltage Range	180V~276V(According to local standard)				
Grid Frequency range	44-55Hz/54-66Hz(According to local standard)				
THD	< 3%				
Power factor	1 default (+/-0.8 adjustable)				

Output AC(Emergency Power Supply)

EPS rated power	3000VA				
Operation phase	Single(L-N-PE)				
EPS rated voltage, Frequency	230V,50/60Hz				
EPS rated current	13A				
Peak Output Apparent Power	4000VA , 10s				
THD	< 3%				
Switch time	5S default (1-60S adjustable)				

Efficiency

MPPT efficiency	99.9%				
Max efficiency of solar Inverter	97.6%	97.6%	97.6%	97.8%	98.0%
European efficiency of solar Inverter	97.2%	97.2%	97.2%	97.3%	97.5%
Max. Charging efficiency of battery	94.6%				
Max. DisCharging efficiency of battery	94.6%				

Protection

PV reverse polarity protection	Yes				
PV insulation detection	Yes				
Ground fault monitoring	Yes				
Over current protection	Yes				
Over voltage protection	Yes				
Battery soft start protection	Yes				

General Data

Ambient temperature range	-30°C...+60°C(Above 45°C Derating)				
Standby Losses	< 5W				
Topology	High frequency insolation(for bat)				
DC-Switch	Yes				
Degree Of Protection	IP65				
Allowable Relative Humidity Range	0-100%, No Condensing				
Certification	NB/T32004-2013,AS4777,IEC62116,VDE0126-1G83/2,G59/3,EN50438,VDE-AR-N4105				
Communication	RS485,Wi-Fi/GPRS,SD,CAN2.0				
Protective class	Class I				
Max. Operating Altitude	2000m				
Current Sensor Connection	External				
Noise	< 25dB				
Weight	20.5kg				
Cooling	Natural				
Dimension (W*H*D)	566*394*173				
Display	LCD display				
Warranty	5 Years or more				



AS4777 G83/2 G59/3

CQC, IEC, VDE-AR-N4105 / VDE-0126, EMC, C10/11, EN50438, RD1669, CEI 0-21



AMASS STORE BATTERY

GTX5000

-  Compatible with multi-brand storage inverters
-  Remote diagnosis and real-time data monitoring
-  Supports parallel expansion, supports up to 4 parallels
-  Certification of IEC62619, UN38.3, IEC62040-1, SAA etc
-  CATL brand battery, long cycle life (6000 times)
-  Wall-mounted or floor-mounted 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

GTX5000

Basic Parameters

Nominal Capacity	100AH
Nominal Voltage	51.2Vdc
Nominal Energy	5120Wh
Usable Energy (90% DOD)	4600Wh
Charge Voltage	55.68~56.16Vdc
Discharge Voltage	45.6~56.16Vdc
Nominal Charge Current	50A
Max. Charge Current	50A
Nominal Discharge Current	50A
Max. Discharge Current	75A (3.5 kW)
Communication	RS232、RS485、CAN
Working Temperature	-20 °C ~ 60 °C
Storage Temperature	≤ 25°C, 12 months
	≤ 35°C, 6 months
	≤ 45°C, 3 months
Operating Humidity	< 95% RH
Storage Humidity	< 95% RH
Max. Operating Altitude	≤ 2000m
Scalable	Up to 4
Degree Of Protection	Ip20
Weight	55Kg
Dimension (W*D*H)	480mm*211.5mm*600mm
Certificates	IEC62619、UN38.3、IEC62040-1、SAA etc
Cycle Life	6000 Cycles@ 80% DOD / 25°C / 0.5C, 60% EOL

Hybrid Solar System

