



SolarMax[®]

Since 2007



PRODUCT

Catalogue



ONE STEP TO KNOW US!

Your Go-to Source for One Stop Solar Solutions!

SolarMax providing the cost effective renewable energy products to corporate, residential and commercial sectors since 2007. Keeping in view the above and our commitment for a healthy planet with less carbon intensive economy.

We are specialized to design and provide the state of the art products of different range in solar panels, Inverters, batteries, charge controllers, related accessories, equipment and complete solar solutions on turn key basis which are equipped with latest technology.

Customer Satisfaction is Our Pride!

Our clients are from different countries and sector like Residential, Commercial, Industrial, Educational Institutes and Agricultural Lands. From houses to community living setups, we have provided them with uninterrupted alternate energy.

How We Work!

We believe in a well-designed strategy and execute our projects in a creative and inventive manner and became trend setter with hard work, sincere dedication and uniqueness style to carry out energy efficient, cost effective and space savings projects. Our team members and Partners have completed numbers of projects. We conduct surveys and perform research beforehand so as to make every project give it maximum yield with considering the cost and space constraints as well as its effectiveness.

Our Widespread Network!

We have International Sales and Distribution Network works efficiently to provide renewable energy solutions especially solar products in minimum possible time while maintaining the best of the quality.



16+

Years of experience



50000+

Valuable customers



16000+

Completed projects

We at SolarMax, keep up with the needs of times and provide our clients with the best solar solutions to the best of their satisfaction and contentment while considering "Go Green Before Green Gone".

SOLARMAX PRODUCTS

SolarMax® offers a complete product range of solar panels, solar inverters, batteries, accessories and services to our partners. Solarmax inverters are not only the heart of your system, but also the intelligent control equipment of your power generation in conjunction with the solarmax monitoring system.

OEM/ODM

In order to meet the market's demand and provide the suitable solution. We have the experience, capability, and R&D resources to make any OEM/ODM products. SolarMax is an extremely versatile turnkey manufacturer with the ability to bring your concepts and ideas into viable computing solutions. We work with individuals and companies at all stages of design and manufacture, from concept to finish, in a highly focused effort to bring industry level products and services to you.



High Reliability



User-Friendly



Smart & Safe



Compact Designs



Efficient

OUR BEST SELLING PRODUCTS

IP21 OFF-GRID HYBRID INVERTERS WITH BUILT-IN PWM & MPPT CHARGE CONTROLLERS



SM-PWM
900 | 1200 | 2400



SM-Jaguar
1.2KVA | 2.4KVA



SM-VM
1KW | 2KW | 3KW | 5KW



SM-Solon
PV2000 | PV3000



SM-Solon
PV5000 | PV7000



SM-R4
PV2000 | PV3000



SM-R4
PV4000 | PV5000

IP21 ON-GRID INVERTERS WITH ENERGY STORAGE (HYBRID)



SM-Solon
PV2200 | PV3200



SM-Solon
PV4200 | PV7200



SM-Falcon
PV4000+



SM-Falcon
3KW | 5KW | 6KW



SM-Falcon
DUAL PV6000+



SM-Orion
PV5000 | PV6000



SM-Orion
DUAL PV6000+



SM-Orion
DUAL PV8000+



SM-Orion
DUAL PV11000+



IP65 ON-GRID INVERTERS WITH ENERGY STORAGE (HYBRID)



Single Phase
DUAL PV9000



Single Phase
DUAL PV7000 | PV8000+



3 Phase
DUAL PV14000+ | PV16000+ | PV22000+ | 40000+

IP65 3 PHASE ON-GIRD/GRID-TIED INVERTERS



3 Phase
6KW | 10KW | 15KW



3 Phase
17KW | 20KW | 22KW



3 Phase
25KW - 30KW



3 Phase
50KW - 60KW

STORAGE BATTERIES LITHIUM ION / TUBULAR / GEL / LEAD CARBON



SM-2560SP PRO
LFP(Lithium Iron Phosphate)



SM-5100
LFP (Lithium Iron Phosphate)



SM-S12-9
(AGM)



SM-S12-65G
(GEL)



SM S12-100G
(GEL)



SM S12-150G
(GEL)



SM S12-200G
(GEL)



SM S12-200C
(Lead Carbon)



SM-1600 | 2200 | 2400
(Tubular)

900 | 1200 | 2400

PWM OFF-GRID INVERTERS



Charging Current
Up to 15A



LCD
Display



High
Reliability



Short Circuit
Protection



Overload
Protection



Pure Sine
Wave

MODEL	SM-PWM-900	SM-PWM-1200	SM-PWM-2400
Battery Voltage	12V	12V	24V
Technology	DSP Based Full Bridge Topology		
Input/Output Phase	Single Phase		
Output Voltage on Inverter Mode	220 ± 2%		
Output Frequency on Inverter Mode	50Hz ± 0.1Hz		
Changeover Time UPS Mode	<10 ms		
Changeover Time Mains Mode	<30 ms		
Changeover Mains to UPS and UPS to Mains	Automatic		
Output Waveform on Backup Mode	Pure Sine Wave		
THD	<3% (On Resistive/Linear Load)		
Efficiency*	>80%		
Charger	CCCV Charge		
Charging Current	Up to 15Amp*		
Surge Load Capacity	300%		
Input Voltage (UPS)	170-260+/-10V		
Input Voltage (INV)	100-290+/-10V		
Output Voltage on Mains Mode	Same as Input		
Output Frequency on Mains Mode	Same as Input		
SOLAR CHARGER			
Input Voltage (UPS)	12V		24V
Input Voltage (INV)	30V		50V
Output Voltage on Mains Mode	40Amps		40Amps
Output Frequency on Mains Mode	600		1200
DISPLAY, PROTECTIONS AND INDICATIONS			
Input Voltage (UPS)	16x2 Alpha Numeric LCD Display with LED Indications		
Input Voltage (INV)	Output Power (Watt), Mains AC Voltage, Output AC Voltage, Temperature (Deg C), Battery Voltage, Charging (Amp)		
Output Voltage on Mains Mode	Low Battery, Overload, Short Circuit, Over Temperature		
Output Frequency on Mains Mode	Yes		

Product specifications are subject to change without further notice.

1.2KVA & 2.4KVA

MPPT OFF-GRID HYBRID INVERTER



Max Charging
Current **50A**



Voltage Range
90-280VAC



Attractive
Light



Overload
Protection



Short Circuit
Protection

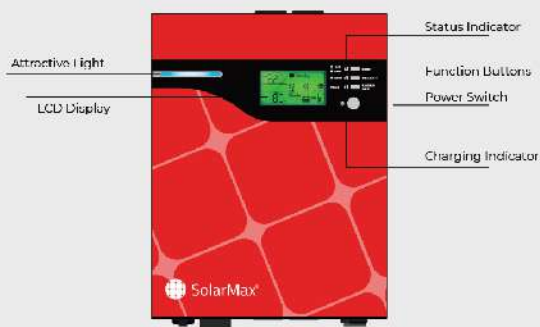


LCD Display &
Function Buttons

MODEL	SM-J 1.2K	SM-J 2.4K
CAPACITY	1200VA / 900W	2400VA / 1600W
Voltage	230 VAC	
Selectable Voltage Range	90 - 280 VAC	
Frequency Range	50 Hz/60 Hz (Auto sensing)	
AC Voltage Regulation (Batt. Mode)	230 VAC \pm 10%	
Overload Capability	Load >110% \pm 15%, alarm 5 minutes and then inverter fault If decreasing the load until lower than 100%, the overload alarm can release. Load >130% \pm 15%, inverter fault immediately.	
Efficiency (Peak)	82%	85%
Output Watt	900W	1600W
Waveform	Simulated Sine Wave	
Transfer Time	20 ms	
Battery Voltage	12 VDC	24 VDC
Floating Charge Voltage	13.7 VDC \pm 0.5 VDC	27.4 VDC \pm 0.5 VDC
Overcharge Protection	15.0VDC \pm 0.5 VDC	30.0VDC \pm 1 VDC
Solar Charger Type	MPPT	
Maximum PV Array Open Circuit Voltage	100 VDC	
Maximum PV Array Power	600 W	1200 W
MPP Range @ Operating Voltage	15 ~ 80 VDC	30 ~ 80 VDC
Maximum Solar Charge Current	50A	
Maximum AC Charge Current	10A /20A	
Maximum Charge Current	50A	
Dimension, D X W X H (mm)	282 x 212 x 127	
Net Weight (kgs)	4.5	4.8
Humidity	0 to 90% Relative Humidity (Non-condensing)	
Operating Temperature	0°C to 40°C	
Storage Temperature	-15°C to 50°C	

Product specifications are subject to change without further notice

Product Overview



- Built-in MPPT Solar Charge Appliances
- Overload and Short circuit protection
- Wide input voltage range
- Combines LCD display and LED indicator for comprehensive information.
- Simulated Sine Wave
- Status indicator System
- Manually set multiple schedule
- Power ON/OFF Button

1KW | 2KW | 3KW | 5KW

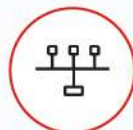
MPPT OFF-GRID HYBRID INVERTER



**High
Reliability**



**Overload
Protection**



**Communication Ports
USB/RS232**



**Short Circuit
Protection**



**Pure Sine
Wave**



**AC/Solar Input
Priority via
LCD Setting**

MODEL	SM-VM-1000	SM-VM-2000	SM-VM-3000	SM-VM-5000
Rated Power	1000VA/1000W	2000VA/2000W	3000VA / 3000W	5000VA / 5000W
INPUT				
Voltage	230 VAC			
Selectable Voltage Range	170-280 VAC (For Personal Computers) ; 90-280 VAC (For Home Appliances)			
Frequency Range	50 Hz/60 Hz (Auto sensing)			
OUTPUT				
AC Voltage Regulation (Batt. Mode)	230VAC \pm 5%			
Surge Power	2000VA	4000VA	6000VA	10000VA
Efficiency (Peak)	90% ~ 93%			
Transfer Time	10 ms (For Personal Computers) ; 20 ms (For Home Appliances)			
Waveform	Pure sine wave			
BATTERY				
Battery Voltage	12 VDC		24 VDC	48 VDC
Floating Charge Voltage	13.5 VDC		27 VDC	54 VDC
Overcharge Protection	16 VDC	31 VDC	33 VDC	63 VDC
SOLAR CHARGER & AC CHARGER				
Maximum PV Array Open Circuit Voltage	102 VDC	102 VDC	102 VDC	145 VDC
Maximum PV Array Power	500 W	1000 W	1000 W	3000 W
MPP Range @ Operating Voltage	17 ~ 80 VDC	30 ~ 80 VDC	30~80 VDC	60 ~ 115 VDC
Maximum Solar Charge Current	40 A	40 A	40 A	60 A
Maximum AC Charge Current	20 A	20 A	25A	60 A
Maximum Charge Current	60 A	60 A	60 A	120 A
PHYSICAL				
Dimension, D x W x H (mm)	88 x 225 x 320		100 x 285 x 334	100 x 300 x 440
Net Weight (kgs)	4.4	5	6.5	9.7
Communication Interface	USB/RS232			
ENVIRONMENT				
Humidity	5% to 95% Relative Humidity (Non-condensing)			
Operating Temperature	-10°C to 50°C			
Storage Temperature	-15°C to 60°C			

Product specifications are subject to change without further notice.



Anti-Dust Kit

After installing this anti-dust kit, inverter will automatically detect this kit and activate internal thermal sensor to adjust internal temperature. By virtue of the dustproof design, it dramatically increases product reliability in harsh environment.



Anti-Dust Kit (optional)

PV2000 / PV3000

MPPT OFF-GRID HYBRID INVERTER



Max Charging
Current **80A**



Pure Sine
Wave



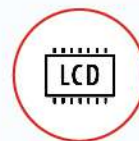
Attractive
Light



Overload
Protection



Short Circuit
Protection



LCD Display &
Function Buttons

DATASHEET	SM-SOLON-PV2000	SM-SOLON-PV3000
RATED POWER	1500W	2500W
INPUT		
Voltage	230 VAC	
Selectable Voltage Range	170-280 VAC (For Personal Computers) 90-280 VAC (For Home Appliances)	
Frequency Range	50 Hz/60 Hz (Auto sensing)	
OUTPUT		
AC Voltage Regulation (Batt. Mode)	230VAC ± 5%	
Surge Power	3000VA	5000VA
Efficiency (Peak) PV to INV	97%	
Efficiency (Peak) Battery to INV	94%	
Transfer Time	10 ms (For Personal Computers) ; 20 ms (For Home Appliances)	
Waveform	Pure sine wave	
BATTERY & AC CHARGER		
Battery Voltage	12 VDC	24 VDC
Floating Charge Voltage	13.5 VDC	27 VDC
Overcharge Protection	16 VDC	33 VDC
Maximum Charge Current	80 A	
SOLAR CHARGER		
Maximum PV Array Power	2000W	3000W
MPPT Range @ Operating Voltage	60 ~ 430 VDC	
Maximum PV Array Open Circuit Voltage	450 VDC	
Maximum Charging Current	80 A	
Maximum Efficiency	98%	
PHYSICAL		
Dimension, D x W x H (mm)	128*300*363	
Net Weight (kgs)	6.9	8.5
Communication interface	USB/RS232	
OPERATING ENVIRONMENT		
Humidity	5% to 95% Relative Humidity(Non-condensing)	
Operating Temperature	0°C - 55°C	
Storage Temperature	-15°C - 60°C	

Product specifications are subject to change without further notice

PV5000 / PV7000

MPPT OFF-GRID HYBRID INVERTER



Max Charging
Current **120A**



Pure Sine
Wave



Attractive
Light



Overload
Protection



Short Circuit
Protection



LCD Display &
Function Buttons

DATASHEET	SM-SOLON-PV5000	SM-SOLON-PV7000
RATED POWER	3600W	6200W
INPUT		
Voltage	230 VAC	
Selectable Voltage Range	170-280 VAC (For Personal Computers) 90-280 VAC (For Home Appliances)	
Frequency Range	50 Hz/60 Hz (Auto sensing)	
OUTPUT		
AC Voltage Regulation (Batt. Mode)	230VAC ± 5%	
Surge Power	7200VA	12400VA
Efficiency (Peak) PV to INV	97%	
Efficiency (Peak) Battery to INV	94%	
Transfer Time	10 ms (For Personal Computers) ; 20 ms (For Home Appliances)	
Output Port	single output	Dual output(Smart load)
Waveform	Pure sine wave	
BATTERY & AC CHARGER		
Battery Voltage	24 VDC	48 VDC
Floating Charge Voltage	27 VDC	54 VDC
Overcharge Protection	33 VDC	61 VDC
Maximum Charge Current	100 A(From grid)	
SOC display	Shows battery State of charge in percentage and in voltage as well	
Sleeping Mode	YES	
Battery voltage low cut off selectable	21V-24V	42V-49V
Battery High voltage range selectable	25V-30V	50-60V
Works without Battery	YES	
SOLAR CHARGER		
Maximum PV Array Power	5000W	6500W
MPPT Range @ Operating Voltage	60 ~ 450 VDC	
Maximum PV Array Open Circuit Voltage	500 VDC	
Maximum Charging Current	120 A	
Maximum Efficiency	98%	
PHYSICAL		
Dimension, D x W x H (mm)	128*300*363	
Net Weight (kgs)	8.7	10.6
Communication interface	RS485/ Wifi option(BMS Compatible with lithium battery using RS-485)	
LCD display	General LCD	
OPERATING ENVIRONMENT		
Humidity	5% to 95% Relative Humidity(Non-condensing)	
Operating Temperature	0°C - 55°C	
Storage Temperature	-15°C - 60°C	

Product specifications are subject to change without further notice

PV2000 / PV3000

MPPT OFF-GRID HYBRID INVERTER



Voltage Range
120-430VDC



Cold Start
Function



High
Reliability



Short Circuit
Protection



Overload
Protection



Pure Sine
Wave

MODEL	SM-R4 PV2000	SM-R4 PV3000
Rated Power	1500W	2500W
INPUT		
Voltage	230 VAC	
Selectable Voltage Range	170-280 VAC (For Personal Computers) ; 90-280 VAC (For Home Appliances)	
Frequency Range	50 Hz/60 Hz (Auto sensing)	
OUTPUT		
AC Voltage Regulation (Batt. Mode)	230 VAC \pm 10%	
Surge Power	3000W	5000W
Waveform	Pure Sine Wave	
Transfer Time	10 ms (For Personal Computers) ; 20 ms (For Home Appliances)	
BATTERY		
Battery Voltage	12 VDC	24 VDC
Floating Charge Voltage	13.5 VDC	27 VDC
Overcharge Protection	16 VDC	33 VDC
SOLAR CHARGER & AC CHARGER		
Maximum PV Array Open Circuit Voltage	450 VDC	450 VDC
Maximum PV Array Power	2000 W	3000 W
MPP Range @ Operating Voltage	120 ~ 430 VDC	120 ~ 430 VDC
Maximum Solar Charge Current	50A	50A
Maximum AC Charge Current	10A /20A	10A /20A
Maximum Charge Current	50A	50A
PHYSICAL		
Dimension, D x W x H (mm)	90 x 285 x 335	
Net Weight (kgs)	4 KG	5 KG
Communication interface	USB/RS232	
ENVIRONMENT		
Humidity	0 to 90% Relative Humidity (Non-condensing)	
Operating Temperature	-10° C to 50°	
Storage Temperature	-15° C to 60°	

Product specifications are subject to change without further notice.

PV4000 / PV5000

MPPT OFF-GRID HYBRID INVERTER



Voltage Range
120-450VDC



Cold Start
Function



High
Reliability



Short Circuit
Protection



Overload
Protection



Pure Sine
Wave

MODEL	SM-R4-M IV-3.2K-24	SM-R4-M IV-5.2K-48
Rated Power	3200VA / 3200W	5200VA / 5200W
INPUT		
Voltage	230 VAC	
Selectable Voltage Range	170-280 VAC (For Personal Computers) ; 90-280 VAC (For Home Appliances)	
Frequency Range	50 Hz/60 Hz (Auto sensing)	
OUTPUT		
AC Voltage Regulation (Batt. Mode)	230VAC \pm 5%	
Surge Power	6400VA	10400VA
Efficiency (Peak) PV to Inverter	97%	
Efficiency (Peak) Battery to Inverter	93%	
Transfer Time	10 ms (For Personal Computers) ; 20 ms (For Home Appliances)	
Waveform	Pure sine wave	
BATTERY		
Battery Voltage	24 VDC	48 VDC
Floating Charge Voltage	27 VDC	54 VDC
Overcharge Protection	32 VDC	63 VDC
SOLAR CHARGING & AC CHARGER		
Maximum PV Array Open Circuit Voltage	500 VDC	500 VDC
Maximum PV Array Power	4000 W	5000 W
MPP Range @ Operating Voltage	120~450 VDC	120~450 VDC
Maximum Solar Charge Current	80 A	80 A
Maximum AC Charge Current	60A	60A
Maximum Charge Current	80A	80A
Maximum Efficiency	98%	
PHYSICAL		
Dimension, D x W x H (mm)	100 x 300 x 440	
Net Weight (kgs)	9.5	10
Communication Interface	USB/RS232	
ENVIRONMENT		
Humidity	5% to 95% Relative Humidity (Non-condensing)	
Operating Temperature	-10°C to 50°C	
Storage Temperature	-15°C to 60°C	

Product specifications are subject to change without further notice

PV2200 / PV3200

MPPT ON-GRID WITH ENERGY STORAGE (HYBRID)



Max Charging
Current **80A**



Pure Sine
Wave



Attractive
Light



Overload
Protection



Short Circuit
Protection



LCD Display &
Function Buttons

DATASHEET	SM-SOLON-PV2200	SM-SOLON-PV3200
Max. PV Array Power	2000W	3000W
Rated Output Power	1500W	2500W
Maximum PV Array Open Circuit Voltage	500VDC	
MPPT Range @ Operating Voltage	60Vdc-430Vdc	
MPPT Tracker Number	1	
GRID-TIE OPERATION		
GRID OUTPUT (AC)		
Nominal Output Voltage	220/230/240 VAC	
Output Voltage Range	184 - 264.5 VAC or 195.5 - 253 VAC (Selectable)	
Nominal Output Current	6.5A	8.7A
Power Factor	> 0.99	
EFFICIENCY		
Maximum Conversion Efficiency (DC/AC)	95%	95%
OFF-GRID, HYBRID OPERATION		
GRID INPUT		
Acceptable Input Voltage Range	90 - 280 VAC or 170 - 280 VAC	
Frequency Range	50 Hz/60 Hz (Auto sensing)	
Maximum AC Input Current	30A	30A
BATTERY MODE OUTPUT (AC)		
Nominal Output Voltage	220/230/240 VAC	
Output Waveform	Pure sine wave	
Efficiency (DC to AC)	93%	
BATTERY & CHARGER		
Nominal DC Voltage	12Vdc	24Vdc
Maximum Solar Charge Current	80 A	80 A
Maximum AC Charge Current	80 A	80 A
Maximum Charge Current	80 A	
GENERAL		
PHYSICAL		
Dimension, D x W x H (mm)	128*300*363	
Net Weight (kgs)	6.9	8.5
INTERFACE		
Communication Ports	USB/RS232/RS485/WIFI	
ENVIRONMENT		
Humidity	0 ~ 90% RH (Non-condensing)	
Operating Temperature	-10°C to 50°C	

Product specifications are subject to change without further notice

PV4200 / PV7200

MPPT ON-GRID WITH ENERGY STORAGE (HYBRID)



Max Charging Current **120A**



Pure Sine Wave



Attractive Light



Overload Protection



Short Circuit Protection



LCD Display & Function Buttons

DATASHEET	SM-SOLON-PV4200	SM-SOLON-PV7200
Max. PV Array Power	4000W	6500W
Rated Output Power	3600W	6000W
Maximum PV Array Open Circuit Voltage	500VDC	500VDC
MPPT Range @ Operating Voltage	60Vdc-450Vdc	
MPPT Tracker Number	1	
GRID-TIE OPERATION		
GRID OUTPUT (AC)		
Nominal Output Voltage	220/230/240 VAC	
Output Voltage Range	184 - 264.5 VAC or 195.5 - 253 VAC (Selectable)	
Nominal Output Current	14.5A	26.1A
Power Factor	> 0.99	
EFFICIENCY		
Maximum Conversion Efficiency (DC/AC)	95%	95%
OFF-GRID, HYBRID OPERATION		
GRID INPUT		
Acceptable Input Voltage Range	90 - 280 VAC or 170 - 280 VAC	
Frequency Range	50 Hz/60 Hz (Auto sensing)	
Maximum AC Input Current	40A	40A
BATTERY MODE OUTPUT (AC)		
Nominal Output Voltage	220/230/240 VAC	
Output Waveform	Pure sine wave	
Efficiency (DC to AC)	93%	
BATTERY & CHARGER		
Nominal DC Voltage	24Vdc	48Vdc
Maximum Solar Charge Current	120 A	120 A
Maximum AC Charge Current	100 A	100 A
Maximum Charge Current	120 A	
GENERAL		
PHYSICAL		
Dimension, D x W x H (mm)	128*300*363	
Net Weight (kgs)	8.7	10.6
INTERFACE		
Communication Ports	USB/RS232/RS485/WIFI	
ENVIRONMENT		
Humidity	0 ~ 90% RH (Non-condensing)	
Operating Temperature	-10°C to 50°C	

Product specifications are subject to change without further notice

PV4000+

ON-GRID WITH ENERGY STORAGE (HYBRID)



Max PV Input
4000W+



Max PV Voltage
500VDC



Max PV Input
Current 18A



MPPT Range
120 ~ 450VDC



AC Output
3000W



Smart & Safe



Zero Export
Built-in



100A Max
Charging Current



Works with &
without Battery
24VDC



Net Metering
Feed into Grid



Monitor & Control
(Optional)



Communication Ports
RS232/RS485

MODEL	SM-FALCON-PV4000+
PHASE	1-phase in / 1-phase out
MAXIMUM PV INPUT POWER	4000W+
RATED OUTPUT POWER	3000W
GRID-TIE OPERATION	
PV INPUT (DC)	
Nominal DC Voltage / Maximum DC Voltage	320 VDC / 500 VDC
MPPT Voltage Range	120 VDC ~ 450 VDC
Number of MPP Trackers / Maximum Input Current	18A
GRID OUTPUT (AC)	
Nominal Output Voltage	220/230/240 VAC
Output Voltage Range	184 - 264.5 VAC or 195.5 - 253 VAC (Selectable)
EFFICIENCY	
Maximum Conversion Efficiency (DC/AC)	96%
OFF-GRID OPERATION	
AC INPUT	
AC Start-up Voltage / Auto Restart Voltage	120 - 140 VAC / 180 VAC
Acceptable Input Voltage Range	90 - 280 VAC or 170 - 280 VAC
PV INPUT (DC)	
Maximum DC Voltage	500 VDC
MPPT Voltage Range	120 VDC ~ 450 VDC
Number of MPP Trackers / Maximum Input Current	18A
BATTERY MODE OUTPUT (AC)	
Nominal Output Voltage	220/230/240 VAC
Output Waveform	Pure sinewave
Efficiency (DC to AC)	93%
HYBRID OPERATION	
PV INPUT (DC)	
Nominal DC Voltage / Maximum DC Voltage	320 VDC / 500 VDC
MPPT Voltage Range	120 VDC ~ 450 VDC
Number of MPP Trackers / Maximum Input Current	18A
GRID OUTPUT (AC)	
Nominal Output Voltage	220/230/240 VAC
Output Voltage Range	184 - 264.5 VAC or 195.5 - 253 VAC (Selectable)
AC INPUT	
AC Start-up Voltage / Auto Restart Voltage	120 - 140 VAC / 180 VAC
Acceptable Input Voltage Range	90 - 280 VAC or 170 - 280 VAC
BATTERY MODE OUTPUT (AC)	
Battery Supported	LEAD ACID VRLA AGM DEEP CYCLE GEL FLOODED LITHIUM-ION
Nominal Output Voltage	220/230/240 VAC
Efficiency (DC to AC)	93%
BATTERY & CHARGER	
Nominal DC Voltage	24VDC
Maximum Solar Charging Current	80A
Maximum AC Charging Current	100A
Maximum Charging Current	100A
GENERAL	
PHYSICAL	
Dimension, D x W x H (mm)	100 x 300 x 440
Net Weight (kgs)	9
INTERFACE	
Communication Port	RS232/RS485
ENVIRONMENT	
Humidity	0 ~ 90% RH (Non-condensing)
Operating Temperature	-10 to 50°C

Product specifications are subject to change without further notice.

3KW | 5KW | 6KW

ON-GRID WITH ENERGY STORAGE (HYBRID)



MPPT Range
120~430VDC



LCD Display &
Function Buttons



High
Reliability



Short Circuit
Protection



User
Friendly



Smart & Compact
Design



Overload
Protection



Works With &
Without Battery



9 Units Can be
Parallel



LCD Display &
Function Buttons



Net Metering
Feed into Grid



Pure Sine
Wave

MODEL	SM-FALCON-PV4000	SM-FALCON-PV5000	SM-FALCON-PV6000
Phase	1-phase in / 1-phase out		
Maximum PV Input Power	4000 W	5000W	6000W
Rated Output Power	3000W	5000W	6000W
Maximum Charging Power	2880W	5000W	5000W
GRID-TIE OPERATION			
PV INPUT (DC)			
Nominal DC Voltage / Maximum DC Voltage	360 VDC / 450 VDC	60 VDC / 450 VDC	360 VDC / 500 VDC
Start-up Voltage / Initial Feeding Voltage	130VDC / 150 VDC	130VDC / 150 VDC	130VDC / 150 VDC
MPP Voltage Range	120 VDC ~ 430 VDC	120 VDC ~ 430 VDC	120 VDC ~ 430 VDC
Number of MPP Trackers / Maximum Input Current	1 / 18A	1 / 18A	1 / 27A
GRID OUTPUT (AC)			
Nominal Output Voltage	220/230/240 VAC		
Output Voltage Range	184 - 264.5 VAC or 195.5 - 253 VAC (Selectable)		
Nominal Output Current	13A	21.7A	26A
Power Factor	> 0.99		
EFFICIENCY			
Maximum Conversion Efficiency (DC/AC)	95%		
OFF-GRID OPERATION			
AC INPUT			
AC Start-up Voltage / Auto Restart Voltage	120 - 140 VAC / 180 VAC		
Acceptable Input Voltage Range	90 - 280 VAC or 170 - 280 VAC		
Frequency Range	50 Hz/60 Hz (Auto sensing)		
Maximum AC Input Current	40 A		
PV INPUT (DC)			
Maximum DC Voltage	450 VDC	450 VDC	500 VDC
MPP Voltage Range	120 VDC ~ 430 VDC	120 VDC ~ 430 VDC	120 VDC ~ 430 VDC
Number of MPP Trackers / Maximum Input Current	1 / 18 A	1 / 18A	1 / 27A
BATTERY MODE OUTPUT (AC)			
Nominal Output Voltage	220/230/240 VAC		
Output Waveform	Pure sine wave		
Efficiency (DC to AC)	93%		
HYBRID OPERATION			
PV INPUT (DC)			
Nominal DC Voltage / Maximum DC Voltage	360 VDC / 450 VDC	360 VDC / 450 VDC	360 VDC / 500 VDC
Start-up Voltage / Initial Feeding Voltage	130VDC / 150 VDC	120VDC / 150 VDC	130VDC / 150 VDC
MPP Voltage Range	120 VDC ~ 430 VDC	120 VDC ~ 430 VDC	120 VDC ~ 430 VDC
Number of MPP Trackers / Maximum Input Current	1 / 18A	1 / 18A	1 / 27A
GRID OUTPUT (AC)			
Nominal Output Voltage	220/230/240 VAC		
Output Voltage Range	184 - 264.5 VAC or 195.5 - 253 VAC (Selectable)		
Nominal Output Current	13A	21.7A	26A
AC INPUT			
AC Start-up Voltage / Auto Restart Voltage	120 - 140 VAC / 180 VAC		
Acceptable Input Voltage Range	90 - 280 VAC or 170 - 280 VAC		
Maximum AC Input Current	40 A		
BATTERY MODE OUTPUT (AC)			
Nominal Output Voltage	220/230/240 VAC		
Efficiency (DC to AC)	93%		
BATTERY & CHARGER			
Nominal DC Voltage	48 VDC	48 VDC	48 VDC
Maximum Solar Charging Current	60 A	100 A	120 A
Maximum AC Charging Current	60 A	100 A	120 A
Maximum Charging Current	60 A	100 A	120 A
GENERAL			
PHYSICAL			
Dimension, D x W x H (mm)	120 x 295 x 468	120 x 295 x 468	120 x 295 x 468
Net Weight (kgs)	11	12	12
INTERACE			
Parallel Function	Yes, 9 units		
Communication Port	USB or RS-232/Dry Contact		
ENVIRONMENT			
Humidity	0 ~ 90% RH (No condensing)		
Operating Temperature	-10°C to 50°C		

Product specifications are subject to change without further notice.

DUAL PV6000+

ON-GRID WITH ENERGY STORAGE (HYBRID)



Max PV Input
6500W+



Max PV Voltage
500VDC



Max PV Input
Current 27A



MPPT Range
120 ~ 430VDC



DUAL AC Output
6000W



9 Units
can be Parallel



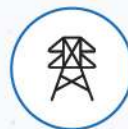
Zero Export
Built-in



120A Max
Charging Current



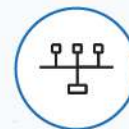
Works with &
without Battery
48VDC



Net Metering
Feed into Grid



Monitor & Control
(Optional)



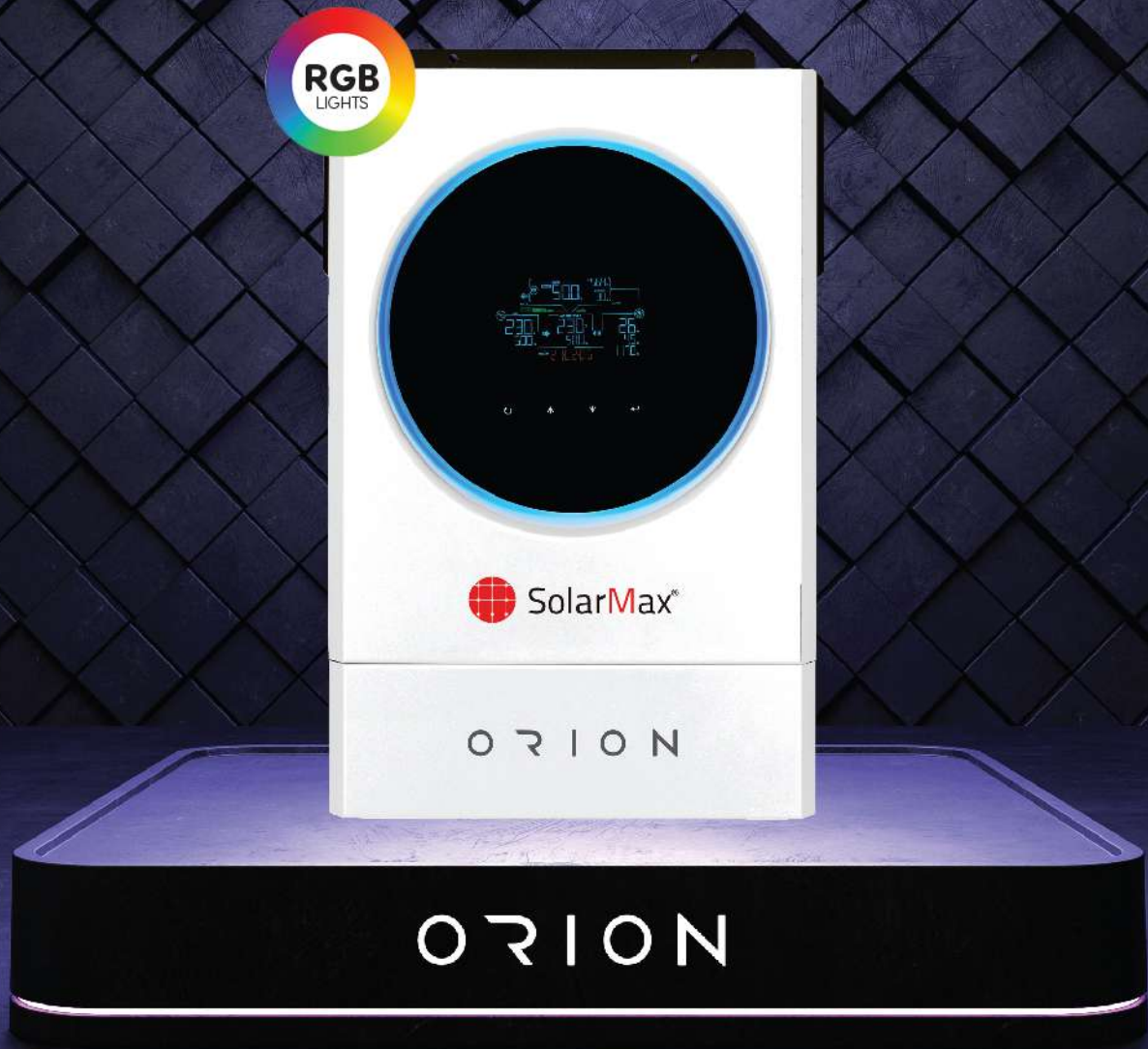
Communication Ports
RS232/USB/RS485

MODEL	SM-FALCON-DUAL-PV6000+
PHASE	1-phase in / 1-phase out
MAXIMUM PV INPUT POWER	6500W+
RATED OUTPUT POWER	6000W DUAL
MAXIMUM CHARGING POWER	6000W
GRID-TIE OPERATION	
PV INPUT (DC)	
Nominal DC Voltage / Maximum DC Voltage	360 VDC / 500 VDC
Start-up Voltage / Initial Feeding Voltage	120 VDC
MPPT Voltage Range	120 VDC ~ 450 VDC
Number of MPP Trackers / Maximum Input Current	1 / 27 A
GRID OUTPUT (AC)	
Nominal Output Voltage	220/230/240 VAC
Output Voltage Range	184 - 264.5 VAC or 195.5 - 253 VAC (Selectable)
Nominal Output Current	26A
EFFICIENCY	
Maximum Conversion Efficiency (DC/AC)	96%
OFF-GRID OPERATION	
AC INPUT	
AC Start-up Voltage / Auto Restart Voltage	120 - 140 VAC / 180 VAC
Acceptable Input Voltage Range	90 - 280 VAC or 170 - 280 VAC
Maximum AC Input Current	40 A
PV INPUT (DC)	
Maximum DC Voltage	500 VDC
MPPT Voltage Range	120 VDC ~ 450 VDC
Number of MPP Trackers / Maximum Input Current	1 / 27 A
BATTERY MODE OUTPUT (AC)	
Nominal Output Voltage	220/230/240 VAC
Output Waveform	Pure sinewave
Efficiency (DC to AC)	93%
HYBRID OPERATION	
PV INPUT (DC)	
Nominal DC Voltage / Maximum DC Voltage	360 VDC / 500 VDC
Start-up Voltage / Initial Feeding Voltage	110VDC / 120 VDC
MPPT Voltage Range	120 VDC ~ 450 VDC
Number of MPP Trackers / Maximum Input Current	1 / 27 A
GRID OUTPUT (AC)	
Nominal Output Voltage	220/230/240 VAC
Output Voltage Range	184 - 264.5 VAC or 195.5 - 253 VAC (Selectable)
Nominal Output Current	26A
AC INPUT	
AC Start-up Voltage / Auto Restart Voltage	120 - 140 VAC / 180 VAC
Acceptable Input Voltage Range	90 - 280 VAC or 170 - 280 VAC
Maximum AC Input Current	40A
BATTERY MODE OUTPUT (AC)	
Battery Supported	LEAD ACID VRLA AGM DEEP CYCLE GEL FLOODED LITHIUM-ION
Nominal Output Voltage	220/230/240 VAC
Efficiency (DC to AC)	93%
BATTERY & CHARGER	
Nominal DC Voltage	48 VDC
Maximum Solar Charging Current	120A
Maximum AC Charging Current	120A
Maximum Charging Current	120A
GENERAL	
PHYSICAL	
Dimension, D x W x H (mm)	120 x 295 x 468
Net Weight (kgs)	12
INTERFACE	
Parallel Function	Yes, 9 units
Communication Port	USB/RS232/RS485/WIFI/Dry-contact
ENVIRONMENT	
Humidity	0 ~ 90% RH (Non-condensing)
Operating Temperature	-10 to 50°C

Product specifications are subject to change without further notice.

PV5000 / PV6000

ON-GRID WITH ENERGY STORAGE (HYBRID)



High Reliability



Short-Circuit Protection



User Friendly



Colored LCD & Touchable Buttons



9 Units Can be Parallel



Built-in BMS



Works With & Without Battery



Smart & Safe



Zero Export Built-in



Pure Sine Wave



Net Metering Feed into Grid



Monitor & Control with Built-in Wifi

MODEL	SM-ORION-PV5000	SM-ORION-PV6000
PHASE	1-phase in / 1-phase out	
MAXIMUM PV INPUT POWER	5000W	6000W
RATED OUTPUT POWER	3600W	5600W
MAXIMUM CHARGING POWER	5000W	6000W
GRID-TIE OPERATION		
PV INPUT (DC)		
Nominal DC Voltage / Maximum DC Voltage	360 VDC / 500 VDC	
Start-up Voltage / Initial Feeding Voltage	110 VDC	120 VDC
MPPT Voltage Range	120 VDC ~ 430 VDC	120 VDC ~ 450 VDC
Number of MPP Trackers / Maximum Input Current	1 / 18 A	1 / 27 A
GRID OUTPUT (AC)		
Nominal Output Voltage	220/230/240 VAC	
Output Voltage Range	184 - 264.5 VAC or 195.5 - 253 VAC (Selectable)	
Nominal Output Current	15.6A	26.1A
Power Factor	> 0.9	
EFFICIENCY		
Maximum Conversion Efficiency (DC/AC)	96%	95%
OFF-GRID OPERATION		
AC INPUT		
AC Start-up Voltage / Auto Restart Voltage	120 - 140 VAC / 180 VAC	
Acceptable Input Voltage Range	90 - 280 VAC or 170 - 280 VAC	
Maximum AC Input Current	40 A	
PV INPUT (DC)		
Maximum DC Voltage	500 VDC	
MPPT Voltage Range	120 VDC ~ 450 VDC	
Number of MPP Trackers / Maximum Input Current	1 / 18 A	1 / 27 A
BATTERY MODE OUTPUT (AC)		
Nominal Output Voltage	220/230/240 VAC	
Output Waveform	Pure sinewave	
Efficiency (DC to AC)	93%	
HYBRID OPERATION		
PV INPUT (DC)		
Nominal DC Voltage / Maximum DC Voltage	360 VDC / 500 VDC	
Start-up Voltage / Initial Feeding Voltage	110VDC / 120 VDC	120VDC / 150 VDC
MPPT Voltage Range	120 VDC ~ 430 VDC	
Number of MPP Trackers / Maximum Input Current	1 / 18 A	1 / 27 A
GRID OUTPUT (AC)		
Nominal Output Voltage	220/230/240 VAC	
Output Voltage Range	184 - 264.5 VAC or 195.5 - 253 VAC (Selectable)	
Nominal Output Current	15.6A	26.1A
BATTERY & CHARGER		
AC Start-up Voltage / Auto Restart Voltage	120 - 140 VAC / 180 VAC	
Acceptable Input Voltage Range	90 - 280 VAC or 170 - 280 VAC	
Maximum AC Input Current	40A	
Battery Supported	LEAD ACID VRLA AGM DEEP CYCLE GEL FLOODED TUBULAR LITHIUM-ION (BMS BUILT-IN)	
Nominal Output Voltage	220/230/240 VAC	
Efficiency (DC to AC)	93%	
BATTERY & CHARGER		
Nominal DC Voltage	48 VDC	
Maximum Solar Charging Current	100A	120A
Maximum AC Charging Current	100A	120A
Maximum Charging Current	100A	120A
GENERAL		
PHYSICAL		
Dimension, D x W x H (mm)	140 x 295 x 468	
Net Weight (kgs)	11	12
INTERFACE		
Parallel Function	Yes, 9 units	
Communication Port	USB/RS232/RS485/WIFI/Dry-contact	
ENVIRONMENT		
Humidity	0 ~ 90% RH (Non-condensing)	
Operating Temperature	-10 to 50°C	

Product specifications are subject to change without further notice.

DUAL PV6000+

ON-GRID WITH ENERGY STORAGE (HYBRID)



Max PV Input
6500W+



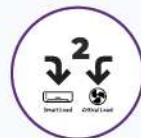
Max PV Voltage
500VDC



Max PV Input
Current **27A**



MPPT Range
120-450VDC



DUAL AC Output
6000W



Max Charging
Current **120A**



Zero Export
Built-in



Colored LCD &
Touchable Buttons



Net Metering
Feed into Grid



Works with &
without Battery
48VDC



9 Units
can be Parallel



Monitor & Control
with **Built-in Wifi**

MODEL	SM-ORION-DUAL-PV6000+
PHASE	1-phase in / 1-phase out
MAXIMUM PV INPUT POWER	6500W+
RATED OUTPUT POWER	6000W DUAL
MAXIMUM CHARGING POWER	6000W
GRID-TIE OPERATION	
PV INPUT (DC)	
Nominal DC Voltage / Maximum DC Voltage	360 VDC / 500 VDC
Start-up Voltage / Initial Feeding Voltage	120 VDC
MPPT Voltage Range	120 VDC ~ 450 VDC
Number of MPP Trackers / Maximum Input Current	1 / 27 A
GRID OUTPUT (AC)	
Nominal Output Voltage	220/230/240 VAC
Output Voltage Range	184 - 264.5 VAC or 195.5 - 253 VAC (Selectable)
Nominal Output Current	26A
EFFICIENCY	
Maximum Conversion Efficiency (DC/AC)	96%
OFF-GRID OPERATION	
AC INPUT	
AC Start-up Voltage / Auto Restart Voltage	120 - 140 VAC / 180 VAC
Acceptable Input Voltage Range	90 - 280 VAC or 170 - 280 VAC
Maximum AC Input Current	40 A
PV INPUT (DC)	
Maximum DC Voltage	500 VDC
MPPT Voltage Range	120 VDC ~ 450 VDC
Number of MPP Trackers / Maximum Input Current	1 / 27 A
BATTERY MODE OUTPUT (AC)	
Nominal Output Voltage	220/230/240 VAC
Output Waveform	Pure sinewave
Efficiency (DC to AC)	93%
HYBRID OPERATION	
PV INPUT (DC)	
Nominal DC Voltage / Maximum DC Voltage	360 VDC / 500 VDC
Start-up Voltage / Initial Feeding Voltage	110VDC / 120 VDC
MPPT Voltage Range	120 VDC ~ 450 VDC
Number of MPP Trackers / Maximum Input Current	1 / 27 A
GRID OUTPUT (AC)	
Nominal Output Voltage	220/230/240 VAC
Output Voltage Range	184 - 264.5 VAC or 195.5 - 253 VAC (Selectable)
Nominal Output Current	26A
AC INPUT	
AC Start-up Voltage / Auto Restart Voltage	120 - 140 VAC / 180 VAC
Acceptable Input Voltage Range	90 - 280 VAC or 170 - 280 VAC
Maximum AC Input Current	40A
BATTERY MODE OUTPUT (AC)	
Battery Supported	LEAD ACID VRLA AGM DEEP CYCLE GEL FLOODED LITHIUM-ION (BMS BUILT-IN)
Nominal Output Voltage	220/230/240 VAC
Efficiency (DC to AC)	93%
BATTERY & CHARGER	
Nominal DC Voltage	48 VDC
Maximum Solar Charging Current	120A
Maximum AC Charging Current	120A
Maximum Charging Current	120A
GENERAL	
PHYSICAL	
Dimension, D x W x H (mm)	140 x 295 x 468
Net Weight (kgs)	12
INTERFACE	
Parallel Function	Yes, 9 units
Communication Port	USB/RS232/RS485/WIFI/Dry-contact
ENVIRONMENT	
Humidity	0 ~ 90% RH (Non-condensing)
Operating Temperature	-10 to 50°C

Product specifications are subject to change without further notice.

PV8000+ PV11000+

ON-GRID WITH ENERGY STORAGE (HYBRID)



Max PV Input
8000W+ & 11000W+



Max PV Voltage
500VDC



Max PV Input
Current **27A**



MPPT Range
90-450VDC



DUAL AC Output
8000W & 11000W



Max Charging
Current **150A**



Zero Export
Built-in



Colored LCD &
Touchable Buttons



Net Metering
Feed into Grid



Works with &
without Battery
48VDC



6 Units
can be Parallel



Monitor & Control
with **Built-in Wifi**

MODEL	SM-ORION-DUAL-PV8000+	SM-ORION-DUAL-PV11000+
Capacity	8000VA/8000W	11000VA/11000W
MAXIMUM DUAL PV INPUT POWER	8000W (4000W x 2)	11000W (5500W x 2)
RATED OUTPUT POWER	8000W	11000W
SURGE POWER	16000VA	22000VA
GRID-TIE OPERATION		
PV INPUT (DC)		
Nominal DC Voltage / Maximum DC Voltage	500 VDC	
Start-up Voltage / Initial Feeding Voltage	80V + / - 5VDC	
MPPT Voltage Range	90 VDC ~ 450 VDC	
Number of MPP Trackers / Maximum Input Current	2 / 27A + 27A	
GRID OUTPUT (AC)		
Nominal Output Voltage	220/230/240 VAC	
Output Voltage Range	184 - 264.5 VAC	
Nominal Output Current	34.8 A	47.8 A
Waveform	Pure Sine Wave	
Transfer Time	10 ms (For Computers), 20 ms (For Home Appliances)	
Optional DC Voltage	12 VDC ± 5%, 100W	N/A
OFF-GRID OPERATION		
AC INPUT		
Voltage	230 VAC	
Selectable Voltage Range	170-280 VAC (For Computers)	90-280 VAC (For Home Appliances)
Frequency Range	50 Hz/60 Hz (Auto sensing)	
Input Voltage Waveform	Sinusoidal (Utility or Generator)	
PV INPUT (DC)		
Maximum DC Voltage	500 VDC	
MPPT Voltage Range	90 VDC ~ 450 VDC	
Number of MPP Trackers / Maximum Input Current	2 / 27A + 27A	
BATTERY MODE OUTPUT (AC)		
Nominal Output Voltage	230VAC ± 5%	230VAC ± 5%
Output Waveform	Pure Sine Wave	
Battery Supported	LEAD ACID VRLA AGM DEEP CYCLE GEL FLOODED TUBULAR LITHIUM-ION (BMS BUILT-IN)	
HYBRID OPERATION		
PV INPUT (DC)		
Nominal DC Voltage / Maximum DC Voltage	500 VDC	
Start-up Voltage / Initial Feeding Voltage	90 VDC	
MPPT Voltage Range	90 VDC ~ 450 VDC	
Number of MPP Trackers / Maximum Input Current	2 / 27A + 27A	
GRID OUTPUT (AC)		
Nominal Output Voltage	220/230/240 VAC	
Output Voltage Range	184 - 264.5 VAC	
Nominal Output Current	34.8 A	47.8 A
AC INPUT		
Voltage	230 VAC	
AC Start-up Voltage / Auto Restart Voltage	180 VAC ± 7V (For Computers)	100 VAC ± 7V (For Home Appliances)
Maximum AC Input Current	60A	
BATTERY MODE OUTPUT (AC)		
Nominal Output Voltage	220/230/240 VAC	
Efficiency (DC to AC)	93%	
BATTERY & CHARGER		
Nominal DC Voltage	48 VDC	
Maximum Solar Charging Current	120A	150A
Maximum AC Charging Current	120A	150A
Maximum Charging Current	150A	
GENERAL		
PHYSICAL		
Dimension, D x W x H (mm)	147.4 x 432.5 x 553.6	
Net Weight (kgs)	18.4	
INTERFACE		
Parallel Function	6 units (Parallel Kit Built-in)	
Communication Port	USB/RS232/RS485/CAN/WIFI/Dry-contact	
ENVIRONMENT		
Humidity	5% to 95% Relative Humidity(Non-condensing)	
Operating Temperature	-10 to 50°C	
Storage Temperature	-15 to 60°C	

Product specifications are subject to change without further notice.



SINGLE PHASE DUAL PV9000 with Parallel Feature

ON-GRID WITH ENERGY STORAGE (HYBRID)



ONYX
DUAL SERIES



Max PV Input
9000W



Max PV Voltage
550VDC



DUAL MPPT
15A + 15A



MPPT Range
70 ~ 520VDC



DUAL AC Output
6000W



Max PV (ISC)
Current 20A + 20A



9 Units
can be Parallel



Max Charging
Current 120A



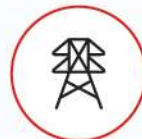
Battery Voltage
40 ~ 60VDC



IP65
Protection



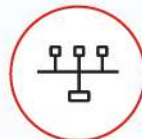
Zero Export
Built-in



Net Metering
Feed into Grid



Monitor & Control
with Built-in Wifi



Communication Ports
RS232/USB/RS485/
DRM/CAN

Model	SM-ONYX-DUAL-PV9000
Input (PV)	
MAX PV Power (W)	9000W
Max PV voltage (V)	550VDC
Max input current (input A/input B) (A)	30A (15A + 15A)
Max short current (input A/input B) (A)	40A (20A + 20A)
Start operating voltage (V)	90VDC
MPPT voltage range (V)	70-520VDC
No.of MPPT trackers	2
String per MPP tracker	1
Input (BATTERY)	
Compatible battery type	Lithium-ion / Lead-acid
Nominal battery voltage (V)	48VDC
Battery voltage range (V)	40-60VDC
Max. charge/discharge current (A)	120A / 120A
Max. charge/discharge power (W)	6000W / 6000W DUAL
Charging curve	3 Stages / Equalization
Lithium battery charge curve	Self-adaption to BMS
Output (Grid)	
Nominal AC output power (W)	6000W DUAL
Max. AC output apparent power (VA)	6000W DUAL
Max.AC output power (PF=1) (W)	6000W DUAL
Max. AC output current (A)	27.2A
Rated AC voltage (V)	220VAC
AC voltage range (V)	150-300VAC (adjustable)
Rated grid frequency (Hz)	50Hz / 60Hz
AC frequency range (Hz)	45-55Hz / 55-65Hz (adjustable)
Grid connection	Single phase
THDI	<3%
Output (Back up)	
Nominal output voltage (V)	230VAC
Nominal output frequency (Hz)	50 / 60Hz
Nominal output power (W)	6000W
Nominal output current (A)	26A
Transfer time (ms)	10(typ) / 20(max)
THDV	<3% @100% R Load
Protection	
Protection category	Class I
DC switch	Support
Anti-islanding protection	Support
AC overcurrent protection	Support
AC short circuit protection	Support
DC reverse connection	Support
Surge Arrester	DC Type III, AC Type III
Insulation detection	Support
Leakage current protection	Support
PV overvoltage category	II
AC overvoltage category	III
Efficiency	
Max.Efficiency (PV to AC)	>97.3%
Max.Efficiency (BAT to AC)	>94.0%
MPPT Efficiency	>99.0%
General	
Max. operation altitude (m)	4000
Noise emission (dB)	<35
Ingress protection degree	IP65
Operating temperature range	-25~60
Relative humidity (%)	0~100
Cooling concept	Natural Cooling
Mounting	Wall bracket
Dimensions (W*H*D)	515mm*450mm*175mm
Weight	25Kg
PV connection way	MC4/H4
Battery connection way	Dedicated DC connector
AC connection way (grid & back up)	Dedicated AC connector
HMI & COM	
Display	LED+APP
Communication interface	RS485/CAN (for BMS), RS485, USB, DRM/RS485 (for Meter), Bluetooth, Wifi, Optional: GPRS/Ethernet
Certification	
Grid	VDE-AR-N4105, IEC 61727/62116, AS 4777.2, EN 50549-1
Safety	IEC62109-1&2, IEC62040-1, IEC62477-1
Warranty (years)	6 Years

Product specifications are subject to change without further notice.



SINGLE PHASE DUAL PV7000 | PV 8000

ON-GRID WITH ENERGY STORAGE (HYBRID)



SOLON DUAL SERIES



LCD & Bluetooth



User-Friendly



IP65 Protection



MPPT Efficiency
95%



Smart & Compact
Design



Support Export Limit
Function



High Reliability



High Power
Factor



Higher Yields



High Surge
Endurance



Wide PV Input
Voltage Range



Internal SPD's
Protection

MODEL	SM-SP-DUAL-PV7000	SM-SP-DUAL-PV8000+
PHASE	1-phase in / 1-phase out	
MAXIMUM PV INPUT POWER	6500 W	8000W
RATED OUTPUT POWER	6000VA/6000W	8000VA/8000W
MAXIMUM CHARGING POWER	6000 W	6000W
GRID-TIE OPERATION		
PV INPUT (DC)		
Maximum DC Voltage	550 VDC	550 VDC
Start-up Voltage / Initial Feeding Voltage	120VDC / 150 VDC	
MPP Voltage Range	120 VDC ~ 450 VDC	120 VDC ~ 450 VDC
Number of MPP Trackers / Maximum Input Current	1 / 30A	2 / 18A
GRID OUTPUT (AC)		
Nominal Output Voltage	220/230/240 VAC	
Output Voltage Range	184 - 264.5 VAC or 195.5 - 253 VAC or 184 - 264.4 VAC (Selectable)	
Nominal Output Current	26A	34.7A
Power Factor	> 0.99	
EFFICIENCY		
Maximum Conversion Efficiency (DC/AC)	95%	
OFF-GRID OPERATION		
AC INPUT		
AC Start-up Voltage / Auto Restart Voltage	120 - 140 VAC / 180 VAC	
Acceptable Input Voltage Range	90 - 280 VAC or 170 - 280 VAC	
Frequency Range	50 Hz/60 Hz (Auto sensing)	
Maximum AC Input Current	40 A	60A
PV INPUT (DC)		
Maximum DC Voltage	550 VDC	550 VDC
MPP Voltage Range	120VDC ~ 450 VDC	120VDC ~ 450 VDC
Number of MPP Trackers / Maximum Input Current	1 / 30A	2 / 18A
BATTERY MODE OUTPUT (AC)		
Nominal Output Voltage	220/230/240 VAC	
Output Waveform	Pure sine wave	
Efficiency (DC to AC)	93%	
HYBRID OPERATION		
PV INPUT (DC)		
Maximum DC Voltage	550 VDC	550 VDC
Start-up Voltage / Initial Feeding Voltage	120 VDC / 150 VDC	
MPP Voltage Range	120 VDC ~ 450 VDC	120 VDC ~ 450 VDC
Number of MPP Trackers / Maximum Input Current	1 / 30A	2 / 18A
GRID OUTPUT (AC)		
Nominal Output Voltage	220/230/240 VAC	
Output Voltage Range	184 - 264.5 VAC or 195.5 - 253 VAC or 184 - 264.4 VAC (Selectable)	
Nominal Output Current	26A	34.7A
AC INPUT		
AC Start-up Voltage / Auto Restart Voltage	120 - 140 VAC / 180 VAC	
Acceptable Input Voltage Range	90 - 280 VAC or 170 - 280 VAC	
Maximum AC Input Current	40 A	60A
BATTERY MODE OUTPUT (AC)		
Nominal Output Voltage	220/230/240 VAC	
Efficiency (DC to AC)	93%	93%
BATTERY & CHARGER		
Nominal DC Voltage	48 VDC	
Maximum Solar Charging Current	120 A	120 A
Maximum AC Charging Current	120 A	120 A
Maximum Charging Current	120 A	120 A
GENERAL		
PHYSICAL		
Dimension, D x W x H (mm)	192 x 360 x 665	
Net Weight (kgs)	22.5	32
INTERFACE		
Parallel Function	Yes, 9 units	
Communication Port	USB or RS-232/Dry Contact/RS485/Wi-Fi	
ENVIRONMENT		
Humidity	0 ~ 95% RH (No condensing)	
IP degree	IP65	
Operating Temperature	-25°C to 50°C	

Product specifications are subject to change without further notice.



3 PHASE DUAL

PV14000+

PV16000+

PV22000+

ON-GRID WITH ENERGY STORAGE (HYBRID)



ONYX

DUAL SERIES



Max DC Voltage
1000VDC



Internal Surge
Protection



2 MPPT Input



Wide PV Input Range
350 ~ 850VDC



DUAL AC
Output



MPPT Efficiency
99.9%



Multiple Units
can be Parallel



Pure Sine
Wave



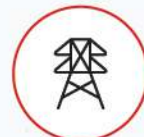
Battery Charging
Curve



IP65
Protection



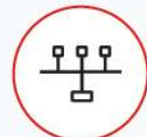
Zero Export
Built-in



Net Metering
Feed into Grid



Monitor & Control
with Built-in Wifi



Communication Ports
RS232/USB/RS485/Can

MODEL	SM-ONYX-DUAL-PV14000+	SM-ONYX-DUAL-PV16000+	SM-ONYX-DUAL-PV22000+
MAXIMUM PV INPUT POWER	14500W	16000W	22500W
RATED OUTPUT POWER	10000 W	12000 W	15000 W
MAXIMUM CHARGING POWER	10000 W	12000 W	15000 W
GRID-TIE OPERATION			
PV INPUT (DC)			
Nominal DC Voltage	720 VDC		
Maximum DC Voltage	1000 VDC		
Start-up Voltage / Initial Feeding Voltage	320 VDC / 350 VDC		
MPP Voltage Range	350 VDC ~ 850 VDC		
Number of MPP Trackers / Maxium Input Current	2 / A: 27A, B: 13.5A	2 / A: 27A, B: 27A	2 / A: 27A, B: 27A
Number of Strings Per MPP Tracker	A: 2, B: 1	A: 2, B: 2	A: 2, B: 2
GRID/UTILITY OUTPUT (AC)			
Nominal Output Voltage	230 VAC (P-N) / 400 VAC (P-P)		
Output Voltage Range	184 - 265 VAC per phase		
Output Frequency Range	47.5 ~ 51.5 Hz or 59.3 ~ 60.5 Hz		
Nominal Output Current	14.5 A per phase	17.4 A per phase	21.7 A per phase
Power Factor Range	0.9 lag ~ 0.9 lead		
EFFICIENCY			
Maximum Conversion Efficiency (DC/AC)	>97%		
European Efficiency@ Vnominal	>96%		
MPPT Efficiency@ Vnominal	>99.9%		
OFF-GRID OPERATION			
AC INPUT			
AC Start-up Voltage	120 - 140 VAC / 180VAC		
Acceptable Input Voltage Range	170 - 290 VAC per phase		
Maximum AC Input Current	40 A	40 A	40 A
PV INPUT (DC)			
Maximum DC Power	14500W	16000W	22500W
Maximum DC Voltage	1000 VDC		
MPP Voltage Range	350 VDC ~ 850 VDC		
Number of MPP Trackers / Maxium Input Current	2 / A: 27A, B: 13.5A	2 / A: 27A, B: 27A	2 / A: 27A, B: 27A
Number of Strings Per MPP Tracker	A: 2, B: 1	A: 2, B: 2	A: 2, B: 2
BATTERY MODE OUTPUT (AC)			
Nominal Output Voltage	230 VAC (P-N) / 400 VAC (P-P)		
Output Frequency	50 Hz / 60 Hz (auto sensing)		
Output Waveform	Pure sine wave		
HYBRID OPERATION			
PV INPUT (DC)			
Maximum DC Power	14500W	16000W	22500W
Nominal DC Voltage	720 VDC		
Maximum DC Voltage	1000 VDC		
Start-up Voltage / Initial Feeding Voltage	320 VDC / 350 VDC		
MPP Voltage Range	350 VDC ~ 850 VDC		
Number of MPP Trackers / Maxium Input Current	2 / A: 27A, B: 13.5A	2 / A: 27A, B: 27A	2 / A: 27A, B: 27A
Number of Strings Per MPP Tracker	A: 2, B: 1	A: 2, B: 2	A: 2, B: 2
GRID/UTILITY OUTPUT (AC)			
Nominal Output Voltage	230 VAC (P-N) / 400 VAC (P-P)		
Output Voltage Range	184 - 265 VAC per phase		
Output Frequency Range	47.5 ~ 51.5 Hz or 59.3 ~ 60.5 Hz		
Nominal Output Current	14.5 A per phase	17.4 A per phase	21.7 A per phase
AC INPUT			
AC Start-up Voltage	120 - 140 VAC per phase		
Auto Restart Voltage	180 VAC per phase		
Acceptable Input Voltage Range	170 - 280 VAC per phase		
Maximum AC Input Current	40 A	40 A	40 A
BATTERY MODE OUTPUT (AC)			
Nominal Output Voltage	230 VAC (P-N) / 400 VAC (P-P)		
Output Frequency	50 Hz / 60 Hz (auto sensing)		
Output Waveform	Pure sine wave		
BATTERY & CHARGER			
Battery Type	LEAD ACID VRLA AGM DEEP CYCLE GEL FLOODED LITHIUM-ION (BMS BUILT-IN)		
Battery Voltage Range	40 ~ 62 VDC		
Maximum Charging Voltage	60 VDC (Configurable)		
Maximum Charging Current	220 A	250 A	300 A
Maximum Discharging Current	250 A	300 A	375 A
Charging Curve	3 Stages/Equalization		
Charging Strategy for Li-Ion Battery	Self-adaption to BMS		
GENERAL			
PHYSICAL			
Dimension, D X W X H (mm)	255 X 660 X 750	255 X 660 X 750	255 X 660 X 750
Net Weight (kgs)	70	70	74.70
IP protection	IP 65		
INTERFACE			
Communication Port	RS-232, RS-485, USB, CAN and Wi-Fi		
Intelligent Slot	Optional for SNMP and Modbus cards		
Parallel Function	6 units (Parallel Kit Built-in)		
ENVIRONMENT			
Humidity	0 ~ 100% RH (Non-condensing)		
Operating Temperature	-25 to 60°C, > 45°C power derating		
Altitude	0 ~ 1000 m**		

*These figures are based on VDE-4105 standard. All figures may vary depending on different AC voltage and country requirements.
Product specifications are subject to change without further notice



3 PHASE DUAL PV40000+

ON-GRID WITH ENERGY STORAGE (HYBRID)



ONYX
DUAL SERIES



Max DC Voltage
1000VDC



Max Charging
Current 50A



3 MPPT Input



Wide PV Input Range
350 ~ 900VDC



DUAL AC
Output



Internal Surge
Protection



Multiple Units
can be Parallel



Pure Sine
Wave



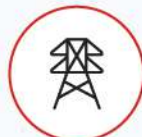
Battery Charging
Curve



IP65
Protection



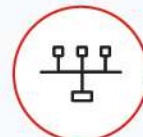
Zero Export
Built-in



Net Metering
Feed into Grid



Monitor & Control
with Built-in Wifi



Communication Ports
RS232/USB/RS485/Can

MODEL	SM-ONYX-DUAL-PV40000+
MAXIMUM PV INPUT POWER	40000 W
RATED OUTPUT POWER	30000 W
MAXIMUM CHARGING POWER	18000 W
GRID-TIE OPERATION	
PV INPUT (DC)	
Nominal DC Voltage / Maximum DC Voltage	720 VDC / 1000 VDC
Start-up Voltage / Initial Feeding Voltage	320 VDC / 350 VDC
MPP Voltage Range	350 VDC ~ 900 VDC
Number of MPP Trackers / Maximum Input Current	3 / A: 26A, B: 26A, C: 26A
Number of Strings Per MPP Tracker	A: 2, B: 2, C: 2
GRID/UTILITY OUTPUT (AC)	
Nominal Output Voltage	230 VAC (P-N) / 400 VAC (P-P)
Output Voltage Range	184 - 265 VAC per phase
Nominal Output Current	43.5 A per phase
Power Factor	0.9 lag to 0.9 lead
EFFICIENCY	
Maximum Conversion Efficiency (DC/AC)	96.5%
European Efficiency@ Vnominal	96%
OFF-GRID OPERATION	
AC INPUT	
AC Start-up Voltage / Auto Restart Voltage	120 - 140 VAC / 180 VAC per phase
Acceptable Input Voltage Range	170 - 280 VAC per phase
Maximum AC Input Current	50 A
PV INPUT (DC)	
Maximum DC Voltage	1000 VDC
MPP Voltage Range	350 VDC ~ 900 VDC
Number of MPP Trackers / Maximum Input Current	3 / A: 26A, B: 26A, C: 26A
BATTERY MODE OUTPUT (AC)	
Nominal Output Voltage	230 VAC (P-N) / 400 VAC (P-P)
Output Waveform	Pure sine wave
Efficiency (DC to AC)	96%
HYBRID OPERATION	
PV INPUT (DC)	
Maximum DC Voltage	1000 VDC
Start-up Voltage / Initial Feeding Voltage	320 VDC / 350 VDC
MPP Voltage Range	350 VDC ~ 900 VDC
Number of MPP Trackers / Maximum Input Current	3 / A: 26A, B: 26A, C: 26A
GRID OUTPUT (AC)	
Nominal Output Voltage	230 VAC (P-N) / 400 VAC (P-P)
Output Voltage Range	184 - 265 VAC per phase
Nominal Output Current	43.5 A per phase
AC INPUT	
AC Start-up Voltage / Auto Restart Voltage	120 - 140 VAC / 180 VAC per phase
Acceptable Input Voltage Range	170 - 280 VAC per phase
Maximum AC Input Current	50 A
BATTERY MODE OUTPUT (AC)	
Nominal Output Voltage	230 VAC (P-N) / 400 VAC (P-P)
Efficiency (DC to AC)	96%
BATTERY & CHARGER	
Battery Voltage Range	500 ~ 1000 VDC
Maximum Charging Current	50 A
GENERAL	
PHYSICAL	
Dimension, D x W x H (mm)	255 x 660 x 750
Net Weight (kgs)	73
INTERFACE	
Communication Port	RS-232, USB, DRY CONTACT, RS-485 and Wi-Fi
Intelligent Slot	Optional SNMP, MODBUS and GPRS
ENVIRONMENT	
Humidity	0 ~ 100% RH
Operating Temperature	-25°C to 60°C (>45°C De-rating)
Altitude	0 ~ 1000 m**



- IP65 waterproof and dustproof makes the inverter available for various working conditions.
- 150% unbalanced load support
- Dual outputs for smart load management
- Built-in WiFi for mobile monitoring (App is available)
- User-adjustable charging current up to 50A
- Wide battery input range
- Built-in communication port for BMS (RS485)
- Parallel operation up to 4 units

*These figures are based on VDE-4105 standard. All figures may vary depending on different AC voltage and country requirements. Product specifications are subject to change without further notice



3 PHASE GRID-TIED

6KW - 8KW - 10KW - 12KW - 15KW



5G SERIES



LCD & Bluetooth



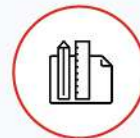
User-Friendly



IP65 Protection



MPPT Efficiency
99%



Smart & Compact
Design



Support Export Limit
Function



High Reliability



High Power
Factor



Higher Yields



High Surge
Endurance



Wide PV Input
Voltage Range



Internal SPD's
Protection

Model	SM-6K-5G3P	SM-8K-5G3P	SM-10K-5G3P	SM-12K-5G3P	SM-15K-5G3P
Efficiency					
Max. Efficiency	98.2%	98.2%	98.4%	98.4%	98.4%
European Efficiency	97.8%	97.8%	98.0%	98.0%	98.0%
MPPT Efficiency	>99%				
Input					
Max. Input Power (KW)	7.8	10.4	13	15.6	19.5
Max. Input Voltage	1000V				
Rated Input Voltage	620V				
Max. Input Current	26A (2*13A)			39A (26A+13A)	
Max.Short Circuit Current	30A(2*15A)			45A(2*15A+15A)	
Start Input Voltage/ Min. Operating Voltage	200V/160V				
MPPT Operating Voltage Range	160V-950V				
MPPT Operating Voltage Range (Full-Load)	300V-800V	380V-800V	470V-800V	380V-800V	470V-800V
Max. Number of PV Strings	2(1/1)			3(2/1)	
No. of MPPTs	2				
Output					
Rated AC Active Power	6,000W	8,000W	10,000W	12,000W	15,000W
Max. AC Apparent Power	6,600VA	8,800VA	11,000VA	13,200VA	16,500VA
Max. AC Active Power (PF=1)	6,600W	8,800W	11,000W	13,200W	16,500W
Max. AC Output Current	3*10A	3*13A	3*16A	3*18.2A	3*22.7A
Rated AC Voltage	380V/400V,3W+N+PE				
AC Voltage Range*	277V-520V(Adjustable)				
Rated Grid Frequency	50Hz/60Hz				
Grid Frequency Range**	45Hz-55Hz/55Hz-65Hz(Adjustable)				
THDI	<3% (Rated Power)				
DC Current Injection	<0.5%In				
Power Factor	> 0.99 Rated power(Adjustable 0.8 Leading - 0.8Lagging)				
Protection					
DC switch	Support				
Anti-islanding protection	Support				
AC overcurrent protection	Support				
AC short circuit protection	Support				
DC reverse connection	Support				
Surge Arrester	AC Type III				
Insulation detection	Support				
Leakage current protection	Support				
Environment					
Topology	Transformerless				
IP Rating	IP65				
Night Self Consumption	<1W				
Cooling	Natural cooling				
Operating Temperature Range	-25°-60°				
Relative Humidity Range	0-100%				
Max. Operating Altitude	4000m				
Noise	<30dB				
Dimensions (W*H*D)	400*500*190mm				
Weight	18.9KG			21.8KG	
Features					
Display	Bluetooth , APP, LED & LCD				
Communication	WiFi, RS485, GPRS(Optional)				
Compliance					
Safety	IEC62109-1, IEC62109-2				
Others	IEC 60068, IEC 61683				
Grid Code	VDE-AR-N 4105, IEC61727, IEC62116, EN 50549, IEEE 1547, AS 4777				
Warranty	6 Years/10 Years(Optional)				

Remarks: The range of output voltage and frequency may vary depending upon different grid codes.Specifications are subject to change without advance notice.



3 PHASE GRID-TIED

17KW - 20KW - 22KW



5G

SERIES



LCD & Bluetooth



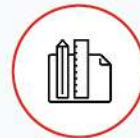
User-Friendly



IP65 Protection



MPPT Efficiency
99%



Smart & Compact
Design



Support Export Limit
Function



High Reliability



High Power
Factor



Higher Yields



High Surge
Endurance



Wide PV Input
Voltage Range



Internal SPD's
Protection

Model	SM-17K-5G3P	SM-20K-5G3P	SM-22K-5G3P
Efficiency			
Max. Efficiency	98.6%	98.6%	98.6%
European Efficiency	98.2%	97.7%	98.2%
MPPT Efficiency		>99%	
Input			
Max. Input Power (KW)	22.1	26	28.6
Max. Input Voltage		1000V	
Rated Input Voltage		620V	
Max. Input Current		50A (2*25A)	
Max.Short Circuit Current		60A(2*30A)	
Start Input Voltage/ Min. Operating Voltage		250V/180V	
MPPT Operating Voltage Range		180V-960V	
MPPT Operating Voltage Range (Full-Load)		480V-800V	
Max. Number of PV Strings		4(2/2)	
No. of MPPTs		2	
Output			
Rated AC Active Power	17,000W	20,000W	22,000W
Max. AC Apparent Power	18,700VA	22,000VA	24,200VA
Max. AC Active Power (PF=1)	18,700VA	22,000W	24,200W
Max. AC Output Current	3*28.3A	3*33.5A	3*35A
Rated AC Voltage		380V/400V, 3W+N+PE	
AC Voltage Range*		277V-520V(Adjustable)	
Rated Grid Frequency		50Hz/60Hz	
Grid Frequency Range**		45Hz-55Hz/55Hz-65Hz(Adjustable)	
THDI		<3% (Rated Power)	
DC Current Injection		<0.5% In	
Power Factor		> 0.99 Rated power(Adjustable 0.8 Leading - 0.8Lagging)	
Protection			
DC switch		Support	
Anti-islanding protection		Support	
AC overcurrent protection		Support	
AC short circuit protection		Support	
DC reverse connection		Support	
Surge Arrester		DC Type II/AC Type II	
Insulation detection		Support	
Leakage current protection		Support	
Environment			
Topology		Transformerless	
IP Rating		IP65	
Night Self Consumption		<1W	
Cooling		Natural cooling	
Operating Temperature Range		-25°-60°	
Relative Humidity Range		0-100%	
Max. Operating Altitude		4000m	
Noise		<30dB	
Dimensions (W*H*D)		555*446*270mm	
Weight		37KG	
Communication			
Display		Bluetooth , APP, LED & LCD	
Communication		WiFi, RS485, GPRS(Optional)	
Compliance			
Safety		IEC62109-1, IEC62109-2	
Others		IEC 60068, IEC 61683	
Grid Code		VDE-AR-N 4105, IEC61727, IEC62116, EN 50549	
Warranty		6 Years/10 Years(Optional)	

Remarks: The range of output voltage and frequency may vary depending upon different grid codes. Specifications are subject to change without advance notice.



3 PHASE GRID-TIED

25KW - 28KW - 30KW



5G SERIES



LCD & Bluetooth



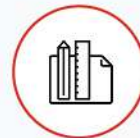
User-Friendly



IP65 Protection



MPPT Efficiency
99%



Smart & Compact
Design



Support Export Limit
Function



High Reliability



High Power
Factor



Higher Yields



High Surge
Endurance



Wide PV Input
Voltage Range



Internal SPD's
Protection

Model	SM-25K-5G3P	SM-28K-5G3P	SM-30K-5G3P
Efficiency			
Max. Efficiency	98.6%	98.6%	98.6%
European Efficiency	98.3%	98.3%	98.3%
MPPT Efficiency		>99%	
Input			
Max. Input Power (KW)	32.5	36.4	39
Max. Input Voltage		1000V	
Rated Input Voltage		620V	
Max. Input Current		75A (2*37.5A)	
Max.Short Circuit Current		84A(2*42A)	
Start Input Voltage/ Min. Operating Voltage		250V/180V	
MPPT Operating Voltage Range		180V-960V	
MPPT Operating Voltage Range (Full-Load)		480V-800V	
Max. Number of PV Strings		6(3/3)	
No. of MPPTs		2	
Output			
Rated AC Active Power	25,000W	28,000W	30,000W
Max. AC Apparent Power	27,500VA	30,800VA	33,000VA
Max. AC Active Power (PF=1)	27,500VA	30,800W	33,000W
Max. AC Output Current	3*40A	3*45A	3*48A
Rated AC Voltage		380V/400V, 3W+N+PE	
AC Voltage Range*		277V-520V(Adjustable)	
Rated Grid Frequency		50Hz/60Hz	
Grid Frequency Range**		45Hz-55Hz/55Hz-65Hz(Adjustable)	
THDI		<3%(Rated Power)	
DC Current Injection		<0.5%In	
Power Factor		> 0.99 Rated power(Adjustable 0.8 Leading - 0.8Lagging)	
Protection			
DC switch		Support	
Anti-islanding protection		Support	
AC overcurrent protection		Support	
AC short circuit protection		Support	
DC reverse connection		Support	
Surge Arrester		DC Type II/AC Type II	
Insulation detection		Support	
Leakage current protection		Support	
Environment			
Topology		Transformerless	
IP Rating		IP65	
Night Self Consumption		<1W	
Cooling		Fan cooling	
Operating Temperature Range		-25°-60°	
Relative Humidity Range		0-100%	
Max. Operating Altitude		4000m	
Noise		<50dB	
Dimensions (W*H*D)		555*446*270mm	
Weight		40KG	
Communication			
Display		Bluetooth , APP, LED & LCD	
Communication		WiFi, RS485, GPRS(Optional)	
Compliance			
Safety		IEC62109-1, IEC62109-2	
Others		IEC 60068, IEC 61683	
Grid Code		VDE-AR-N 4105, IEC61727, IEC62116, EN 50549	
Warranty		6 Years/10 Years(Optional)	

Remarks: The range of output voltage and frequency may vary depending upon different grid codes. Specifications are subject to change without advance notice.



3 PHASE GRID-TIED

50KW - 60KW



5G SERIES



LCD & Bluetooth



User-Friendly



IP65 Protection



MPPT Efficiency
99%



Smart & Compact
Design



Support Export Limit
Function



High Reliability



High Power
Factor



Higher Yields



High Surge
Endurance



Wide PV Input
Voltage Range



Internal SPD's
Protection

Model	SM-50K-5G3P	SM-60K-5G3P
Efficiency		
Max. Efficiency	99.0%	99.0%
European Efficiency	98.5%	98.5%
MPPT Efficiency	>99%	
Input		
Max. Input Power (KW)	70	84
Max. Input Voltage	1100V	
Rated Input Voltage	620V	
Max. Input Current	110A (33A/33A/22A/22A)	132A (33A/33A/33A/33A)
Max.Short Circuit Current	140A(42A/42A/28A/28A)	168A(42A/42A/42A/42A)
Start Input Voltage/ Min. Operating Voltage	250V/200V	
MPPT Operating Voltage Range	200V-1000V	
MPPT Operating Voltage Range (Full-Load)	540V-850V	
Max. Number of PV Strings	10(3/3/2/2)	12(3/3/3/3)
No. of MPPTs	4	
Output		
Rated AC Active Power	50,000W	60,000W
Max. AC Apparent Power	55,000VA	66,000VA
Max. AC Active Power (PF=1)	55,000W	66,000W
Max. AC Output Current	3*76A	3*92A
Rated AC Voltage	380V/400V, 3W+N+PE	
AC Voltage Range*	277V-520V(Adjustable)	
Rated Grid Frequency	50Hz/60Hz	
Grid Frequency Range**	45Hz-55Hz/55Hz-65Hz(Adjustable)	
THDI	<3%(Rated Power)	
DC Current Injection	<0.5%In	
Power Factor	> 0.99 Rated power(Adjustable 0.8 Leading - 0.8Lagging)	
Protection		
DC switch	Support	
Anti-islanding protection	Support	
AC overcurrent protection	Support	
AC short circuit protection	Support	
DC reverse connection	Support	
Surge Arrester	DC Type II/AC Type II	
Insulation detection	Support	
Leakage current protection	Support	
Environment		
Topology	Transformerless	
IP Rating	IP65	
Night Self Consumption	<1W	
Cooling	Fan cooling	
Operating Temperature Range	-25°-60°	
Relative Humidity Range	0-100%	
Max. Operating Altitude	4000m	
Noise	<65dB	
Dimensions (W*H*D)	855*555*275mm	
Weight	65KG	67KG
Communication		
Display	Bluetooth , APP, LED & LCD	
Communication	WiFi, RS485, GPRS(Optional)	
Compliance		
Safety	IEC62109-1, IEC62109-2	
Others	IEC 60068, IEC 61683	
Grid Code	VDE-AR-N 4105, IEC61727, IEC62116, EN 50549	
Warranty	6 Years/10 Years(Optional)	

Remarks: The range of output voltage and frequency may vary depending upon different grid codes.
Specifications are subject to change without advance notice.

Turn Your Roof Into A
Power Plant



Because
Every Watt Matters



SolarMax-2560SP Pro

Lithium Ion

The S Pro batteries are based on Lithium Iron Phosphate technology (LiFePO4), the safest Lithium technology available today. On top of that our bespoke casing and self-developed BMS System further increase safety and durability.

Compared to conventional lead-acid batteries, the lithium battery offers an enormous weight and space saving. It is very efficient, has extremely high performances and is maintenance free.

- Low Weight - Low Maintenance - Low Self-Discharge
High Capacity - Safest Lithium Technology - High Cycle Count



Self-Developed BMS

Eight-Fold Safety Protection, Safe and Reliable



Over Charge Protection



Over Discharge Protection



Short Circuit Protection



Over Load Protection



Overheating Protection



Cryogenic Protection



Over Current Protection



Over Voltage Protection

SolarMax-2560SP Pro

Support 4 batteries connected in parallel.

Support external connections in series with voltage up to 51.2V.

Active balancing function between batteries, true parallel with RS485 communication.

Quick connection and insulation protection.

High-resolution, low-power OLED shows battery power & voltage, soft switch design.

Stainless steel handles, high durability, easy to carry, and guarantee 3000 fatigue tests.

Rugged stainless steel body with wonderful looking and durable.

Environmental Requirements and Certifications.

Operating Temperature	Charging:0°C to 45°C
	Discharging :-20°C to 60°C
Storage Temperature	1 year : -20~25°C
	3 months : -20~45°C
	1 month : -20~60°C
Relative Humidity (R H)	20~60 (No Condensed Water)
Safety Certificate	CE(IEC 62040), MSDS
Transportation Certificate	UN38.3

Specifications

Model	SolarMax-2560SP Pro
Nominal Voltage	25.6V
Nominal Capacity @1C	100Ah
Charge Voltage	29.2V
Charge Current Max Continuous	50A
Discharge Current Max Continuous	100A
Discharge Voltage Minimum	20.8V
Pulse Current 5 Sec	125A
Weight	22.9kgs±0.5kgs
Dimensions L*W*H	360*260*250 mm
Calendar Life & Performance Guarantee	a. 3500 cycles or 5 years , whichever comes

SolarMax-5100

Lithium Ion

Safety: LFP(Lithium iron Phosphate) the highest safety.

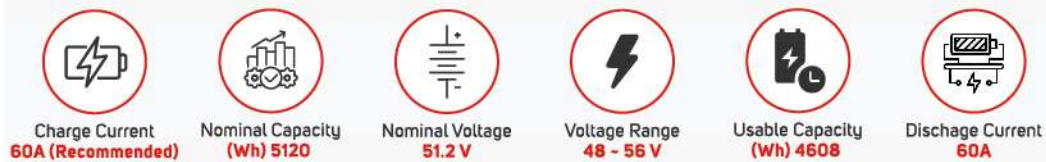
Upto 8 Series or Parallel: Flexible to increase voltage capacity without any other equipments or settings.

Cycle Life: 80% of initial capacity after 6000.

Wifi & App: Integrated WiFi Modem OTA online upgrade convenient after-sales service.

Installation: Simple buckle fixing minimize the installation time and cost.

High-Precision SOC: Accurate sampling of voltage and current SOC mathematic more accurate and never jump.



Dimension: 442*500*133 mm

Communication Port: CAN / RS485

Charge Working Temperature: 0~50°C

Communication Port: CAN / RS485

Storage Temperature: -20~60°C

Altitude: <2000 m

Installation: Cabinet or Wall Mounting

IP Rating: IP20

Weight: 42 Kg

Single String Quantity: 8 pcs

Charge Working Temperature: -10~50°C

Humidity: 5~95%

Cooling Type: Ambient Cooling

Authentication Level: UN3480

Cycle life: 6000

Warranty: 10 Years

SolarMax-5100

MODEL	SM-5100
Nominal Voltage(V)	51.2
Nominal Capacity (Wh)	5120
Usable Capacity(Wh)	4608
Dimension(mm)	442*500*133
Weight(Kg)	42
Voltage(V)	48 ~ 56
Charge/Discharge Current(A)	60(Recommend)
	60(Max)
	100(Peak@15s)
Commucation Port	CAN / RS485
Single string quantity(pcs)	8
Working Temperature(Charge)	0~45
Working Temperature(Discharge)	-10~55
Shelf Temperature	-20~60
Humidity	5~85%
Altitude(m)	IP20
IP Rating	As per Manufacturer
Warranty	10 years
Cycle life [1]	6000
Authentication Level	CE & TUV(IEC 62619, IEC 62040) UN38.3
Cooling Type	Ambient Cooling
Installation	Cabinet or Wall Mounting

Test conditions: 0.2C Charging/Discharging, @25°C, 80% Dod



SolarMax-S12-9(12V 9Ah)

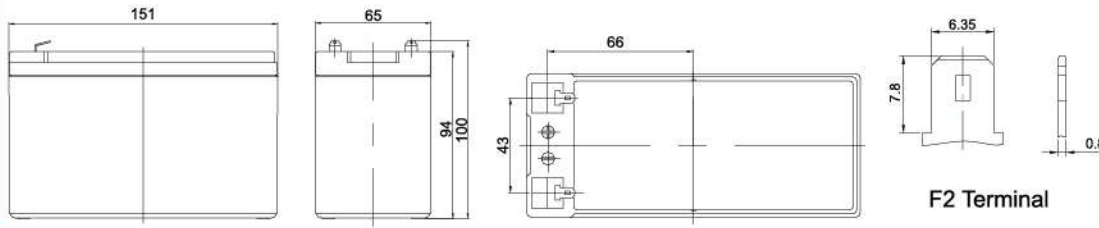
AGM

S series is a general purpose battery with 6 to 8 years design life in float service. It meets with IEC, JIS, BS, GB/T and YD/T standards. With advance AGM valve regulated technology and high purity raw material, the S series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS, Emergency backup, Security.



MODEL	S12-9
Cells Per Unit	6
Voltage Per Unit	12V
Capacity	9Ah@20hour-rate to 1.75V per cell @25°C
Weight	Approx. 2.30 Kg
Internal Resistance	≤ 22 mΩ
Terminal	Default F2,F1 Optional
Max. Discharge Current	90A (5 sec)
Design Life	6-8 years
Maximum Charging Current	2.7 A
Cycle Use Voltage	14.6 V~14.8 V @ 25°C. Temperature Compensation: -4mV/°C/Cell
Operating Temperature Range	Discharge: -20°C~60°C, Charge: 0°C~50°C, Storage: -20°C~60°C
Normal Operating Temperature Range	25°C ± 5°C
Self Discharge	Valve Regulated Lead Acid (Vrla) Batteries Can Be Stored For Up To 6 Months At 25°C And Then Recharging Is Recommended. Monthly Self-discharge Ratio Is Less Than 3% At 25°C. Please Charged Batteries Before Using.
Container Material	A,B,C UL94-HB, UL94-V0 Optional
Short Circuit Current	450A
Reference Capacity	C ₃ : 6.75Ah, C ₅ : 7.65Ah, C ₁₀ : 8.41Ah, C ₂₀ : 9.00Ah
Standby Use Voltage	13.7 V~13.9 V @ 25°C Temperature Compensation: -3mV/°C/Cell

Dimensions



Length	151±1.5mm (5.94 inches)	
Width	65±1.5mm (2.56 inches)	
Height	94±1.5mm (3.70 inches)	
Total Height	100±1.5mm (3.94 inches)	
Terminal	Value	
M5	6~7	N*m
M6	8~10	N*m
M8	10~12	N*m

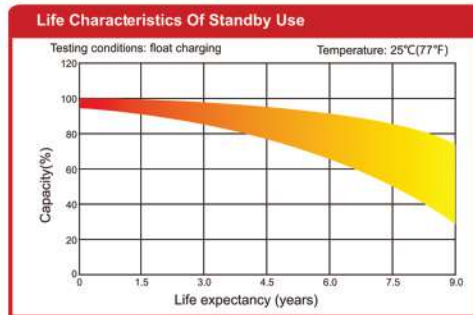
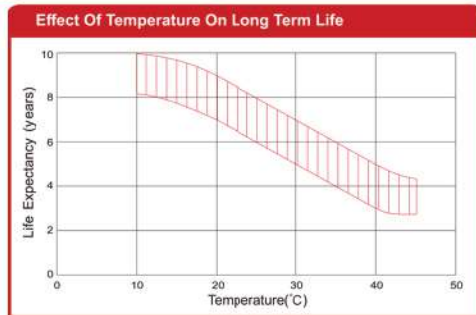
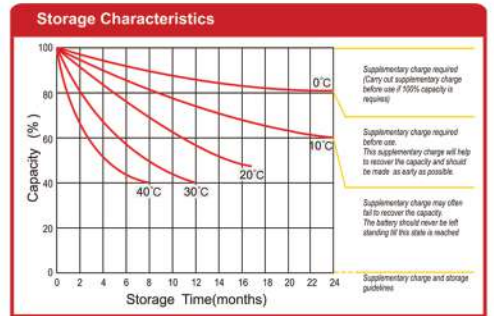
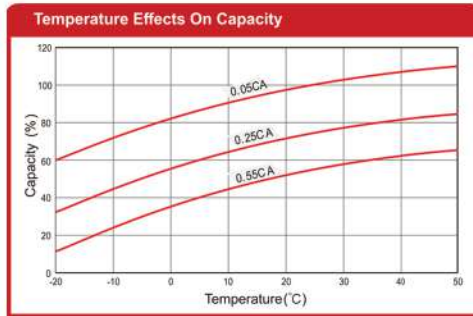
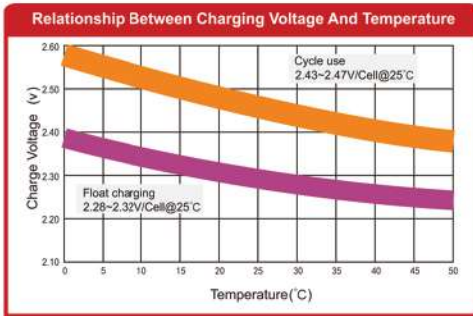
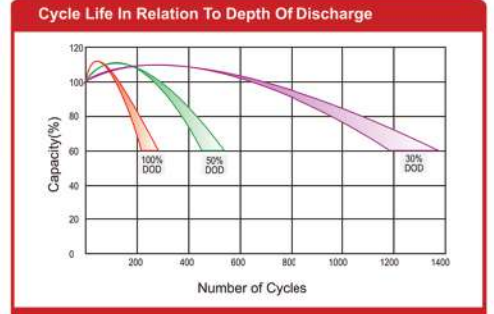
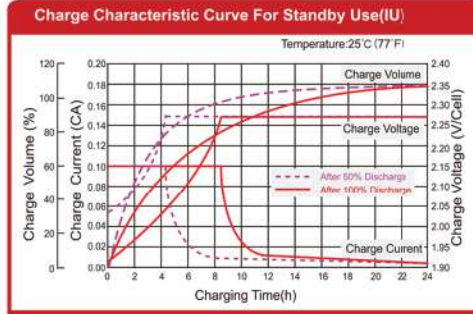
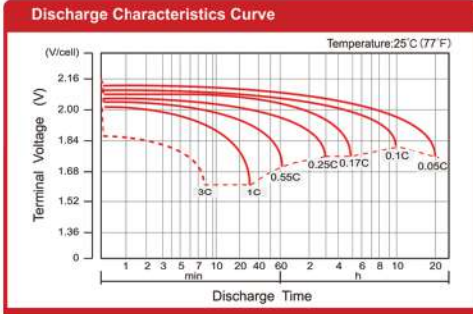
Unit: mm

Constant Current Discharge Characteristics : A (25 °C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	35.17	24.62	17.62	10.12	5.499	3.376	2.538	2.049	1.698	1.093	0.887	0.469
1.65V	32.71	23.26	16.85	9.716	5.310	3.268	2.460	1.994	1.654	1.080	0.877	0.461
1.70V	29.51	21.41	15.78	9.287	5.137	3.161	2.393	1.939	1.611	1.064	0.863	0.456
1.75V	26.44	19.60	14.68	8.876	4.950	3.050	2.321	1.890	1.570	1.049	0.852	0.450
1.80V	23.21	17.74	13.56	8.484	4.760	2.941	2.250	1.835	1.530	1.031	0.841	0.446
1.85V	18.43	14.50	11.25	7.307	4.270	2.695	2.080	1.706	1.426	0.968	0.792	0.423

Constant Power Discharge Characteristics : W/Cell (25 °C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	58.30	41.84	30.80	18.38	10.33	6.399	4.848	3.934	3.273	2.134	1.744	0.923
1.65V	54.85	40.30	29.89	17.83	10.04	6.225	4.718	3.842	3.200	2.114	1.726	0.909
1.70V	50.61	37.78	28.41	17.22	9.770	6.053	4.610	3.751	3.127	2.087	1.702	0.899
1.75V	46.35	35.21	26.82	16.62	9.470	5.868	4.491	3.669	3.059	2.062	1.681	0.890
1.80V	41.57	32.43	25.12	16.05	9.161	5.687	4.369	3.577	2.991	2.031	1.662	0.882
1.85V	33.69	26.97	21.14	13.96	8.267	5.239	4.057	3.337	2.798	1.911	1.567	0.838



SolarMax-S12-65G(12V 65Ah)

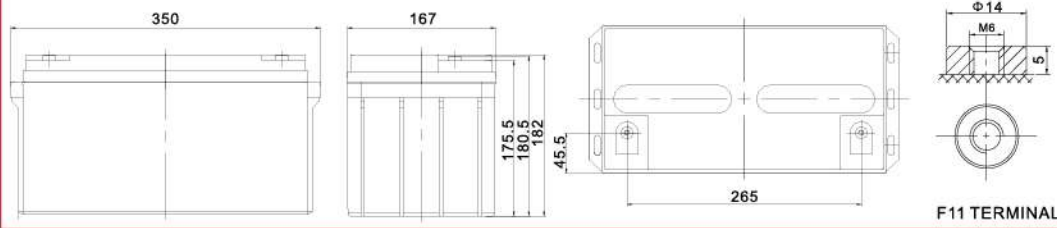
GEL

S series is a general purpose battery with 12 years design life in float service. It meets with IEC, JIS, BS ,GB/T and YD/T standards. With advanced GEL valve regulated technology and high purity raw material, the S series battery maintains high consistency for better performance and reliable standby service life. It is suitable for Solar & Wind Power, UPS, Emergency backup, Scissor Lift, Machines, Marine etc.



MODEL	S12-65G
Cells Per Unit	6
Voltage Per Unit	12V
Capacity	65Ah@20hour-rate to 1.75V per cell @25°C
Weight	Approx. 19.5 Kg
Internal Resistance	≤7.7 mΩ(Full Charge Condition @25°C)
Terminal	Default F11(M6),F5(M8)Optional
Max. Discharge Current	650A (5 sec)
Design Life	12 years
Maximum Charging Current	19.5A
Cycle Use Voltage	14.6 V~14.8 V @ 25°C. Temperature Compensation: -4mV/°C/Cell
Operating Temperature Range	Discharge: -20°C~60°C , Charge: 0°C~50°C , Storage: -20°C~60°C
Normal Operating Temperature Range	25°C ± 5°C
Self Discharge	Valve Regulated Lead Acid (VRLA) Batteries Can Be Stored For Up To 6 Months At 25°C And Then Recharging Is Recommended. Monthly Self-discharge Ratio Is Less Than 3% At 25°C. Please Charged Batteries Before Using.
Container Material	A.B.C UL94-HB, UL94-V0
Short Circuit Current	1250A
Reference Capacity	C ₃ : 48.8Ah, C ₅ : 55.3Ah, C ₁₀ : 61.9Ah, C ₂₀ : 65.0Ah
Standby Use Voltage	13.7 V~13.9 V @ 25°C Temperature Compensation: -3mV/°C/Cell

Dimensions



Length	350±2mm (13.8 inches)	
Width	167±2mm (6.57 inches)	
Height	182±2mm (7.17 inches)	
Total Height	182±2mm (7.17 inches)	
Terminal	Value	
M5	6~7	N*m
M6	8~10	N*m
M8	10~12	N*m

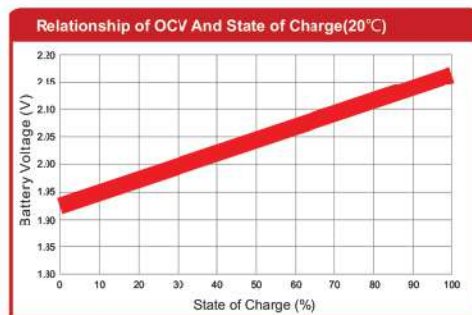
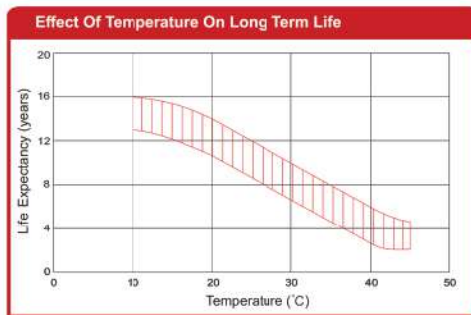
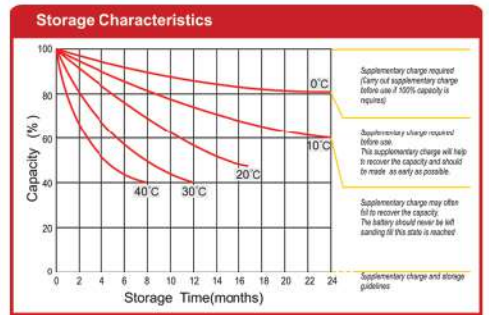
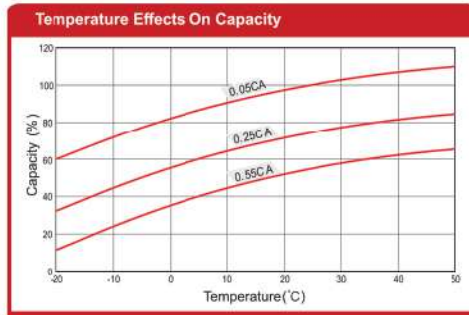
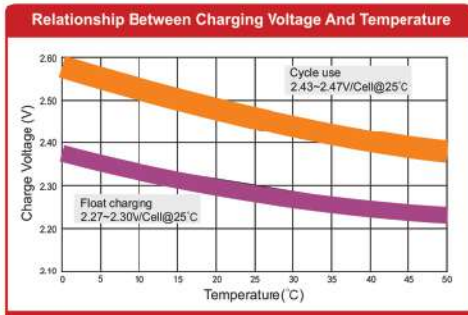
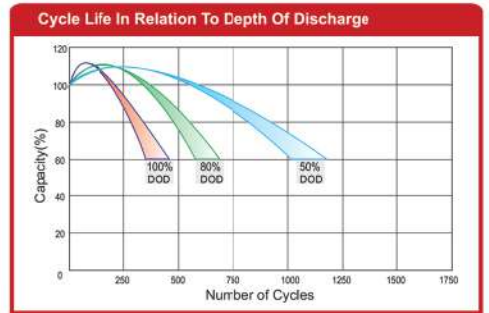
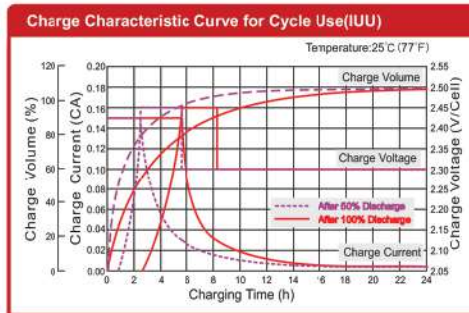
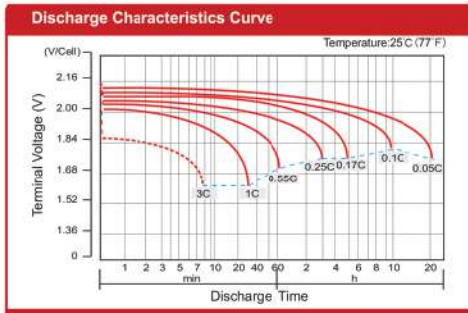
Unit: mm

Constant Current Discharge Characteristics : A (25°C)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	157.8	120.0	70.79	39.48	23.51	18.31	14.37	12.22	7.837	6.500	3.369
1.65V	145.4	112.2	67.05	38.13	22.72	17.75	13.94	11.84	7.776	6.438	3.351
1.70V	134.7	105.5	63.58	36.91	22.12	17.00	13.51	11.52	7.652	6.314	3.309
1.75V	123.6	98.82	61.07	35.75	21.27	16.56	13.14	11.20	7.529	6.252	3.250
1.80V	112.5	90.49	58.82	34.16	20.54	16.25	12.83	11.05	7.405	6.190	3.219
1.85V	88.02	74.87	49.87	30.49	18.78	15.13	12.03	10.17	6.973	5.819	3.189

Constant Power Discharge Characteristics : W/Cell (25°C)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	268.7	209.3	128.6	74.11	44.45	34.77	27.69	23.13	15.27	12.75	6.725
1.65V	258.8	203.5	125.6	72.84	43.25	33.91	27.01	22.50	15.15	12.62	6.665
1.70V	241.5	192.6	119.6	70.71	42.17	32.61	26.15	21.94	14.97	12.38	6.605
1.75V	224.7	181.8	115.4	68.75	40.67	31.80	25.54	21.44	14.72	12.26	6.485
1.80V	207.1	168.0	111.6	65.94	39.75	31.63	25.05	21.15	14.48	12.13	6.425
1.85V	164.3	141.2	95.75	59.22	36.60	29.50	23.57	19.57	13.69	11.46	6.365



SolarMax-S12-100G(12V 100Ah)

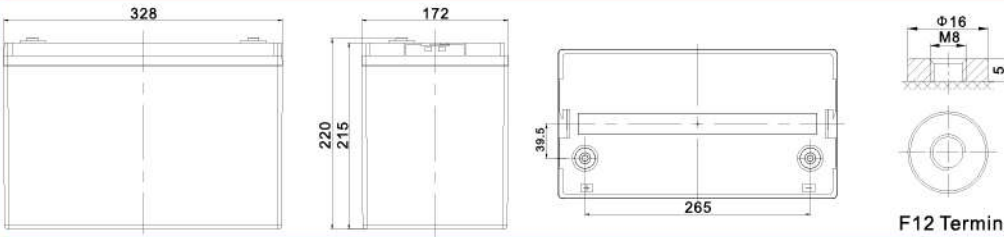
GEL

S series is a general purpose battery with 12 years design life in float service. It meets with IEC, JIS, BS ,GB/T and YD/T standards. With advanced GEL valve regulated technology and high purity raw material, the S series battery maintains high consistency for better performance and reliable standby service life. It is suitable for Solar & Wind Power, UPS, Emergency backup, Scissor Lift, Machines, Marine etc.



MODEL	S12-100G
Cells Per Unit	6
Voltage Per Unit	12V
Capacity	100Ah@20hour-rate to 1.75V per cell @25°C
Weight	Approx. 28.5 Kg (Tolerance±5%)
Internal Resistance	≤6.1 mΩ(Full Charge Condition @25°C)
Terminal	Default F12(M8), F5(M8) Optional
Max. Discharge Current	1000A (5 sec)
Design Life	12 years
Maximum Charging Current	30.0A
Cycle Use Voltage	14.6 V~14.8 V @ 25°C. Temperature Compensation: -4mV/°C/Cell
Operating Temperature Range	Discharge: -20°C~60°C, Charge: 0°C~50°C, Storage: -20°C~60°C
Normal Operating Temperature Range	25°C ± 5°C
Self Discharge	Valve Regulated Lead Acid (VRLA) Batteries Can Be Stored For Up To 6 Months At 25°C And Then Recharging Is Recommended. Monthly Self-discharge Ratio Is Less Than 3% At 25°C. Please Charged Batteries Before Using.
Container Material	A.B.C UL94-HB, UL94-V0 Optional
Short Circuit Current	2100A
Reference Capacity	C ₃ : 48.8Ah, C ₅ : 55.3Ah, C ₁₀ : 61.9Ah, C ₂₀ : 65.0Ah
Standby Use Voltage	13.7 V~13.9 V @ 25°C Temperature Compensation: -3mV/°C/Cell

Dimensions



Length	328±2mm (12.9 inches)
Width	172±2mm (6.77 inches)
Height	215±2mm (8.46 inches)
Total Height	220±2mm (8.66 inches)
Terminal	Value
M5	6-7 N*m
M6	8-10 N*m
M8	10-12 N*m

Unit: mm

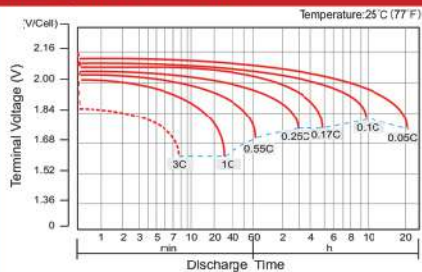
Constant Current Discharge Characteristics : A (25°C)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	230.7	184.6	108.9	60.74	36.17	28.17	22.10	18.80	12.06	10.00	5.183
1.65V	212.5	172.6	103.2	58.67	34.96	27.31	21.44	18.21	11.96	9.905	5.155
1.70V	196.9	162.3	97.81	56.79	34.03	26.15	20.78	17.72	11.77	9.714	5.090
1.75V	180.7	152.0	93.95	55.00	32.72	25.48	20.21	17.22	11.58	9.619	5.000
1.80V	164.4	139.2	90.49	52.56	31.60	25.00	19.74	17.00	11.39	9.524	4.952
1.85V	128.6	115.2	76.73	46.91	28.90	23.27	18.51	15.65	10.73	8.952	4.905

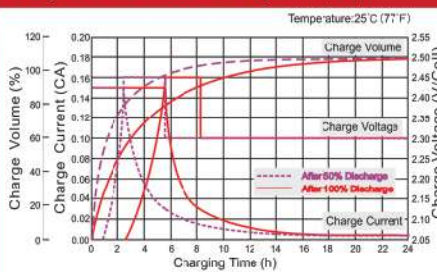
Constant Power Discharge Characteristics : W/Cell (25°C)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	392.8	322.0	197.9	114.0	68.39	53.50	42.59	35.58	23.50	19.61	10.35
1.65V	378.2	313.0	193.2	112.1	66.54	52.17	41.56	34.62	23.31	19.42	10.25
1.70V	353.0	296.3	183.9	108.8	64.88	50.17	40.23	33.76	23.03	19.05	10.16
1.75V	328.5	279.7	177.5	105.8	62.57	48.93	39.29	32.99	22.65	18.86	9.977
1.80V	302.6	258.5	171.8	101.4	61.15	48.65	38.53	32.54	22.28	18.67	9.885
1.85V	240.1	217.2	147.3	91.10	56.31	45.38	36.27	30.10	21.05	17.63	9.792

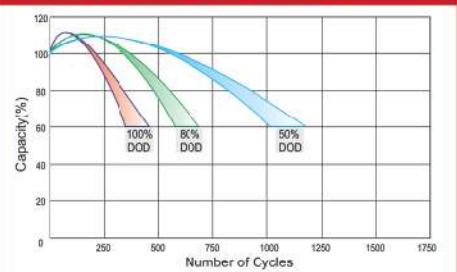
Discharge Characteristics Curve



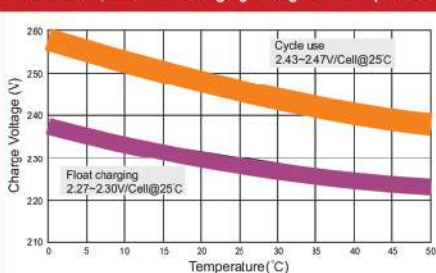
Charge Characteristic Curve for Cycle Use(IUU)



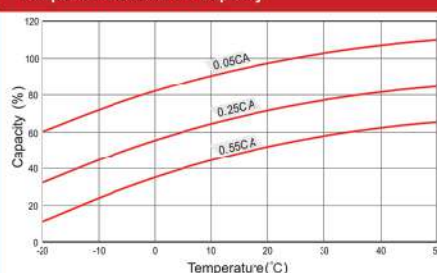
Cycle Life In Relation To Depth Of Discharge



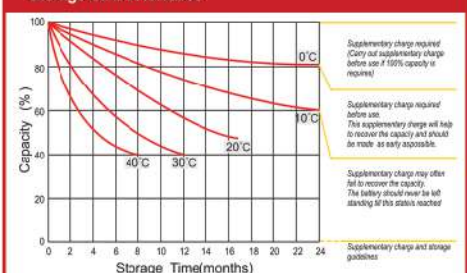
Relationship Between Charging Voltage And Temperature



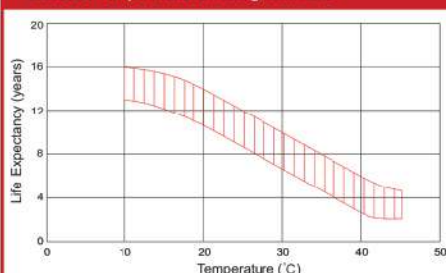
Temperature Effects On Capacity



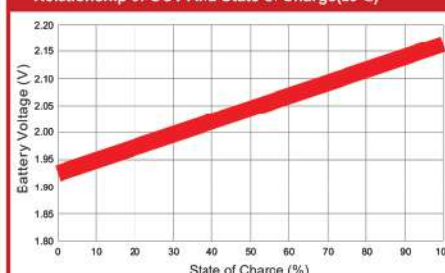
Storage Characteristics



Effect Of Temperature On Long Term Life



Relationship of OCV And State of Charge(20°C)



SolarMax-S12-150G(12V 150Ah)

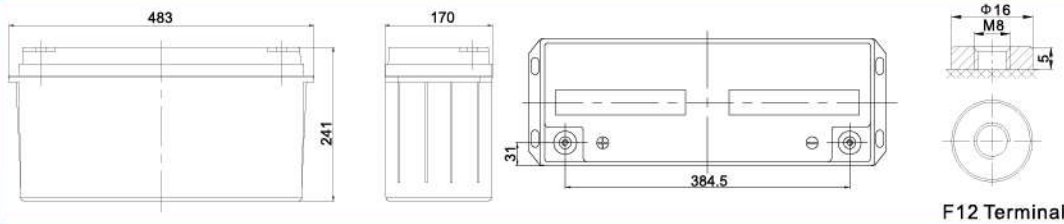
GEL

S series is a general purpose battery with 12 years design life in float service. It meets with IEC, JIS, BS ,GB/T and YD/T standards. With advanced GEL valve regulated technology and high purity raw material, the S series battery maintains high consistency for better performance and reliable standby service life. It is suitable for Solar & Wind Power, UPS, Emergency backup, Scissor Lift, Machines, Marine etc.



MODEL	S12-150G
Cells Per Unit	6
Voltage Per Unit	12V
Capacity	150Ah@20hour-rate to 1.75V per cell @25°C
Weight	Approx. 43.0 Kg (Tolerance±5%)
Internal Resistance	≤7.0 mΩ(Full Charge Condition @25°C)
Terminal	Default F12(M8), F5(M8) Optional
Max. Discharge Current	1500A (5 sec)
Design Life	15 years
Maximum Charging Current	30.0A
Cycle Use Voltage	14.2 V~14.4 V @ 25°C. Temperature Compensation: -4mV/°C/Cell
Operating Temperature Range	Discharge: -40°C~60°C , Charge: 0°C~50°C , Storage: -40°C~60°C
Normal Operating Temperature Range	25°C ± 5°C
Self Discharge	Valve Regulated Lead Acid (VRLA) Batteries Can Be Stored For Up To 6 Months At 25°C And Then Recharging Is Recommended. Monthly Self-discharge Ratio Is Less Than 3% At 25°C. Please Charged Batteries Before Using.
Container Material	A,B,C UL94-HB, UL94-V0 Optional
Short Circuit Current	2460A
Reference Capacity	C ₃ : 99.3Ah, C ₅ : 112.5Ah, C ₁₀ : 132.0Ah, C ₂₀ : 150.0Ah
Standby Use Voltage	13.6 V~13.8 V @ 25°C Temperature Compensation: -3mV/°C/Cell

Dimensions



Length	483±2mm (19.0 inches)
Width	170±2mm (6.69 inches)
Height	241±2mm (9.49 inches)
Total Height	241±2mm (9.49 inches)
Terminal	Value
M5	6-7 N*m
M6	8-10 N*m
M8	10-12 N*m

F12 Terminal

Unit: mm

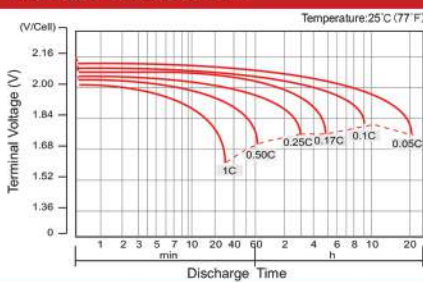
Constant Current Discharge Characteristics : A (25°C)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	245.6	199.2	130.7	81.5	49.8	37.3	29.8	25.0	16.9	13.9	7.81
1.65V	232.1	190.4	125.5	78.7	48.2	36.2	29.0	24.3	16.7	13.8	7.68
1.70V	213.6	178.3	119.9	76.1	46.6	35.2	28.2	23.7	16.4	13.5	7.59
1.75V	195.6	166.0	114.6	73.3	45.0	34.1	27.5	23.1	16.2	13.4	7.50
1.80V	177.0	153.2	109.5	70.5	43.4	33.1	26.7	22.5	15.9	13.2	7.42
1.85V	144.7	127.2	94.3	63.2	39.7	30.6	24.8	21.0	15.0	12.4	7.05

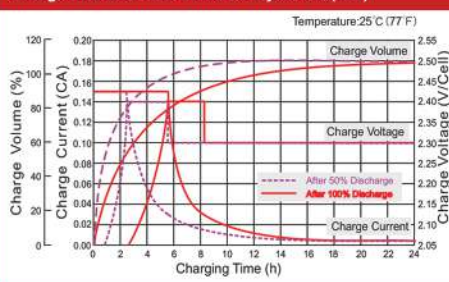
Constant Power Discharge Characteristics : W/Cell (25°C)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	417.4	348.2	237.4	153.1	94.3	71.3	57.2	48.1	33.0	27.4	15.4
1.65V	397.2	334.6	229.8	148.9	91.8	69.5	55.8	47.1	32.6	27.0	15.2
1.70V	376.9	321.1	222.3	144.7	89.2	67.8	54.5	46.0	32.2	26.7	15.0
1.75V	351.3	303.2	214.7	140.3	86.5	66.0	53.3	45.0	31.9	26.4	14.8
1.80V	323.5	283.9	207.2	135.7	83.8	64.2	52.0	44.0	31.4	26.1	14.7
1.85V	269.1	238.9	180.3	122.5	77.2	59.7	48.5	41.2	29.5	24.6	14.0

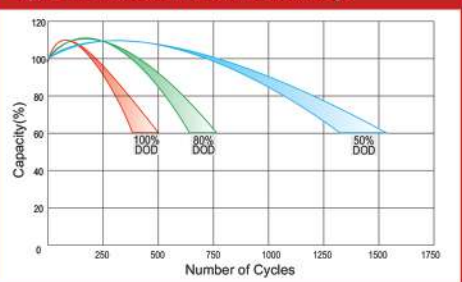
Discharge Characteristics Curve



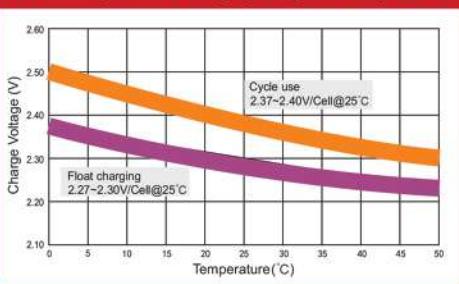
Charge Characteristic Curve for Cycle Use(IUU)



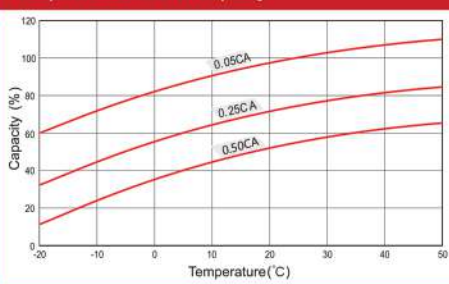
Cycle Life In Relation To Depth Of Discharge



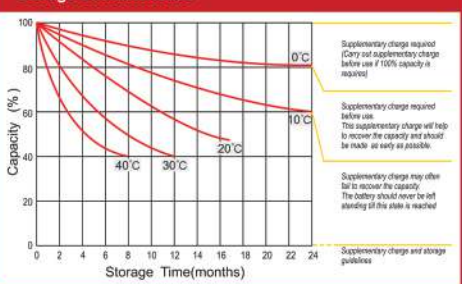
Relationship Between Charging Voltage And Temperature



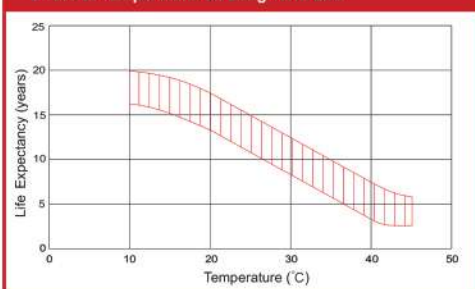
Temperature Effects On Capacity



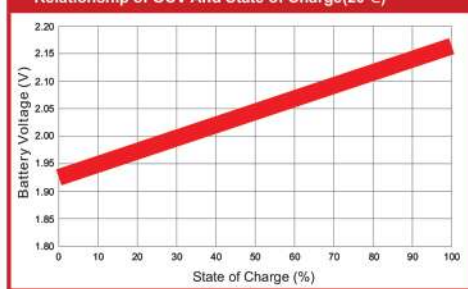
Storage Characteristics



Effect Of Temperature On Long Term Life



Relationship of OCV And State of Charge(20°C)



SolarMax-S12-200G(12V 200Ah)

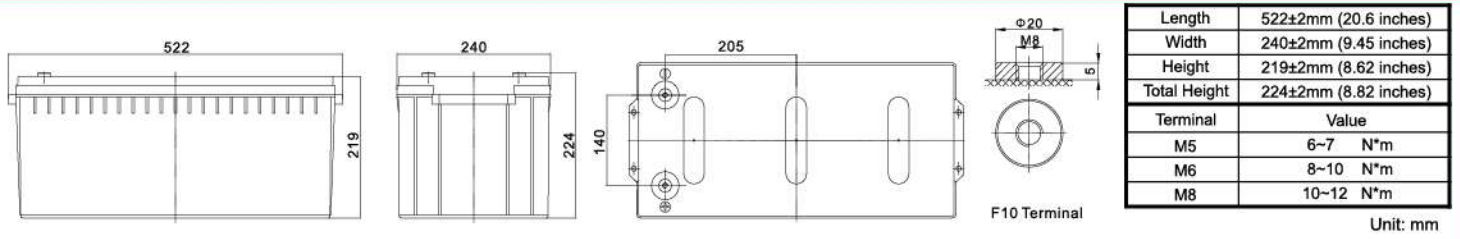
GEL

S series is a general purpose battery with 12 years design life in float service. It meets with IEC, JIS, BS ,GB/T and YD/T standards. With advanced GEL valve regulated technology and high purity raw material, the S series battery maintains high consistency for better performance and reliable standby service life. It is suitable for Solar & Wind Power, UPS, Emergency backup, Scissor Lift, Machines, Marine etc.



MODEL	S12-200G
Cells Per Unit	6
Voltage Per Unit	12V
Capacity	200Ah@20hour-rate to 1.75V per cell @25°C
Weight	Approx. 59.0 Kg (Tolerance±5%)
Internal Resistance	≤7.0 mΩ(Full Charge Condition @25°C)
Terminal	Default F10(M8), F16(M8)& L6 Optional
Max. Discharge Current	2000A (5 sec)
Design Life	15 years
Maximum Charging Current	45.0A
Cycle Use Voltage	14.2 V~14.4 V @ 25°C. Temperature Compensation: -4mV/°C/Cell
Operating Temperature Range	Discharge: -40°C~60°C, Charge: 0°C~50°C, Storage: -40°C~60°C
Normal Operating Temperature Range	25°C ± 5°C
Self Discharge	Valve Regulated Lead Acid (VRLA) Batteries Can Be Stored For Up To 6 Months At 25°C And Then Recharging Is Recommended. Monthly Self-discharge Ratio Is Less Than 3% At 25°C. Please Charged Batteries Before Using.
Container Material	A.B.C UL94-HB, UL94-V0 Optional
Short Circuit Current	3020A
Reference Capacity	C ₃ : 132.3Ah, C ₅ : 150.0Ah, C ₁₀ : 176.0Ah, C ₂₀ : 200.0Ah
Standby Use Voltage	13.6 V~13.8 V @ 25°C Temperature Compensation: -3mV/°C/Cell

Dimensions



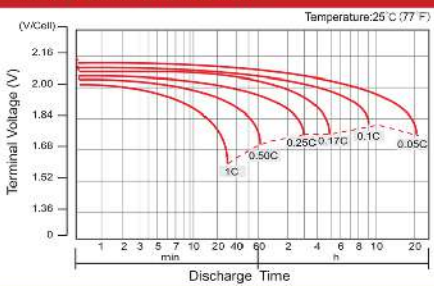
Constant Current Discharge Characteristics : A (25°C)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	327.4	265.5	174.2	108.6	66.4	49.7	39.7	33.3	22.5	18.6	10.4
1.65V	309.4	253.9	167.3	104.9	64.2	48.2	38.6	32.4	22.3	18.3	10.2
1.70V	284.9	237.8	159.9	101.5	62.1	46.9	37.6	31.6	21.9	18.1	10.1
1.75V	260.7	221.3	152.8	97.8	60.0	45.5	36.6	30.8	21.6	17.8	10.0
1.80V	236.0	204.3	146.1	94.0	57.8	44.1	35.6	30.0	21.2	17.6	9.90
1.85V	192.9	169.5	125.8	84.3	53.0	40.8	33.0	28.0	19.9	16.6	9.40

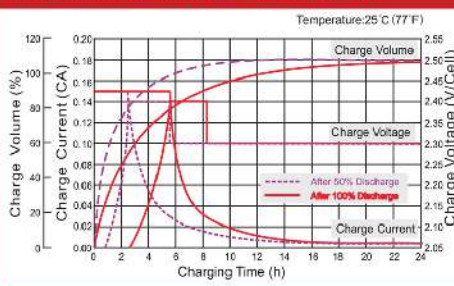
Constant Power Discharge Characteristics : W/Cell (25°C)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	556.6	464.2	316.5	204.1	125.8	95.0	76.2	64.2	44.0	36.5	20.5
1.65V	529.6	446.2	306.4	198.5	122.4	92.7	74.4	62.8	43.5	36.1	20.2
1.70V	502.6	428.2	296.4	193.0	119.0	90.4	72.7	61.3	43.0	35.6	20.0
1.75V	468.3	404.2	286.2	187.1	115.4	88.0	71.1	60.0	42.5	35.2	19.8
1.80V	431.3	378.5	276.3	180.9	111.8	85.6	69.3	58.7	41.8	34.8	19.6
1.85V	358.8	318.6	240.4	163.3	103.0	79.5	64.6	54.9	39.4	32.8	18.6

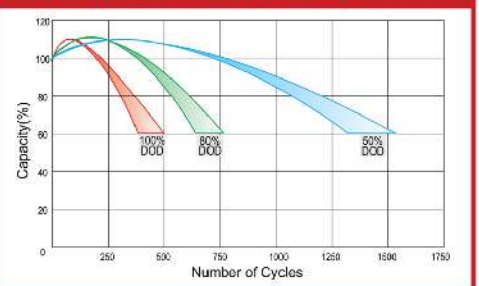
Discharge Characteristics Curve



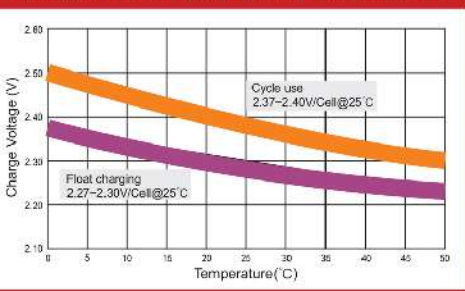
Charge Characteristic Curve for Cycle Use(IUU)



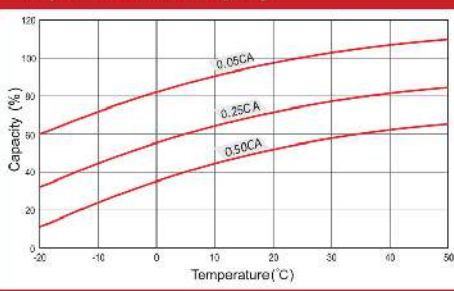
Cycle Life In Relation To Depth Of Discharge



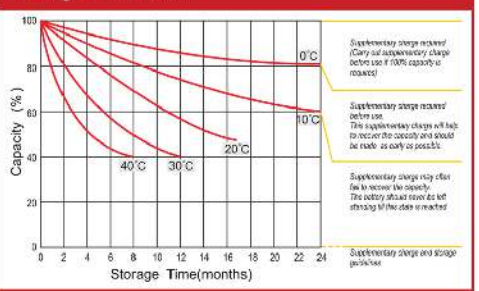
Relationship Between Charging Voltage And Temperature



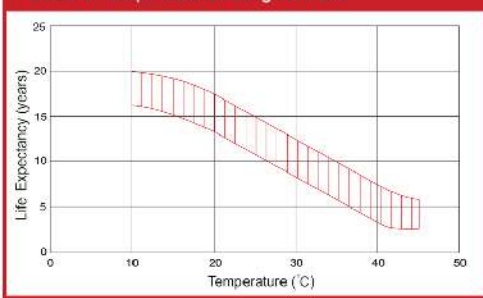
Temperature Effects On Capacity



Storage Characteristics



Effect Of Temperature On Long Term Life



Relationship of OCV And State of Charge(20°C)



SolarMax-S12-200C(12V 200Ah)

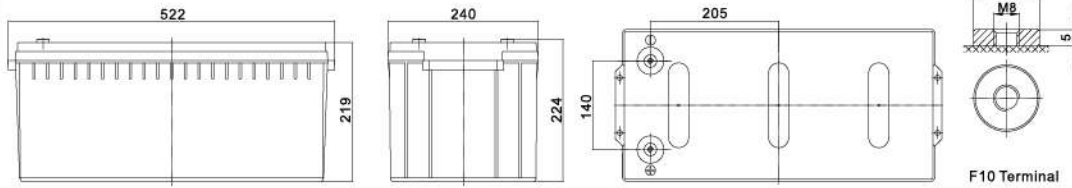
Lead Carbon

S series is a general purpose battery with 15years design life in float service. It meets with IEC, JIS, BS ,GB/T and YD/T standards. With advanced GEL valve regulated technology and high purity raw material, the S series battery maintains high consistency for better performance and reliable standby service life. It is suitable for Solar & Wind Power, UPS, Emergency back-up, Scissor Lift, Machines, Marine etc.



MODEL	S12-200C (Lead Carbon)
Cells Per Unit	6
Voltage Per Unit	12V
Capacity	200Ah@20hour-rate to 1.75V per cell @25°C
Weight	Approx. 59.0 Kg (Tolerance±5%)
Internal Resistance	≤7.0 mΩ(Full Charge Condition @25°C)
Terminal	Default F10(M8), F16(M8)& L6 Optional
Max. Discharge Current	2000A (5 sec)
Design Life	15 years
Maximum Charging Current	40.0A
Cycle Use Voltage	14.2 V~14.4 V @ 25°C. Temperature Compensation: -4mV/°C/Cell
Operating Temperature Range	Discharge: -40°C~60°C, Charge: 0°C~50°C, Storage: -40°C~60°C
Normal Operating Temperature Range	25°C ± 5°C
Self Discharge	Valve Regulated Lead Acid (VRLA) Batteries Can Be Stored For Up To 6 Months At 25°C And Then Recharging Is Recommended. Monthly Self-discharge Ratio Is Less Than 3% At 25°C. Please Charged Batteries Before Using.
Container Material	A,B,C UL94-HB, UL94-V0 Optional
Short Circuit Current	3020A
Reference Capacity	C ₃ : 132.3Ah, C ₅ : 150.0Ah, C ₁₀ : 176.0Ah, C ₂₀ : 200.0Ah
Standby Use Voltage	13.6 V~13.8 V @ 25°C Temperature Compensation: -3mV/°C/Cell

Dimensions



Length	522±2mm (20.6 inches)	
Width	240±2mm (9.45 inches)	
Height	219±2mm (8.62 inches)	
Total Height	224±2mm (8.82 inches)	
Terminal	Value	
M5	6~7	N*m
M6	8~10	N*m
M8	10~12	N*m

Unit: mm

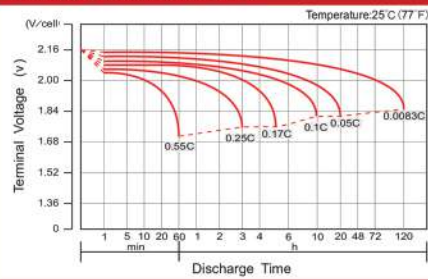
Constant Current Discharge Characteristics : A (25°C)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	327.4	265.5	174.2	108.6	66.4	49.7	39.7	33.3	22.5	18.6	10.4
1.65V	309.4	253.9	167.3	104.9	64.2	48.2	38.6	32.4	22.3	18.3	10.2
1.70V	284.9	237.8	159.9	101.5	62.1	46.9	37.6	31.6	21.9	18.1	10.1
1.75V	260.7	221.3	152.8	97.8	60.0	45.5	36.6	30.8	21.6	17.8	10.0
1.80V	236.0	204.3	146.1	94.0	57.8	44.1	35.6	30.0	21.2	17.6	9.90
1.85V	192.9	169.5	125.8	84.3	53.0	40.8	33.0	28.0	19.9	16.6	9.40

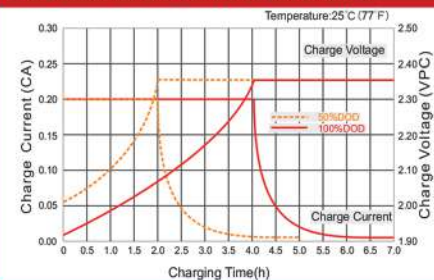
Constant Power Discharge Characteristics : W/Cell (25°C)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	556.6	464.2	316.5	204.1	125.8	95.0	76.2	64.2	44.0	36.5	20.5
1.65V	529.6	446.2	306.4	198.5	122.4	92.7	74.4	62.8	43.5	36.1	20.2
1.70V	502.6	428.2	296.4	193.0	119.0	90.4	72.7	61.3	43.0	35.6	20.0
1.75V	468.3	404.2	286.2	187.1	115.4	88.0	71.1	60.0	42.5	35.2	19.8
1.80V	431.3	378.5	276.3	180.9	111.8	85.6	69.3	58.7	41.8	34.8	19.6
1.85V	358.8	318.6	240.4	163.3	103.0	79.5	64.6	54.9	39.4	32.8	18.6

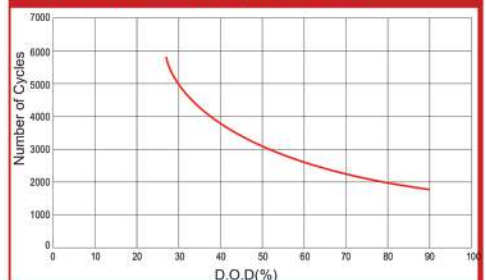
Discharge Characteristics Curve



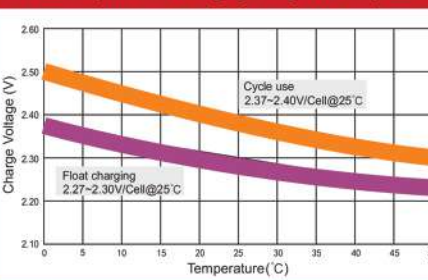
Charge Characteristic Curve for Cycle Use(IUU)



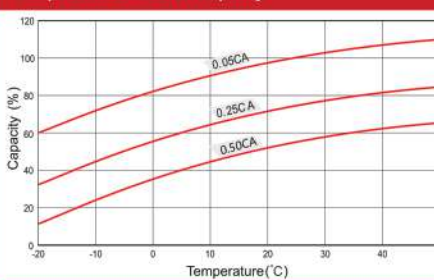
Cycle Life In Relation To Depth Of Discharge



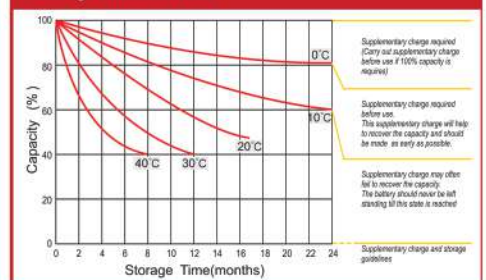
Relationship Between Charging Voltage And Temperature



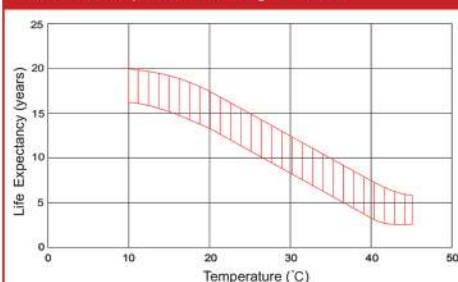
Temperature Effects On Capacity



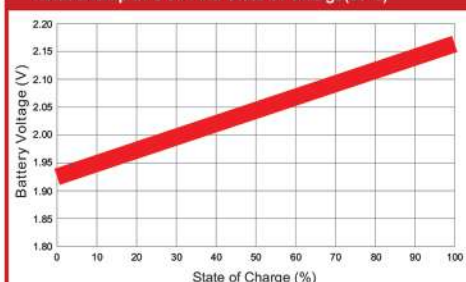
Storage Characteristics



Effect Of Temperature On Long Term Life



Relationship of OCV And State of Charge(20°C)



SolarMax-2200

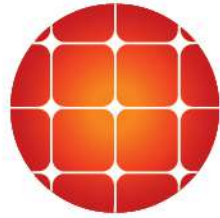
160Ah@c10 - 220Ah@c10 - 240Ah@c10

Tubular



MODEL	SM-1600	SM-2200	SM-2400
Parameters	160Ah@c10	220Ah@c10	240Ah@c10
Container	PPCP	PPCP	PPCP
Separator	PE	PE	PE
Nominal Voltage	12V	12V	12V
No. Of Cells	6	6	6
Design Life	8 Years	8 Years	8 Years
20hr Rate	160	220	240
10hr Rate	140.8	193.6	211.2
3hr Rate	100.9536	138.8112	151.4304
Self Discharge	<3%Pm	<3%Pm	<3%Pm
Operating Temperature Range	@27°C	@27°C	@27°C
Discharge	0~55°C	0~55°C	0~55°C
Charge	0~55°C	0~55°C	0~55°C
Storage	0~45°C	0~45°C	0~45°C
Max. Discharge Current 77°F(25°C)	160A(3s)	220A(3s)	240A(3s)
HRD	160A	220A	240A
Charging Methods:	As per Manufacturer	As per Manufacturer	As per Manufacturer
Maximum Charging Current	16A	22A	24A
Standby Use	13.8-14.4V	13.8-14.4V	13.8-14.4V
Dimension	503x190x408	503x190x408	503x190x408
Packed Weight+-3% (Kg)	59	66	70

IS 13369, IEC 60896-11 Stationary Lead Acid Battery, ISO 9001:2015, CE Complied.



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Since 2007

UAE Office:

Albloosh Building, Outlet No 6, Al Suq
Al kabeer, Bur Dubai, UAE

China Office:

703, Building A2, China Merchants Smart City,
Guangming District, Shenzhen, China