



ARAS

GREEN
ENERGY

QUALITY
BEYOND
EXCELLENCE



PRODUCT CATALOGUE



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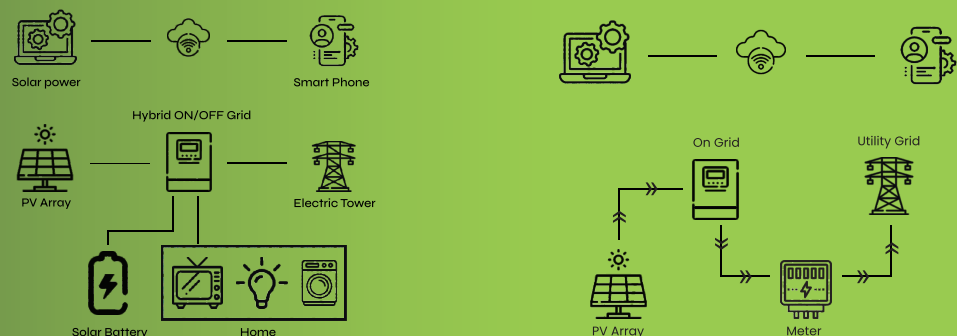
DC CABLE MC4

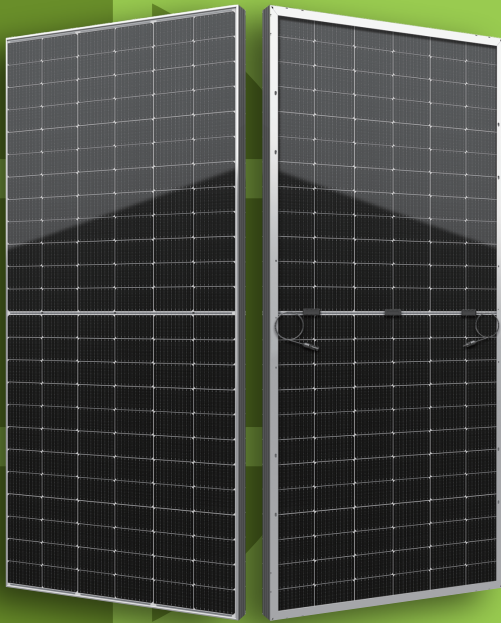
85

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Solar Power System





N-TOP SERIES

565-580W

NTOP Con SERIES

Seraphim redefined the high-efficiency module series by integrating 182mm N-TOPCon silicon wafers with multi-busbar and half-cut cell technologies. Seraphim panel combined creative technology effectively and extremely improved the module efficiency and power output.

QUALITY SYSTEM

ISO9001 / ISO14001 / ISO45001

PRODUCT CERTIFICATION



KEY FEATURES



Less mismatch to get more power



Less power loss by minimizing the shading impact

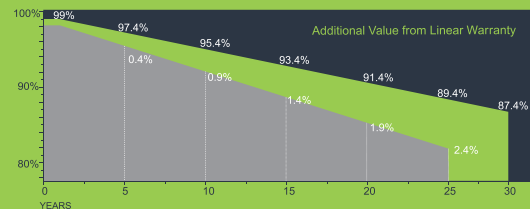


Competitive low light performance



3 times EL test to ensure best quality

WARRANTY



Guarantee on product material and workmanship



Linear power output warranty

INSURANCE



Ideal choice for utility and commercial scale projects by reduced BOS and improved ROI



Outstanding reliability proven by PVEL for stringent environment condition:

- Sand, acid, salt and hail stones
- 2400 Pa wind load and 5400 Pa snow load
- Anti-PID

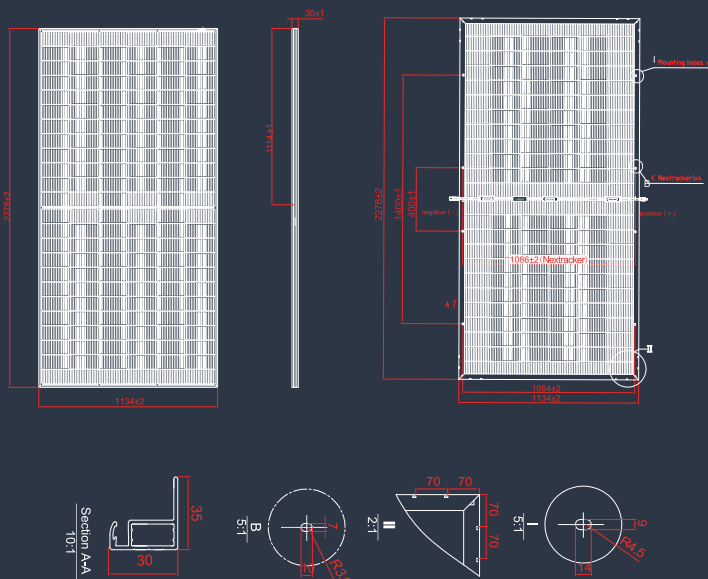
Mechanical Specifications

External Dimension	2278 x 1134 x 30 mm
Weight	32.0 kg
Solar Cells	N-Topcon 182 x 91 mm(144pcs)
Front / Back Glass	2.0mm AR coating semi-tempered glass,low iron
Frame	Anodized aluminium alloy
Junction Box	IP68, 3 diodes
Output Cables	4.0mm²250mm(+)/350mm(-) or Customized Length

Packing Configuration

Container	20'GP	40'HQ
Pieces per Pallet	36	36
Pallets per Container	4	20
Pieces per Container	144	720

Technical drawing



Electrical Characteristics

Module Type	SRP-565-BTA-BG			SRP-570-BTA-BG			SRP-575-BTA-BG			SRP-580-BTA-BG		
	Front STC	Front NOCT	Back STC	Front STC	Front NOCT	Back STC	Front STC	Front NOCT	Back STC	Front STC	Front NOCT	Back STC
Maximum Power -P _{mp} (W)	565	425	452	570	429	456	575	433	460	580	437	464
Open Circuit Voltage -V _{oc} (V)	51.50	48.93	51.48	51.70	49.12	51.68	51.90	49.31	51.88	52.10	49.50	52.08
Short Circuit Current -I _{sc} (A)	13.89	11.11	11.11	13.95	11.16	11.16	14.01	11.21	11.21	14.07	11.26	11.26
Maximum Power Voltage -V _{mp} (V)	42.80	40.22	42.78	43.00	40.44	42.98	43.20	40.63	43.18	43.40	40.86	43.38
Maximum Power Current -I _{mp} (A)	13.21	10.57	10.57	13.26	10.61	10.61	13.32	10.66	10.66	13.37	10.70	10.70
Module Efficiency STC-η _m (0/0)	21.87			22.07			22.26			22.45		
Power Tolerance (W)	(0, +4.99)											
Pmax Temperature Coefficient	-0.30 %/°C											
Voc Temperature Coefficient	-0.25 %/°C											
Isc Temperature Coefficient	+0.046 %/°C											

STC: Irradiance 1000 W/m² module temperature 25°C AM=1.5
Power measurement tolerance: +/-3%

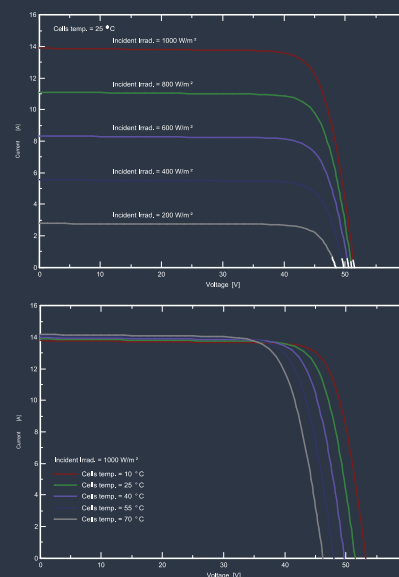
Rear Side Power Gain(SRP-565-BTA-BG)

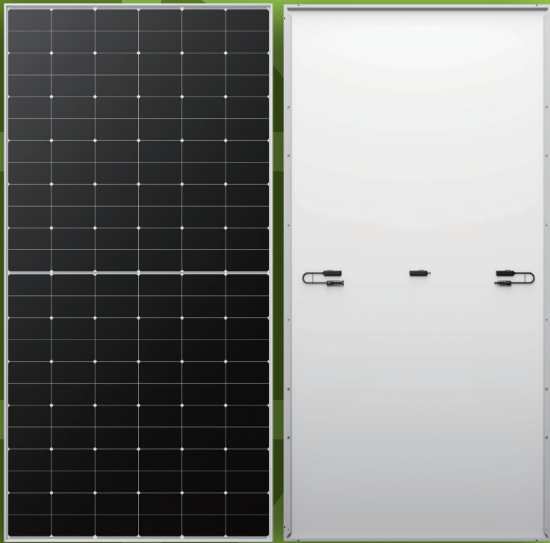
Power Gain	10%	15%	20%	25%	30%
Maximum Power - P_{mp} (W)	621	648	675	702	729
Open Circuit Voltage - V_{oc} (V)	51.50	51.50	51.50	51.50	51.50
Short Circuit Current - I_{sc} (A)	15.28	15.98	16.67	17.36	18.06
Maximum Power Voltage - V_{mp} (V)	42.80	42.80	42.80	42.80	42.80
Maximum Power Current - I_{mp} (A)	14.53	15.19	15.85	16.51	17.17

Application Conditions

Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	25 A
Operating Temperature	-40~+85°C
Nominal Operating Cell Temperature	45±2 °c
Bifaciality	80%±10%
Mechanical Load	Front side 5400 Pa / Back side 2400 Pa

I-V Curve





Hi-Mo 565~585M

❁ KEY FEATURES

- » Suitable for Distribution Market
- » Simple design embodies modern style
- » Better energy generation performance
- » High-quality module guarantees long-term reliability

❁ WARRANTY

-  15-year Warranty for Materials and Processing
-  25-year Warranty for Extra Linear Power Output

❁ COMPLETE SYSTEM AND PRODUCT CERTIFICATIONS

- » IEC 61215, IEC 61730, UL 61730
- » ISO9001:2015: ISO Quality Management system
- » ISO14001: 2015: ISO Environment Management System
- » ISO45001: 2018: Occupational Health and Safety
- » IEC62941: Guideline for module design qualification and type approval





22.6%
MAX MODULE
EFFICIENCY

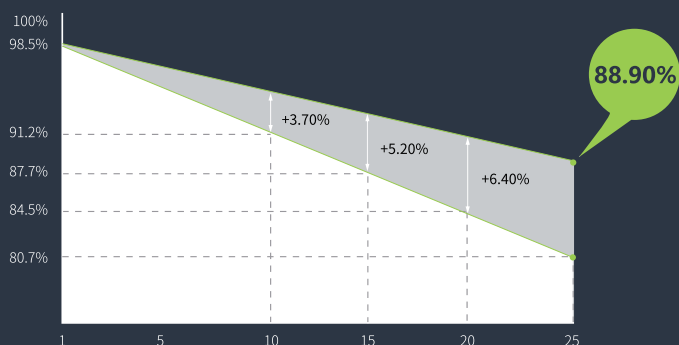
0~3%
POWER
TOLERANCE

<1.5%
FIRST YEAR
POWER DEGRADATION

0.40%
YEAR 2-25
POWER DEGRADATION

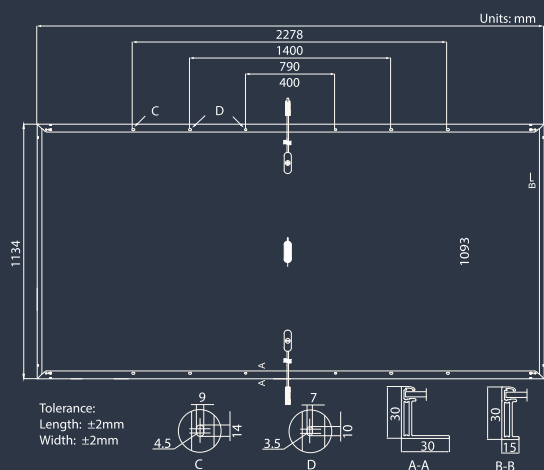
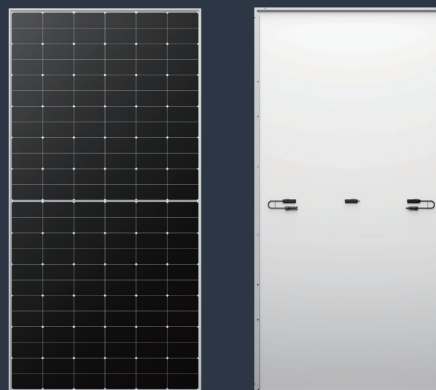
Additional Value

25-Year Power Warranty



Mechanical Parameters

Cell Orientation	144 (6×24)
Junction Box	IP68
Output Cable	4mm ² , +400, -200mm/±1400mm length can be customized
Glass	Single glass, 3.2mm coated tempered glass
Frame	Anodized aluminum alloy frame
Weight	27.2kg
Dimension	2278×1134×30mm
Packaging	36pcs per pallet / 180pcs per 20' GP / 720pcs per 40' HC



Electrical Characteristics

STC : AM1.5 1000W/m² 25°C

NOCT : AM1.5 800W/m² 20°C 1m/s

Test uncertainty for Pmax: ±3%

Module Type	LR5-72HTH-565M		LR5-72HTH-570M		LR5-72HTH-575M		LR5-72HTH-580M		LR5-72HTH-585M	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax/W)	565	422	570	426	575	430	580	433	585	437
Open Circuit Voltage (Voc/V)	51.76	48.60	51.91	48.74	52.06	48.88	52.21	49.02	52.36	49.16
Short Circuit Current (Isc/A)	14.01	11.31	14.07	11.36	14.14	11.42	14.20	11.47	14.27	11.52
Voltage at Maximum Power (Vmp/V)	43.61	39.79	43.76	39.93	43.91	40.07	44.06	40.20	44.21	40.34
Current at Maximum Power (Imp/A)	12.96	10.61	13.03	10.67	13.10	10.72	13.17	10.78	13.24	10.84
Module Efficiency(%)	21.9		22.1		22.3		22.5		22.6	

Operating Parameters

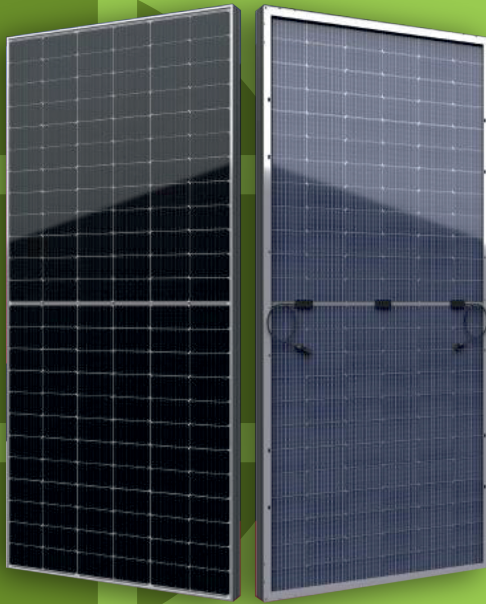
Operational Temperature	-40°C ~ +85°C
Power Output Tolerance	0 ~ 3%
Voc and Isc Tolerance	±3%
Maximum System Voltage	DC1500V (IEC/UL)
Maximum Series Fuse Rating	25A
Nominal Operating Cell Temperature	45±2°C
Protection Class	Class II
Fire Rating	UL type 1 or 2 IEC Class C

Mechanical Loading

Front Side Maximum Static Loading	5400Pa
Rear Side Maximum Static Loading	2400Pa
Hailstone Test	25mm Hailstone at the speed of 23m/s

Temperature Ratings (STC)

Temperature Coefficient of Isc	+0.050%/°C
Temperature Coefficient of Voc	-0.230%/°C
Temperature Coefficient of Pmax	-0.290%/°C



SIV SERIES

535-550W

SIV SERIES

Seraphim redefined the high-efficiency module series by integrating 182mm silicon wafers with multi-busbar and half-cut cell technologies. Seraphim panel combined creative technology effectively and extremely improved the module efficiency and power output.

QUALITY SYSTEM

ISO9001 / ISO14001 / ISO45001

PRODUCT CERTIFICATION



KEY FEATURES



Less mismatch to get more power



Less power loss by minimizing the shading impact

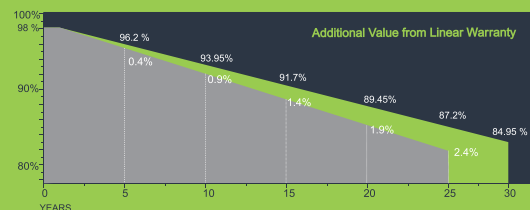


Competitive low light performance



3 times EL test to ensure best quality

WARRANTY



Guarantee on product material and workmanship



Linear power output warranty

INSURANCE



Ideal choice for utility and commercial scale projects by reduced BOS and improved ROI



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- Sand, acid, salt and hail stones
- 2400 Pa wind load and 5400 Pa snow load
- Anti-PID

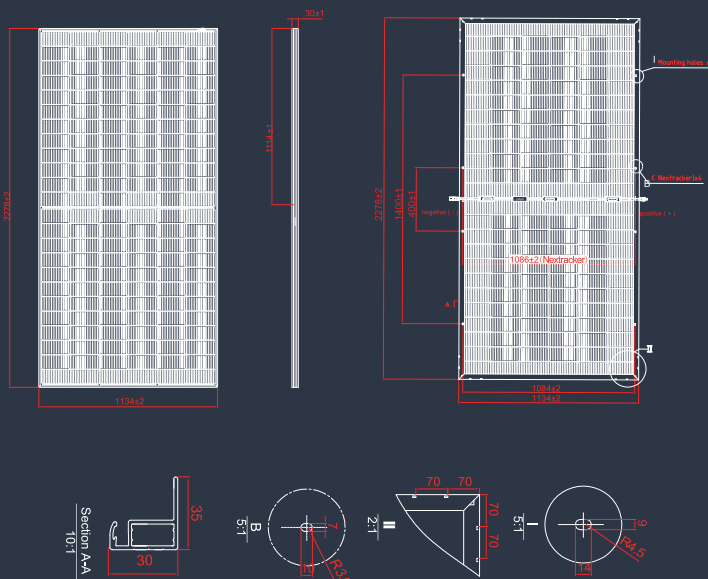
Mechanical Specifications

External Dimension	2278 x 1134 x 30 mm
Weight	32.0 kg
Solar Cells	PERC Mono crystalline(144pcs)
Front / Back Glass	2.0mm AR coating semi-tempered glass, low iron
Frame	Anodized aluminium alloy
Junction Box	IP68, 3 diodes
Output Cables	4.0mm ² , 250mm(+)/350mm(-) or Customized Length

Packing Configuration

Container	20'GP	40'HQ
Pieces per Pallet	32	32
Pallets per Container	4	20
Pieces per Container	128	640

Technical drawing



Electrical Characteristics

Module Type	SRP-535-BMA-BG			SRP-540-BMA-BG			SRP-545-BMA-BG			SRP-550-BMA-BG		
	Front STC	Front NOCT	Back STC	Front STC	Front NOCT	Back STC	Front STC	Front NOCT	Back STC	Front STC	Front NOCT	Back STC
Maximum Power -P _{mp} (W)	535	402	375	540	406	375	545	409	382	550	414	385
Open Circuit Voltage -V _{oc} (V)	49.40	46.09	49.38	49.50	46.18	49.38	49.60	46.32	4958	49.70	46.40	49.68
Short Circuit Current -I _{sc} (A)	13.70	11.08	9.66	13.81	11,16	9.66	13.90	11.23	9.80	14.00	11.32	9.87
Maximum Power Voltage -V _{mp} (V)	41.29	38.33	41.35	41.55	38.39	41.35	41.80	38.41	41.86	42.05	38.58	42.10
Maximum Power Current -I _{mp} (A)	12.96	10.50	9.07	13.00	10.59	9.07	13.04	10.65	9.13	13.08	10.73	9.15
Module Efficiency STC-η _m (0/0)	20.71			20.90			21.10			21.29		
Power Tolerance (W)	(0, +3%)											
Pmax Temperature Coefficient	-0.35 %/°C											
Voc Temperature Coefficient	-0.27 %/°C											
Isc Temperature Coefficient	+0.05 %/°C											

STC: Irradiance 1000 W/m² module temperature 25°C AM=1.5
Power measurement tolerance: +/-3%

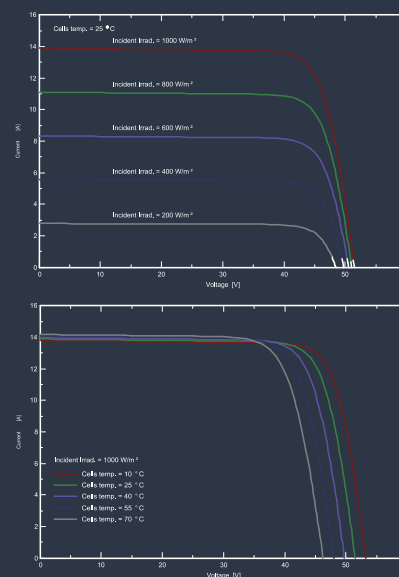
Rear Side Power Gain(SRP-540-BMA-BG)

Power Gain	10%	15%	20%	25%	30%
Maximum Power - P_{mp} (W)	594	621	648	675	702
Open Circuit Voltage - V_{oc} (V)	49.50	49.50	49.50	49.50	49.50
Short Circuit Current - I_{sc} (A)	15.19	15.88	16.57	17.26	17.95
Maximum Power Voltage - V_{mp} (V)	41.55	41.55	41.55	41.55	41.55
Maximum Power Current - I_{mp} (A)	14.30	14.95	15.60	16.25	16.90

Application Conditions

Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	25 A
Operating Temperature	-40~+85℃
Nominal Operating Cell Temperature	45±2 ℃
Bifaciality	70%±10%
Mechanical Load	Front side 5400 Pa / Back side 2400 Pa

I-V Curve





SV SERIES 595-610W

SV SERIES

Seraphim redefined the high-efficiency module series by integrating 210mm silicon wafers with multi-busbar and half-cut cell technologies. Seraphim panel combined creative technology effectively and extremely improved the module efficiency and power output.

QUALITY SYSTEM

ISO9001 / ISO14001 / ISO45001

PRODUCT CERTIFICATION



KEY FEATURES



Less mismatch to get more power



Less power loss by minimizing the shading impact

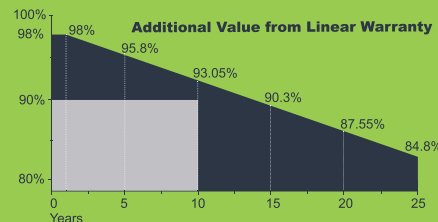


Competitive low light performance



3 times EL test to ensure best quality

WARRANTY



Guarantee on product material and workmanship



Linear power output warranty

INSURANCE



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Outstanding reliability proven by PVEL for stringent environment condition:

- Sand, acid, salt and hail stones
- 2400 Pa wind load and 5400 Pa snow load
- Anti-PID

Electrical Characteristics

Module Type	SRP-595-BMB-HV		SRP-600-BMB-HV		SRP-605-BMB-HV		SRP-610-BMB-HV	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power at STC (Pmp)	595	446	600	450	605	454	610	458
Open Circuit Voltage (Voc)	41.3	38.6	41.5	38.8	41.7	39.0	41.9	39.2
Short Circuit Current (Isc)	18.49	14.94	18.54	14.98	18.59	15.02	18.64	15.06
Maximum Power Voltage (Vmp)	34.12	31.54	34.33	31.71	34.54	31.88	34.74	32.06
Maximum Power Current (Imp)	17.44	14.15	17.48	14.20	17.52	14.25	17.56	14.29
Module Efficiency at STC(ηm)	21.02		21.20		21.38		21.55	
Power Tolerance	(0, +4.99)							
Maximum System Voltage	1500V DC							
Maximum Series Fuse Rating	30 A							

STC: Irradiance 1000 W/m²,module temperature 25°C,AM=1.5
 Power measurement tolerance: +/-3%

Temperature Characteristics

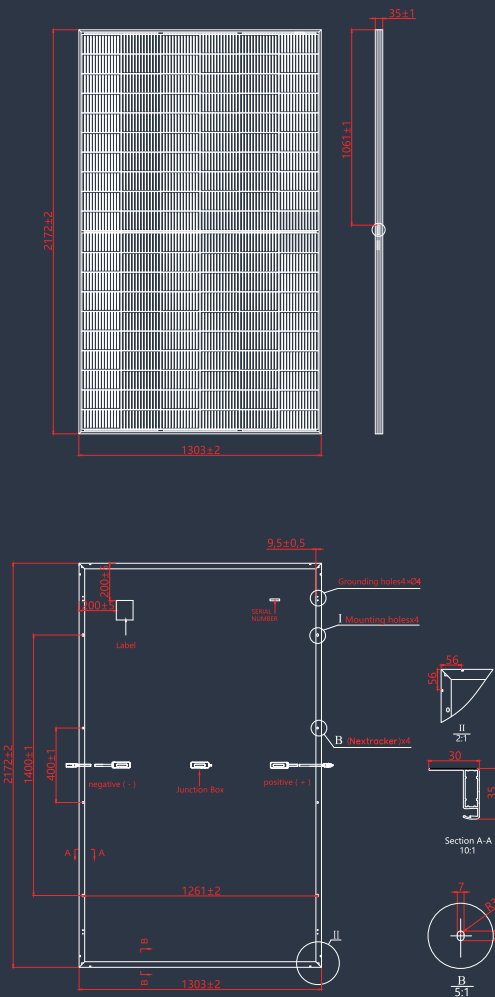
Pmax Temperature Coefficient	-0.34 %/0c
Voc Temperature Coefficient	-0.26 %/0c
Isc Temperature Coefficient	+0.05 %/0c
Operating Temperature	-40 +85°C
Nominal Operating Cell Temperature(NOCT)	45±2°c

Mechanical Specifications

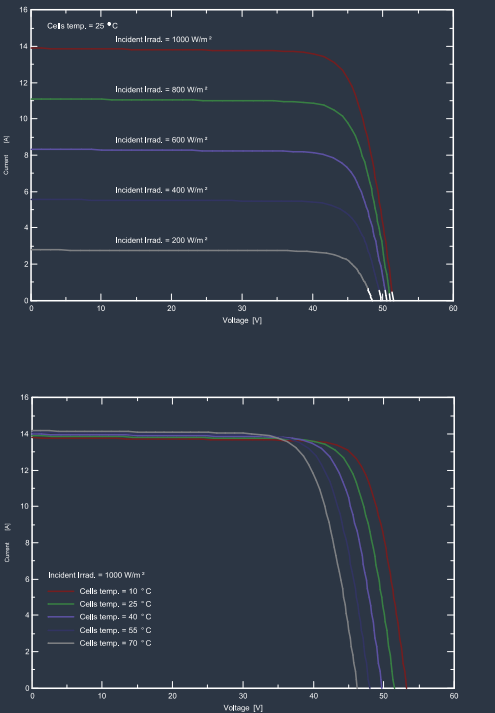
External Dimensions	2172x1303x35mm
Weight	31.0 kg
Solar Cells	PERC Mono (120pcs)
Front Glass	3.2mm AR coating tempered glass, low iron
Frame	Anodized aluminium alloy
Junction Box	IP68, 3 diodes
Output Cables	4.0mm², 250mm(+)/350mm(-) or Customized Length
Mechanical Load	Front side 5400Pa/ Rear side 2400Pa

Packing Configuration

	2172x1303x35mm
Container	40'HQ
Pieces per Pallet	31
Pallets per Container	17
Pieces per Container	527



I-V Curve





AGE 1200

» This simple solar inverter is designed to power your home appliances or precious 3C electronics. It also can handle motor-type loads with high surge power such as vacuums, small freezers, or drills. With built-in solar charger, it can convert solar power to battery power and provide continuous power to connected equipment during night time.

- ⊗ Simulated sine wave inverter
- ⊗ Built-in 50A PWM solar charger
- ⊗ Wide input voltage range
- ⊗ 10A or 20A standard AC charging current
- ⊗ LCD display for comprehensive information
- ⊗ Overload, short circuit and reverse polarity protection



AGE 1200



MODEL		1200
CAPACITY		1200 VA / 720 W
INPUT		
Voltage		230 VAC
Input Voltage Range		90-280VAC
Frequency Range		60Hz or 50 Hz (Auto sensing)
OUTPUT		
Output voltage Regulation (Batt. Mode)		230 VAC $\pm 10\%$
Frequency Range (Batt. Mode)		60 Hz or 50 Hz ± 1 Hz
Transfer Time		20ms (Typical)
Waveform (Batt. Mode)		Simulated Sine Wave
BATTERY		
Battery Voltage		12VDC
Acceptable Battery Type		Rechargeable lead-acid and deep discharge battery
Acceptable Input Range for Charger		90~280 VAC
DC Start Voltage		>11VDC
AC CHARGER		
Constant Current Charge Voltage		14.3VDC $\pm 2\%$
Floating Charge Voltage		13.7VDC $\pm 2\%$
Maximum Charge Current		10A or 20A
SOLAR CHARGER		
Maximum PV Array Open Circuit Voltage		40 VDC
Operating Voltage Range		15~18 VDC
Maximum Solar Charge Current		50A
PROTECTION		
Full Protection		Overload, short circuit and reverse polarity protection
PHYSICAL		
Dimension, D x W x H (mm)		300 x 360 x 88
Net Weight (kgs)		6.3
ENVIRONMENT		
Humidity		0 to 90% Relative Humidity (Non-condensing)
Operating Temperature		0°C to 40°C
Storage Temperature		-15°C to 50°C



AGE PLUS 1/2 KW



» This is a hybrid inverter which combines solar system, AC utility, and battery power source to supply continuous power. It is suitable for remote areas where the cost of utility is too high or emergency usage when utility is not stable.

- ⊕ Pure sine wave solar inverter
- ⊕ Output power factor 1
- ⊕ Selectable high power charging current
- ⊕ Wide DC input range
- ⊕ Selectable input voltage range for home appliances and personal computers
- ⊕ Configurable AC/Solar input priority via LCD setting
- ⊕ Compatible to AC mains or generator power
- ⊕ Auto restart while AC is recovering
- ⊕ Overload and short circuit protection
- ⊕ Battery equalization for optimized battery performance and lifecycle
- ⊕ Cold start function
- ⊕ Optional anti-dust kit



AGE PLUS 1/2 KW



MODEL	AGE Plus 1KW	AGE Plus 2KW
Rated Power	1000VA/1000W	2000VA / 2000W
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	2000VA	4000VA
Efficiency (Peak)	90%	
Transfer Time	10 ms (For Personal Computers) ; 20 ms (For Home Appliances)	
Waveform	Pure sine wave	
BATTERY		
Battery Voltage	12 VDC	24 VDC
Floating Charge Voltage	13.5 VDC	27 VDC
Overcharge Protection	16 VDC	31 VDC
SOLAR CHARGER & AC CHARGER		
Solar Charger type	MPPT	
Maximum PV Array Open Circuit Voltage	102 VDC	
Maximum PV Array Power	500 W	1000 W
MPP Range @ Operating Voltage	15 ~ 80 VDC	30~80 VDC
Maximum Solar Charge Current	40 A	
Maximum AC Charge Current	20 A	
Maximum Charge Current	60 A	
PHYSICAL		
Dimension, D x W x H (mm)	88 x 225 x 320	88 x 225 x 320
Net Weight (kgs)	4.4	5
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.



AGE 3000W MPPT



» This is a hybrid inverter which combines solar system, AC utility, and battery power source to supply continuous power. It is suitable for remote areas where the cost of utility is too high or emergency usage when utility is not stable.

- ⊕ Pure sine wave solar inverter
- ⊕ Output power factor 1
- ⊕ High PV input voltage range
- ⊕ Battery independent design
- ⊕ Built-in 80A and 100A MPPT solar charger for 1.2K-2.5K and 3K-5K respectively
- ⊕ Battery equalization function to optimize battery performance and extend lifecycle
- ⊕ Built-in anti-dust kit for harsh environment



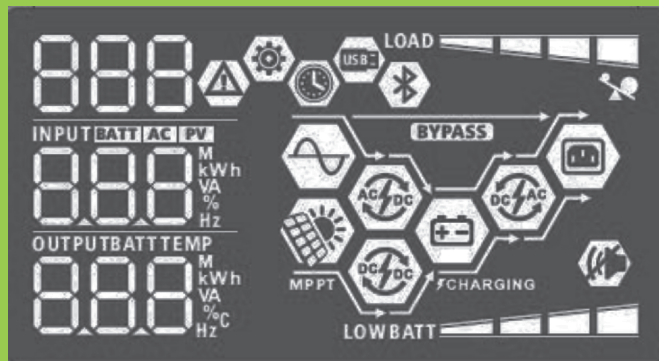
AGE 3000W MPPT



MODEL		AGE 3000W MPPT
RATED POWER		2500VA/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 $\pm$ 5%
Surge Power		5000VA
Efficiency (Peak)		93%
Transfer Time		10 ms (For Personal Computers) ; 20 ms (For Home Appliances)
Waveform		Pure sine wave
BATTERY		
Battery Voltage		24 VDC
Floating Charge Voltage		27 VDC
Overcharge Protection		32 VDC
SOLAR CHARGER & AC CHARGER		
Maximum PV Array Open Circuit Voltage		450 VDC
Maximum PV Array Power		3000W
MPP Range @ Operating Voltage		60-400 VDC
Maximum Solar Charge Current		80 A
Maximum AC Charge Current		80 A
Maximum Charge Current		80 A
PHYSICAL		
Dimension, D x W x H (mm)		90 x 288 x 357
Net Weight (kgs)		6.5
Communication Interface		RS232
ENVIRONMENT		
Humidity		5% to 95% Relative Humidity (Non-condensing)
Operating Temperature		-10°C to 50°C
Storage Temperature		-15°C to 60°C



LCD Display Panel



AGE HYBRID 3 KW

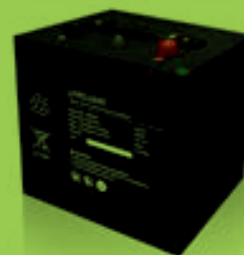
- **Detachable LCD control module with various communications**

- » This detachable LCD control module can be turned to remotepanel.
- » Users can install the LCD panel in accessible area away from inverter up to 20 meters.



- **Reserved communication port (RS-485, CAN-BUS or RS-232) for BMS**

- » This third generation inverter is reserved communication port for BMS.
- » For the detailed information, please contact sales directly.



- **Battery equalization extends lifecycle**

- » This inverter charger is built in battery equalization function.
- » This function will help remove sulfation to optimize battery performance and even extend lifecycle.

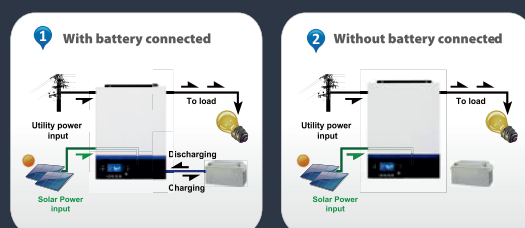
• Integrated Bluetooth interface with Android App

- » VM III series is integrated Bluetooth interface ready for mobile monitoring.
- » This technology allows wireless communication upto 6—7m in an open space.
- » Now, WatchPower App is available in google store.



• Battery independency

- » Inverter can keep supplying power to the loads from PV energy or the grid without battery connected.



• Supports USB On-the-Go function

- » VM III series supports USB On-the-Go function to facilitate data upload/download.



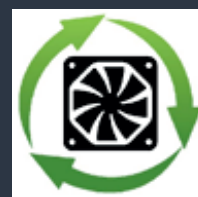
• User-friendly LCD operation

- » Users can easily set up or change the charging current, output source and charger source prioritization through LCD control panel to optimize inverter performance.



• Replaceable fan design

- » VM III series is designed with replaceable fan. It will simplify the maintenance and reduce the maintenance cost.



• Dual outputs selected as either programmable output or generator input



Axpert VM III Off-Grid Inverter Selection Guide

MODEL	Axpert VM III-1500-24		Axpert VM III-3000-24	Axpert VM III 5000-48
Rated Power	1500VA/1500W		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 ± 5%			
Surge Power	3000VA	6000VA	10000VA	
Efficiency (Peak)	90% ~ 93%			
Transfer Time	15 ms (For Personal Computers) 20 ms (For Home Appliances)			
Waveform	Pure sine wave			
Dual Outputs	Yes			
BATTERY				
Battery Voltage	24 VDC			48 VDC
Floating Charge Voltage	27 VDC			54 VDC
Overcharge Protection	33 VDC			63 VDC
SOLAR CHARGER & AC CHARGER				
Solar Charger type	MPPT			
Maximum PV Array Power	2000W	4000W	5000W	
MPP Range @ Operating Voltage	120 ~ 380 VDC	120 ~ 450 VDC		
Maximum PV Array Open Circuit Voltage	400 VDC	500 VDC		
Maximum Solar Charge Current	60A	100A		
Maximum AC Charge Current	40A	100A		
Maximum Charge Current	60A	100A		
PHYSICAL				
Dimension, D x W x H (mm)	100 x 280 x 390	115 x 300 x 400		
Net Weight (kgs)	8.5	9	10	
Communication Interface	USB/RS232/RS485/Bluetooth/Dry-contact			
OPERATING 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.



AGE PLUS 3/5 KW



» This is a hybrid inverter which combines solar system, AC utility, and battery power source to supply continuous power. It is suitable for remote areas where the cost of utility is too high or emergency usage when utility is not stable.

- ⊕ Pure sine wave solar inverter
- ⊕ Output power factor 1
- ⊕ High PV input voltage range
- ⊕ Battery independent design
- ⊕ Built-in 80A and 100A MPPT solar charger for 1.2K-2.5K and 3K-5K respectively
- ⊕ Battery equalization function to optimize battery performance and extend lifecycle
- ⊕ Built-in anti-dust kit for harsh environment



AGE PLUS 3/5 KW



MODEL	AGE PLUS+3KW	AGE PLUS+5KW
RATED POWER	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 ± 5%	
Surge Power	6000VA	10000VA
Efficiency (Peak)	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	33 VDC	63 VDC
SOLAR CHARGER & AC CHARGER		
Maximum PV Array Open Circuit Voltage	500 VDC	500 VDC
Maximum PV Array Power	4000 w	4000 w
MPP Range @ Operating Voltage	120–450 VDC	120–450 VDC
Maximum Solar Charge Current	100 A	100 A
Maximum AC Charge Current	100A	100A
Maximum Charge Current	100A	100A
PHYSICAL		
Dimension, D x W x H (mm)	100 x 300 x 440	
Net Weight (kgs)	9	10
Communication Interface	USB/RS232 (optional USB/Dry contact)	
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.



AGE 4000 MPPT



- ⊞ Pure sine wave
- ⊞ Power factor 1.0
- ⊞ PV input 500Vdc Max
- ⊞ Built-in MPPT IOOA
- ⊞ Capable to work without battery
- ⊞ Detachable dust cover for harsh environment
- ⊞ WiFi remote monitoring optional
- ⊞ Compatible work with lifep04 battery
- ⊞ Support multiple output priority: UTL, SOL, SBU, SUB
- ⊞ EQ function to optimize battery performance and extend life cycle



Waveform
Pure sine wave



Support Generator
Connection



$pF=I.O$



Lead-acid/Lithium
Battery Optional



120-500V
Wide PV Input

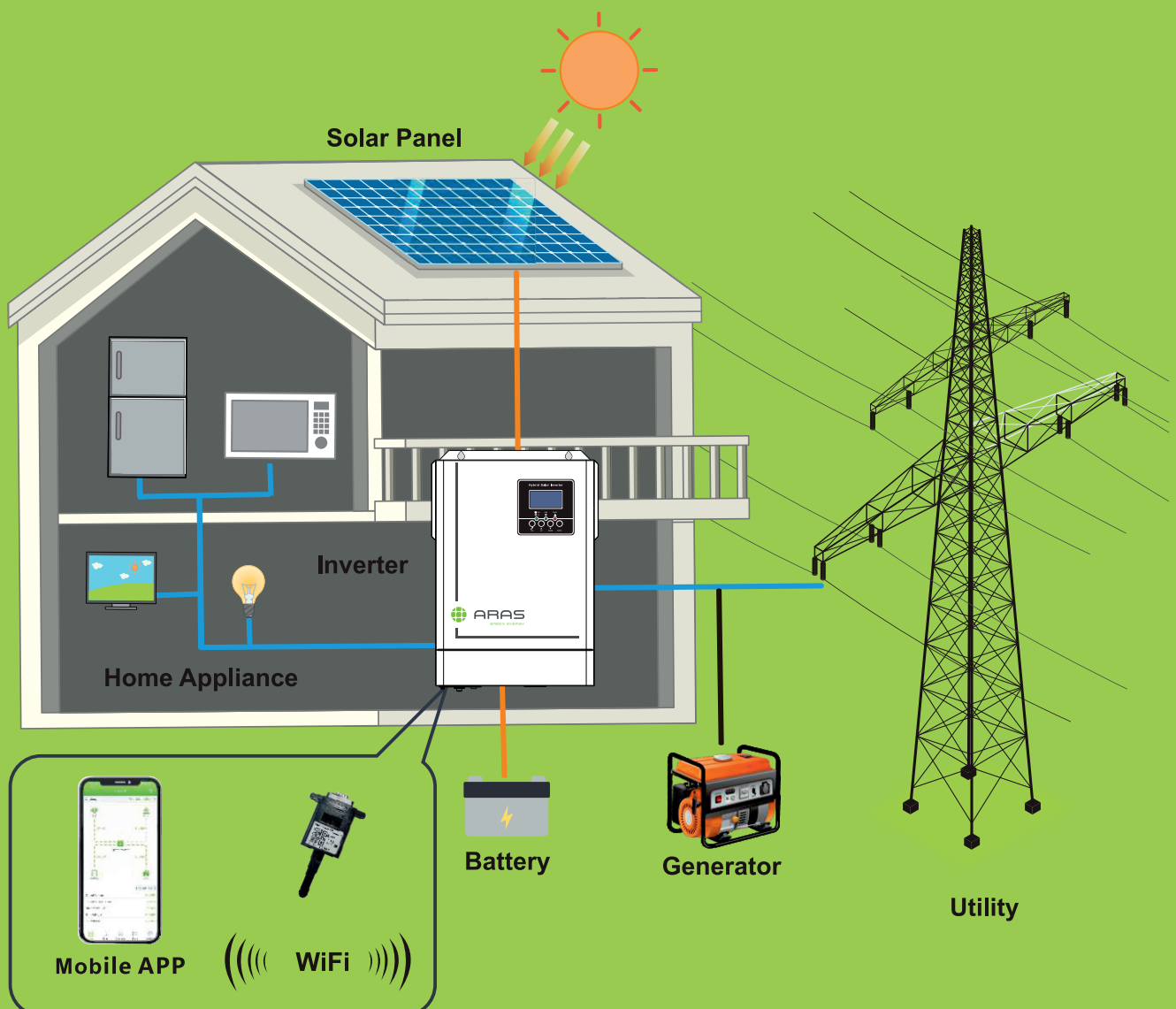


WIFI



Working without
batteries in sun day

Application Diagram





Technical Data

MODEL	AEG 4000 MPPT
Capacity	3.5KVA/3.5KW
Parallel Capability	NO
INPUT	
Nominal Voltage	230VAC
Acceptable Voltage Range	170-280VAC(For personal Computer);90-280vac(For Home Appliances)
Frequency	50/60 Hz(Auto sensing)
OUTPUT	
Nominal Voltage	220/230VAC $\pm$ 5%
Surge Power	7000VA
Frequency	50/60Hz
Waveform	Pure Sine wave
Transfer Time	10ms(For personal Computer);20ms(For Home Appliances)
Peak Efficiency(PV to INV)	96%
Peak Efficiency(Battery to INV)	93%
Overload Protection	5s@ $\geq$ 150% load; 10s@110%~150% load
Crest Factor	3:1
Admissible Power FACTOR	0.6~1 (inductive or capacitive)
BATTERY	
Battery Voltage	24VDC
Floating Charge Voltage	27VDC
OverCharge Protection	33VDC
Charging Method	CC / CV
Solar Charger & AC Charger	
Solar Charger TYPE	MPPT
Max.PV Array Power	4000W
Max.PV Array Open Circuit Voltage	500VDC
PV Array MPPT Voltage Range	120VDC~450VDC
Max.Solar Input Current	15A
Max.Solar Charge Current	100A
Max.AC Charge Current	60A
Max.Charge Current	100A
PHYSICAL	
Dimensions,D x W x H(mm)	448x295x120
Package Dimensions,D x W x H(mm)	560x375x190
Net Weight(Kg)	9
Communication Interface	USB / RS232 / Dry-contact
ENVIRONMENT	
Operating Temperature Range	(-10°C to 50°C)
Storage temperature	(-15°C ~ 50°C)
Humidity	5% to 95% Relative Humidity (Non-condensing)

*Product specifications are subject to change without further notice.



AGE MKS 5KW



» This is a hybrid inverter which combines solar system, AC utility, and battery power source to supply continuous power. It is suitable for remote areas where the cost of utility is too high or emergency usage when utility is not stable.

- ⊗ Pure sine wave solar inverter
- ⊗ Selectable high power charging current
- ⊗ Wide DC input range
- ⊗ Selectable input voltage range for home appliances and personal computers
- ⊗ Configurable AC/Solar input priority via LCD setting
- ⊗ Compatible to mains voltage or generator power
- ⊗ Auto restart while AC is recovering
- ⊗ Overload and short circuit protection
- ⊗ Smart battery charger design for optimized battery performance
- ⊗ Cold start function
- ⊗ Parallel operation with up to 9 units
- ⊗ Optional dual outputs for smart load management (check sales)

**MODEL****AGE MKS 5KW****RATED POWER**

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)	230 VAC $\pm$ 5%
Overload capacity	5s@ $\geq$ 150% load; 10s@110%~150% load; 100ms @ $\geq$ 200% load
Efficiency (Peak)	90 %
Transfer Time	10 ms (For Personal Computers) 20 ms (For Home Appliances)
Waveform	Pure sine wave

BATTERY

Battery Voltage	48 VDC
Floating Charge Voltage	54 VDC
Overcharge Protection	66 VDC

SOLAR CHARGER & AC CHARGER

Solar Charger Type	MPPT
Maximum PV Array Power	4500W
MPPT Range @ Operating Voltage	120 ~ 430 VDC
Maximum PV Array Open Circuit Voltage	450 VDC
Maximum Solar Charge Current	100 A
Maximum AC Charge Current	100 A
Maximum Charge Current	100 A

PHYSICAL

Dimension, D x W x H (mm)	120 x 295 x 468
Net Weight (kgs)	11.0
Communication Interface	USB and 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.



AGE 5KW GRID TIE



- ⊕ High PV input voltage range 500Vdc Max
- ⊕ Built-in MPPT solar controller 100A
- ⊕ WiFi remote monitoring optional
- ⊕ Battery independent design
- ⊕ Detachable dust cover for harsh environment
- ⊕ Self-consumption and Feed-in to the grid
- ⊕ Programmable supply priority for PV , Battery or Grid
- ⊕ Support multiple output priority: SBU / SUB / SUF / ZEC
- ⊕ Parallel operation up to 12 units in 1phase or 3phase
- ⊕ EQ function to optimize battery performance and extend life cycle
- ⊕ Programmable multiple operation modes : Grid-tie , off-grid and grid-tie with backup
- ⊕ The external CT sensor will provide to detect power flowing back to the grid



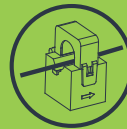
Support
Max 12 units Parallel



Working without
batteries in sun day



Feed-in to the Grid



CT Sensor available

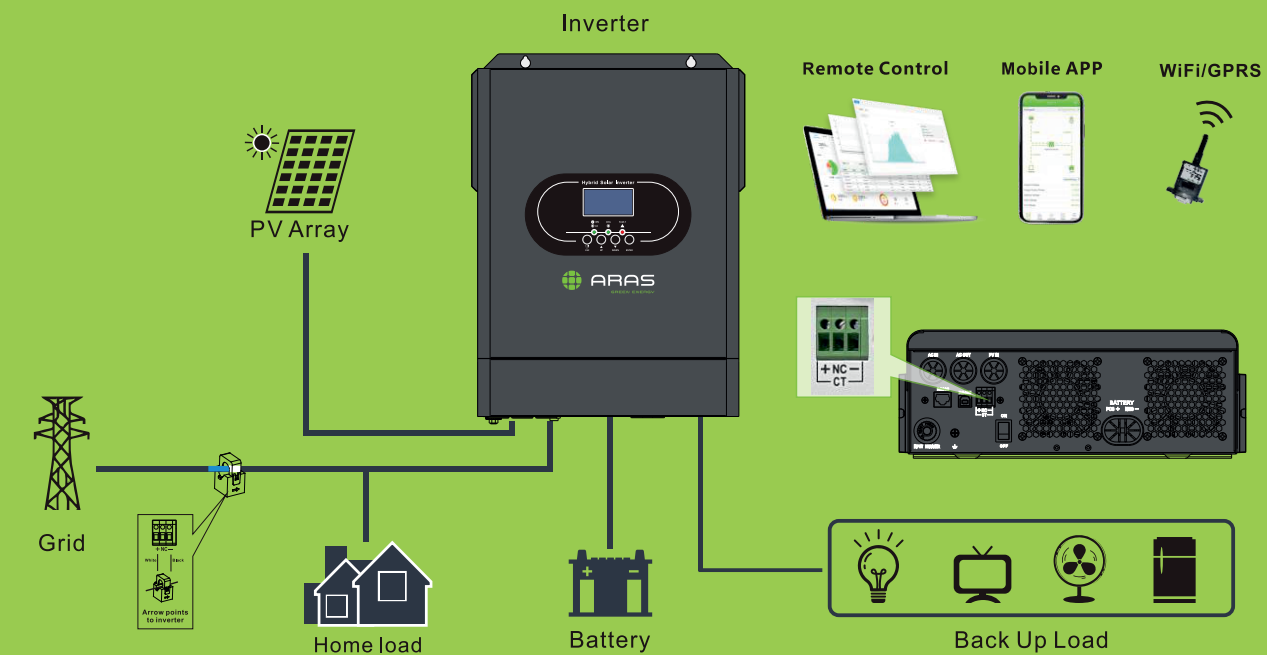


120-500V
Wide PV Input



WIFI remote
monitoring

Application Diagram





MODEL		AGE 5KW GRID TIE
Phase		1-Phase or 3-Phase
Maximum Pv Input Power		5500W
Rated Output Power		5000VA / 5000W
Maximum Charging Power		5000W
GRID-TIE OPERATION		
PV INPUT (DC)		
Nominal DC Voltage / Maximum DC Voltage		360VDC / 500VDC
Start-up Voltage / Initial Feeding Voltage		150VDC / 120VDC
MPPT Voltage Range		120VDC ~ 450VDC
Number of MPPT Trackers / Maximum Input Current		1 / 18A
GRID OUTPUT (AC)		
Nominal Output Voltage		220 / 230 / 240VAC
Output Voltage Range		170-280VAC or 90-280VAC
Nominal Output Current		22A
Power Factor		0.6~1 (inductive or capacitive)
EFFICIENCY		
Maximum Conversion Efficiency (DC/AC)		94%
OFF-GRID OPERATION		
AC INPUT		
AC Start-up Voltage / Auto Restart Voltage		100Vac / 90Vac
Acceptable Input Voltage Range		170-280VAC or 90-280VAC
Maximum AC Input Current		40A
PV INPUT (DC)		
Maximum DC Voltage		500VDC
MPPT Voltage Range		120VDC~450VDC
Number of MPPT Trackers / Maximum Input Current		1 / 18A
BATTERY MODE OUTPUT (AC)		
Nominal Output Voltage		220/230/240VAC
Output Waveform		Pure Sine wave
Efficiency (DC to AC)		94%
HYBRID OPERATION		
PV INPUT (DC)		
Nominal DC Voltage / Maximum DC Voltage		360VDC/500VDC
Start-up Voltage / Initial Feeding Voltage		150VDC/120VDC
MPPT Voltage Range		120VDC~450VDC
Number of MPPT Trackers / Maximum Input Current		1/18A
GRID OUTPUT (AC)		
Nominal Output Voltage		220/230/240VAC
Output Voltage Range		170-280VAC or 90-280VAC
Nominal Output Current		22A
AC INPUT		
AC Start-up Voltage / Auto Restart Voltage		100Vac/90Vac
Acceptable Input Voltage Range		170-280VAC or 90-280VAC
Maximum AC Input Current		40A
BATTERY MODE OUTPUT (AC)		
Nominal Output Voltage		48VDC
Efficiency (DC to AC)		94%
BATTERY & CHARGER		
Nominal DC Voltage		48VDC
Maximum Solar Charging Current		100A
Maximum AC Charging Current		60A
Maximum Charging Current		100A
GENERAL		
PHYSICAL		
Dimension, D x W x H (mm)		448*315*122
Net Weight (kgs)		11
INTERFACE		
Parallel Function		1-Phase Parallel*12 / 3-Phase Parallel*12
Communication Port		RS232/RS485
ENVIRONMENT		
Humidity		5%~95% Relative Humidity (Non-condensing)
Operating Temperature		-10°C~55°C

*Product specifications are subject to change without further notice.



AGE LEADER 6KW



- » This is a hybrid inverter which combines solar system, AC utility, and battery power source to supply continuous power. It is suitable for remote areas where the cost of utility is too high or emergency usage when utility is not stable.
- ⊕ Zero (0ms) transfer time to protect mission-critical loads such as servers and ATMs
- ⊕ High PV input voltage range
- ⊕ Removable LCD control module with multiple communications
- ⊕ Selectable high power charging current
- ⊕ Selectable input voltage range for home appliances and personal computers
- ⊕ Configurable AC/Solar input priority via LCD setting
- ⊕ Compatible to AC mains or generator power
- ⊕ Reserved communication port for BMS (RS485 or CAN-BUS)
- ⊕ Battery equalization for optimized battery performance and lifecycle
- ⊕ Built-in anti-dust kit



MODEL		AGE LEADER 6KW
Rated Power		6000VA/6000W
Parallel Capability		Up to 9 units
INPUT		
Voltage		230 VAC
Voltage Range		110-280 VAC
Frequency Range		50 Hz/60 Hz (Auto sensing)
OUTPUT		
AC Voltage Regulation		230 VAC $\pm$ 5%
Output THDv		<3% for linear load, <5% for non-linear load
Efficiency (Peak)		94 % at Line Mode, 92% at Battery Mode
Transfer Time (AC Mode to Battery Mode)		0 ms
Transfer Time (Inverter to Bypass)		4 ms
Waveform		Pure sine wave
BATTERY		
Battery Voltage		40 ~ 66 VDC
Floating Charge Voltage		54 VDC
Overcharge Protection		66 VDC
SOLAR CHARGER & AC CHARGER		
Solar Charger Type		MPPT
Maximum PV Array Open Circuit Voltage		500 VDC
Maximum PV Array Power		6000 W
MPP Range @ Operating Voltage		120~430VDC
Maximum Solar Charge Current		120 A
Maximum AC Charge Current		120 A
Maximum Charge Current		120 A
PHYSICAL		
Dimension, D x W x H (mm)		140 x 295 x 468
Net Weight (kgs)		12.0
Communication Interface		USB/RS232/RS485/WiFi/Dry-contact
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.



AGE V4 WP



- ⊞ IP65 waterproof and dustproof
- ⊞ Dual outputs for smart load management
- ⊞ Two independent AC power sources connected and switched automatically
- ⊞ Self-consumption and Feed-in to the grid
- ⊞ Programmable supply priority for PV, Battery or Grid
- ⊞ Built-in communication port for BMS (Rs485)
- ⊞ User-adjustable charging current and voltage
- ⊞ Programmable multiple operation modes: Grid-tie, off-grid and grid-tie with backup
- ⊞ Parallel operation up to 9 units



MODEL	Infini V4 WP 6kw
PHASE	1-phase in / 1-phase out
MAXIMUM PV INPUT POWER	7000W
RATED OUTPUT POWER	6000VA/6000W
MAXIMUM CHARGING POWER	6000 W
GRID-TIE OPERATION	
PV INPUT (DC)	
Maximum DC Voltage	550 VDC
Start-up Voltage / Initial Feeding Voltage	120VDC / 150 VDC
MPP Voltage Range	120 VDC ~ 450 VDC
Number of MPP Trackers / Maximum Input Current	1 / 30A
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
Power Factor	> 0.99
EFFICIENCY	
Maximum Conversion Efficiency (DC/AC)	97%
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	550 VDC
MPP Voltage Range	120VDC ~ 450 VDC
Number of MPP Trackers / Maximum Input Current	1 / 30A
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
Start-up Voltage / Initial Feeding Voltage	120 VDC / 150 VDC
MPP Voltage Range	120 VDC ~ 450 VDC
Number of MPP Trackers / Maximum Input Current	1 / 30A
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
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
Maximum Solar Charging Current	120 A
Maximum AC Charging Current	120 A
Maximum Charging Current	120 A
GENERAL	
PHYSICAL	
Dimension, D x W x H (mm)	192 x 360 x 665
Net Weight (kgs)	22.5
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.



HYBRID INVERTER 6KW

- Colorful touch LCD, IP65 protection degree
- DC couple and AC couple to retrofit existing solar system
- Max. 16pcs parallel for on-grid and off-grid operation;
Support multiple batteries parallel
- Max. charging/discharging current of 140A
- 6 time periods for battery charging/discharging
- Support storing energy from diesel generator



Technical Data

Model	SUN-3K -SG04LP1-24-EU	SUN-3K -SG04LP1-EU	SUN-3.6K -SG04LP1-EU	SUN-5K -SG04LP1-EU	SUN-6K -SG04LP1-EU
Battery Input Data					
Battery Type	Lead-acid or Lithium-ion				
Battery Voltage Range (V)	20-30	40-60	40-60	40-60	40-60
Max. Charging Current (A)	140	70	90	120	135
Max. Discharging Current (A)	140	70	90	120	135
Number of battery input	Yes				
Charging Curve	3 Stages / Equalization				
Charging Strategy for Li-Ion Battery	Self-adaption to BMS				
PV String Input Data					
Max. DC Input Power (W)	3900	3900	4680	6500	7800
Rated PV Input Voltage (V)	370 (125-500)				
Start-up Voltage (V)	125				
MPPT Voltage Range (V)	150-425				
Full Load DC Voltage Range (V)	300-425				
PV Input Current (A)	13		13+13		
Max. PV I _{SC} (A)	17		17+17		
No.of MPP Trackers	1		2		
No.of Strings per MPP Tracker	1				
AC Output Data					
Rated AC Output Active Power (W)	3000		3600	5000	6000
Max AC Output Active Power (W)	3300		3960	5500	6600
AC Output Rated Current (A)	13.6/13		16.4/15.7	22.7/21.7	27.3/26.1
Max. AC Current (A)	15/14.3		18/17.2	25/23.9	30/28.7
Max. Continuous AC Passthrough (A)	35				40
Peak Power (off grid)	2 time of rated power, 10 S				
Power Factor Adjustment Range	0.8 leading to 0.8 lagging				
Power Factor	1				
Output Frequency and Voltage	50/60Hz; L/N/PE 220/230Vac (single phase)				
Grid Type	Single Phase				
Total Harmonic Distortion (THD)	<3% (of nominal power)				
DC current injection	<0.5% I _n				
Efficiency					
Max. Efficiency	97.60%				
Euro Efficiency	96.50%				
MPPT Efficiency	99.90%				
Protection					
Integrated	PV Input Lightning Protection, Anti-islanding Protection, PV String Input Reverse Polarity Protection, Insulation Resistor Detection, Residual Current Monitoring Unit, Output Over Current Protection, Output Shorted Protection, Surge protection				
Output Over Voltage Protection	DC Type II/AC Type III				
Certifications and Standards					
Grid Regulation	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150				
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2				
General Data					
Operating Temperature Range (β _H)	-40-60°C, >45°C derating				
Cooling	Natural cooling				Smart cooling
Noise (dB)	≤30 dB				
Communication with BMS	RS485; CAN				
Weight (kg)	14			15.1	
Size (mm)	330W x 433H x238D				
Protection Degree	IP65				
Installation Style	Wall-mounted				
Warranty	5 years				



AGE HYBRID (RGB) 6 KW



» This is a hybrid inverter which combines solar system, AC utility, and battery power source to supply continuous power. It is suitable for remote areas where the cost of utility is too high or emergency usage when utility is not stable.

- ⊞ Customizable status LED ring with RGB lights
- ⊞ Touchable button with 4.3" colored LCD
- ⊞ Supports USB On-the-Go function
- ⊞ Data log events stored in the inverter
- ⊞ Self-consumption and Feed-in to the grid
- ⊞ Programmable supply priority for PV, Battery or Grid
- ⊞ User-adjustable charging current and voltage
- ⊞ Programmable multiple operation modes: Grid-tie, off-grid and grid-tie with backup
- ⊞ Built-in Wi-Fi for mobile monitoring (App is available)
- ⊞ Reserved communication port for BMS
- ⊞ Parallel operation up to 9 units



MODEL	AGE HYBRID TOUCH (RGB) 6KW
PHASE	1-phase in / 1-phase out
MAXIMUM PV INPUT POWER	6000W
RATED OUTPUT POWER	6000W
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	120VDC / 150 VDC
MPP Voltage Range	120 VDC ~ 430 VDC
Number of MPP Trackers / Maximum Input Current	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	26A
Power Factor	> 0.9
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
MPP Voltage Range	120 VDC ~ 430 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 sine wave
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	120VDC / 150 VDC
MPP Voltage Range	120 VDC ~ 430 VDC
Number of MPP Trackers / Maximum Input Current	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	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)	
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.



HYBRID INVERTER 8KW

- ⊗ Colorful touch LCD, IP65 protection degree
- ⊗ DC couple and AC couple to retrofit existing solar system
- ⊗ Max. 16pcs parallel for on-grid and off-grid operation;
Support multiple batteries parallel
- ⊗ Max. charging/discharging current of 190A
- ⊗ 6 time periods for battery charging/discharging
- ⊗ Support storing energy from diesel generator

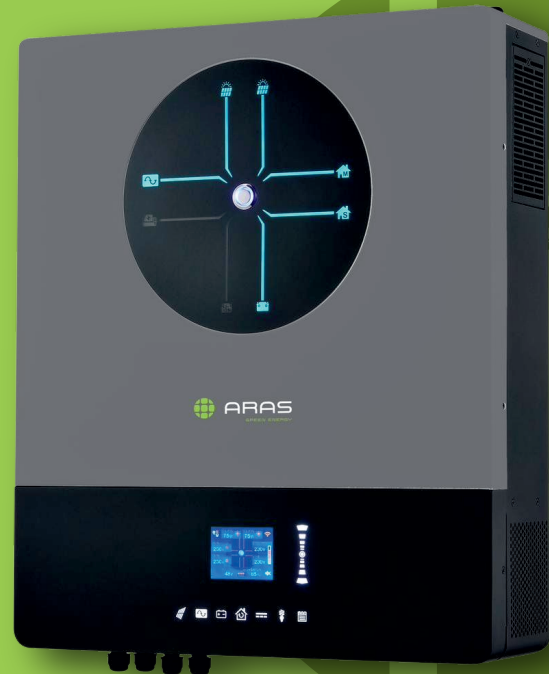


Technical Data

Model	SUN-3.6K -SG05LP1-EU	SUN-5K -SG05LP1-EU	SUN-6K -SG05LP1-EU	SUN-7.6K -SG05LP1-EU	SUN-8K -SG05LP1-EU
Battery Input Data					
Battery Type	Lead-acid or Lithium-ion				
Battery Voltage Range (V)	40-60				
Max. Charging Current (A)	90	120	135	190	190
Max. Discharging Current (A)	90	120	135	190	190
External Temperature Sensor	Yes				
Charging Curve	3 Stages / Equalization				
Charging Strategy for Li-Ion Battery	Self-adaption to BMS				
PV String Input Data					
Max. DC Input Power (W)	4680	6500	7800	9880	10400
Rated PV Input Voltage (V)	370 (125-500)				
Start-up Voltage (V)	125				
MPPT Voltage Range (V)	150-425				
Full Load DC Voltage Range (V)	300-425			200-425	
PV Input Current (A)	13+13			26+26	
Max. PV I _{SC} (A)	17+17			34+34	
No.of MPP Trackers	2				
No.of Strings per MPP Tracker	1			2	
AC Output Data					
Rated AC Output Active Power (W)	3600	5000	6000	7600	8000
Max AC Output Active Power (W)	3960	5500	6600	8360	8800
AC Output Rated Current (A)	16.4/15.7	22.7/21.7	27.3/26.1	34.5/33	36.4/34.8
Max AC Output Current (A)	18/17.2	25/23.9	30/28.7	38/36.3	40/38.3
Max. Continuous AC Passthrough (A)	35		40	50	
Peak Power (off grid)	2 time of rated power, 10 S				
Power Factor Adjustment Range	0.8 leading to 0.8 lagging				
Power Factor	1				
Output Frequency and Voltage	50/60Hz; L/N/PE 220/230Vac (single phase)				
Grid Type	Single Phase				
Total Harmonic Distortion (THD)	<3% (of nominal power)				
DC current injection	<0.5% I _n				
Efficiency					
Max. Efficiency	97.60%				
Euro Efficiency	96.50%				
MPPT Efficiency	99.90%				
Protection					
Integrated	PV Input Lightning Protection, Anti-islanding Protection, PV String Input Reverse Polarity Protection, Insulation Resistor Detection, Residual Current Monitoring Unit, Output Over Current Protection, Output Shorted Protection, Surge protection				
Output Over Voltage Protection	DC Type II/AC Type III				
Certifications and Standards					
Grid Regulation	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150				
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2				
General Data					
Operating Temperature Range (β _H)	-40-60°C, >45°C derating				
Cooling	Smart cooling				
Noise (dB)	≤30 dB				
Communication with BMS	RS485; CAN				
Weight (kg)	24				
Size (mm)	330W x 580H x 232D				
Protection Degree	IP65				
Installation Style	Wall-mounted				
Warranty	5 years				



AGE ULTRA



- ⊕ Dual outputs for smart load management
- ⊕ Two independent AC power sources connected and switched automatically
- ⊕ Built-in current transformer sensor to meet self-consumption application
- ⊕ Support external BTS (Battery Temperature Sensor) detection
- ⊕ Built-in power status lighting indicators
- ⊕ Built-in 2.8" colored LCD with slide operation
- ⊕ Built-in Wi-Fi for mobile monitoring and OTA firmware upgrade
- ⊕ Supports USB On-the-Go function
- ⊕ Reserved communication port for BMS (RS485, CAN-BUS or Rs232)
- ⊕ Support optional GFCI, Rapid shutdown, AFCI detections
- ⊕ Parallel operation with 6 units



AGE ULTRA



MODEL	Axpert Ultra 8K		Axpert Ultra 11K	
RATED POWER	8000VA/8000W		11000VA/11000W	
PARALLEL CAPABILITY	YES, 6 units			
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	16000VA		22000VA	
Efficiency (Peak)	93%			
Transfer Time	10 ms (For Personal Computers) ; 20 ms (For Home Appliances)			
Waveform	Pure sine wave			
BATTERY				
Battery Voltage	48 VDC			
Floating Charge Voltage	54 VDC			
Overcharge Protection	63 VDC			
SOLAR CHARGER & AC CHARGER				
Solar Charger Type	MPPT			
Maximum PV Array Power	10000W (5000W x 2)		12000W (6000W x 2)	
MPPT Range @ Operating Voltage	90 ~ 450 VDC			
Maximum PV Array Open Circuit Voltage	500 VDC			
Maximum PV Input Current	27A x 2 (MAX 40A)			
Maxmum Solar Charge Current	150A		150A	
Maximum AC Charge Current	120A		150A	
Maximum Charge Current	150A		150A	
PHYSICAL				
Dimension, D x W x H (mm)	145 x 438 x 553.6			
Net Weight (kgs)	18.4			
Communication Interface	USB/RS232/RS485/WiFi/Dry-contact/BTS Support optional GFCI, Rapid shutdown, AFCI detection			
External Current Sensor Port	Yes, built-in current transformer sensor			
OPERATING ENVIRONMENT				
Humidity	5% to 95% Relative Humidity(Non-condensing)			
Operating Temperature	-10°C to 50°C			
Storage Temperature	-15°C to 60°C			
STANDARD				
Compliance Safety	CE			



AGE HYBRID TOUCH (RGB) 10KW



» This is a hybrid inverter which combines solar system, AC utility, and battery power source to supply continuous power. It is suitable for remote areas where the cost of utility is too high or emergency usage when utility is not stable.

- ⊞ Status indication with RGB lights
- ⊞ Built-in Wi-Fi for mobile monitoring (Android/iOS App is available)
- ⊞ Supports USB On-the-Go function
- ⊞ Reserved communication port for BMS (RS485, CAN-BUS or RS232)
- ⊞ Replaceable fan design for ease of maintenance
- ⊞ Battery independent design
- ⊞ Configurable AC/PV output usage timer and prioritization
- ⊞ Selectable high power charging current
- ⊞ Selectable input voltage range for home appliances and personal computers
- ⊞ Compatible to Utility Mains or generator input
- ⊞ Built-in anti-dust kit
- ⊞ Built-in DC output for DC fan, LED bulb, router and so on
- ⊞ Parallel operation with 6 units



AGE HYBRID TOUCH (RGB) 10KW



MODEL		AGE HYBRID TOUCH (RGB) 10KW
Rated Power		10000VA/10000W
Parallel Capability		YES, 6 units
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		20000VA
Efficiency (Peak)		93%
Transfer Time		15 ms (For Personal Computers) ; 20 ms (For Home Appliances)
Waveform		Pure sine wave
No Load Power Consumption		< 75W
DC Voltage		12 VDC $\pm$ 5%, 100W
BATTERY		
Battery Voltage		48 VDC
Floating Charge Voltage		54 VDC
Overcharge Protection		66 VDC
SOLAR CHARGER & AC CHARGER		
Solar Charger Type		MPPT
Maximum PV Array Power		10000W (5000W x 2)
MPPT Range @ Operating Voltage		90 ~ 450 VDC
Maximum PV Array Open Circuit Voltage		500 VDC
Maximum Solar Charge Current		150A
Maximum AC Charge Current		150A
Maximum Charge Current		150A
PHYSICAL		
Dimension, D x W x H (mm)		158.4 x 503.6 x 530.8
Net Weight (kgs)		20
Communication Interface		USB/RS232/RS485/WiFi/Dry-contact
OPERATING ENVIRONMENT		
Humidity		5% to 95% Relative Humidity(Non-condensing)
Operating Temperature		-10°C to 50°C
Storage Temperature		-15°C to 60°C
STANDARD		
Compliance Safety		CE

Product specifications are subject to change without further notice.



HYBRID INVERTER 12 KW

- ⊞ 100% unbalanced output, each phase; Max.output up to 50% rated power
- ⊞ DC couple and AC couple to retrofit existing solar system
- ⊞ Max. 16pcs parallel for on-grid and off-grid operation; Support multiple batteries parallel
- ⊞ Max. charging/discharging current of 240A
- ⊞ 48V low voltage battery, transformer isolation design
- ⊞ 6 time periods for battery charging/discharging
- ⊞ Support storing energy from diesel generator



Technical Data

Model	SUN-5K -SG04LP3-EU	SUN-6K -SG04LP3-EU	SUN-8K -SG04LP3-EU	SUN-10K -SG04LP3-EU	SUN-12K -SG04LP3-EU
Battery Input Data					
Battery Type	Lead-acid or Li-Ion				
Battery Voltage Range (V)			40~60		
Max. Charging Current (A)	120	150	190	210	240
Max. Discharging Current (A)	120	150	190	210	240
External Temperature Sensor	Yes				
Charging Curve	3 Stages / Equalization				
Charging Strategy for Li-Ion Battery	Self-adaption to BMS				
PV String Input Data					
Max. DC Input Power (W)	6500	7800	10400	13000	15600
Rated PV Input Voltage (V)	550 (160~800)				
Start-up Voltage (V)	160				
MPPT Voltage Range (V)	200-650				
Full Load DC Voltage Range (V)	350-650				
PV Input Current (A)	13+13			26+13	
Max. PV ISC (A)	17+17			34+17	
Number of MPPT / Strings per MPPT	2/1+1			2/2+1	
AC Output Data					
Rated AC Output and UPS Power (W)	5000	6000	8000	10000	12000
Max. AC Output Power (W)	5500	6600	8800	11000	13200
AC Output Rated Current (A)	7.6	9.1	12.1	15.2	18.2
Max. AC Current (A)	11.4	13.6	18.2	22.7	27.3
Max. Continuous AC Passthrough (A)	45				
Peak Power (off grid)	2 time of rated power, 10 S				
Power Factor	0.8 leading to 0.8 lagging				
Output Frequency and Voltage	50/60Hz; 3L/N/PE 220/380, 230/400Vac				
Grid Type	Three Phase				
DC injection current (mA)	THD<3% (Linear load<1.5%)				
Efficiency					
Max. Efficiency	97.60%				
Euro Efficiency	97.00%				
MPPT Efficiency	99.90%				
Protection					
Integrated	PV Input Lightning Protection, Anti-islanding Protection, PV String Input Reverse Polarity Protection, Insulation Resistor Detection, Residual Current Monitoring Unit, Output Over Current Protection, Surge protection				
Certifications and Standards					
Grid Regulation	CEI 0-21, VDE-AR-N 4105, NRS 097, IEC 62116, IEC 61727, G99, G98, VDE 0126-1-1, RD 1699, C10-11				
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2				
General Data					
Operating Temperature Range (°C)	-45~60°C, >45°C derating				
Cooling	Smrat cooling				
Noise (dB)	<45 dB				
Communication with BMS	RS485; CAN				
Weight (kg)	33.6				
Size (mm)	422W x 699.3H x279D				
Protection Degree	IP65				
Installation Style	Wall-mounted				
Warranty	5 years				

HYBRID INVERTER 12KW



AGE 15 KW WP



» This is a hybrid inverter which combines solar system, AC utility, and battery power source to supply continuous power. It is suitable for remote areas where the cost of utility is too high or emergency usage when utility is not stable.

- ⊕ IP65 waterproof and dustproof makes the inverter available for various working conditions
- ⊕ Built-in WiFi for mobile monitoring (App is available)
- ⊕ 150% unbalanced load support
- ⊕ Maximum PV input current 27A
- ⊕ Dual outputs for smart load management
- ⊕ User-adjustable charging current
- ⊕ Parallel operation up to 9 units



MODEL	AGE 15KW WP
PHASE	3-phase in / 3-phase out
MAXIMUM PV INPUT POWER	22500 W
RATED OUTPUT POWER	15000 W
MAXIMUM CHARGING POWER	15000 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 ~ 950 VDC
Number of MPP Trackers/Maximum Input Current	2 / A: 27A, B: 27A
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	21.7A per phase
Power Factor	> 0.99
EFFICIENCY	
Maximum Conversion Efficiency (DC/AC)	>96%
European Efficiency@ Vnominal	>95%
OFF-GRID OPERATION	
AC INPUT	
AC Start-up Voltage/Auto Restart Voltage	120 - 140 VAC per phase / 180 VAC per phase
Acceptable Input Voltage Range	170 - 290 VAC per phase
Maximum AC Input Current	40 A
PV INPUT (DC)	
Maximum DC Voltage	1000 VDC
MPP Voltage Range	350 VDC ~ 950 VDC
Number of MPP Trackers/Maximum Input Current	2 / A: 27A, B: 27A
BATTERY MODE OUTPUT (AC)	
Nominal Output Voltage	230 VAC (P-N) / 400 VAC (P-P)
Output Waveform	Pure Sinewave
Efficiency (DC to AC)	91%
HYBRID 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 ~ 950 VDC
Number of MPP Trackers/Maximum Input Current	2 / A: 27A, B: 27A
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	21.7 A per phase
AC INPUT	
AC Start-up Voltage / Auto Restart Voltage	120 - 140 VAC per phase / 180 VAC per phase
Acceptable Input Voltage Range	170 - 290 VAC per phase
Maximum AC Input Current	40 A
BATTERY MODE OUTPUT (AC)	
Nominal Output Voltage	230 VAC (P-N) / 400VAC (P-P)
Efficiency (DC to AC)	91%
BATTERY & CHARGER	
Battery Voltage Range	40 ~62 VDC
Maximum Charging Current	300A (Adjustable)
GENERAL	
PHYSICAL	
Dimension, D x W x H (mm)	255 x 660 x 750
Net Weight (kgs)	78
INTERFACE	
Communication Port	RS-232, RS-485, USB, CAN and Wi-Fi
Intelligent Slot	Optional for SNMP and Modbus cards

*These figures may vary depending on different AC voltage and country requirements. **Power derating 1% every 100 m when altitude is over 1000m.

Product specifications are subject to change without further notice.



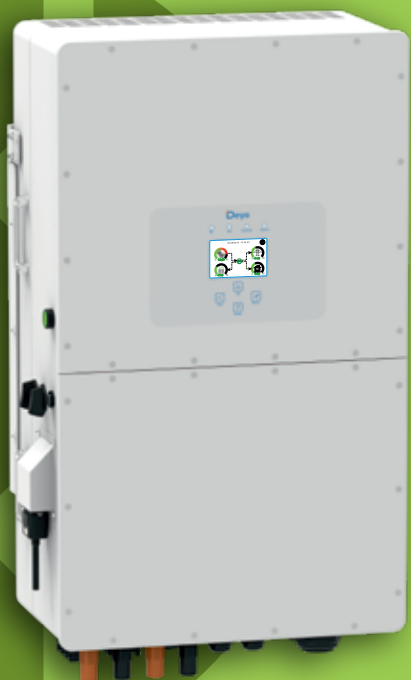
HYBRID INVERTER 16 KW

- ⊗ Colorful touch LCD, IP65 protection degree
- ⊗ DC couple and AC couple to retrofit existing solar system
- ⊗ Max. 16pcs parallel for on-grid and off-grid operation;
Support multiple batteries parallel
- ⊗ Max. charging/discharging current of 290A
- ⊗ 6 time periods for battery charging/discharging
- ⊗ Support storing energy from diesel generator



Technical Data

Model	SUN-12K-SG01LP1-EU		SUN-14K-SG01LP1-EU		SUN-16K-SG01LP1-EU	
Battery Data						
Battery Type	Lead-acid or Lithium-ion					
Battery Voltage Range (V)	40-60					
Max. Charging Current (A)	220		250		290	
Max. Discharging Current (A)	220		250		290	
External Temperature Sensor	Yes					
Charging Curve	3 Stages / Equalization					
Charging Strategy for Li-Ion Battery	Self-adaption to BMS					
PV String Input Data						
Max. DC Input Power (W)	15600		18200		20800	
Max. DC Input Voltage (V)	500					
Start-up Voltage (V)	125					
MPPT Range (V)	150-425					
Rated DC Input Voltage (V)	370					
PV Input Current (A)	26+26+26					
Max. PV I _{SC} (A)	44+44+44					
No.of MPP Trackers	3					
No.of Strings per MPP Tracker	2					
AC Output Data						
Rated AC Output Active Power (W)	12000		14000		16000	
Max AC Output Active Power (W)	13200		15400		17600	
Rated AC Output Current (A)	54.5/52.2		63.6/60.9		72.7/69.6	
Max AC Output Current (A)	60/57.4		70/67		80/76.5	
Max. Continuous AC Passthrough (A)	100					
Peak Power (off grid)	2 time of rated power, 5 S					
Power Factor Adjustment Range	0.8 leading to 0.8 lagging					
Power Factor	1					
Output Frequency and Voltage	50/60Hz; L/N/PE 220/230Vac (single phase)					
Grid Type	Single Phase					
Total Harmonic Distortion (THD)	<3% (of nominal power)					
DC current injection	<0.5% I _n					
Backup Data						
Backup Power (W)	10000		12000		14000	
Backup Rated Current (A)	45.5/43.5		54.5/52.2		63.6/60.9	
Backup UPS	4ms Automatic switchover time					
Efficiency						
Max. Efficiency	97.60%					
Euro Efficiency	96.50%					
MPPT Efficiency	99.90%					
Protection						
Integrated	PV Input Lightning Protection, Anti-islanding Protection, PV String Input Reverse Polarity Protection, Insulation Resistor Detection, Residual Current Monitoring Unit, Output Over Current Protection, Output Shorted Protection, Surge protection					
Output Over Voltage Protection	DC Type II/AC Type III					
Certifications and Standards						
Grid Regulation	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150					
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2					
General Data						
Operating Temperature Range (℉/℃)	-40-60℃, >45℃ derating					
Cooling	Smart cooling					
Noise (dB)	≤30 dB					
Communication with BMS	RS485; CAN					
Weight (kg)	48.5					
Size (mm)	464W×798.4H×300D					
Protection Degree	IP65					
Installation Style	Wall-mounted					
Warranty	5 years					



HYBRID INVERTER 50 KW

- ⊗ 100% unbalanced output, each phase; Max. output up to 50% rated power
- ⊗ DC couple and AC couple to retrofit existing solar system
- ⊗ Max. 10pcs parallel for on-grid and off-grid operation; Support multiple batteries parallel
- ⊗ Max. charging/discharging current of 100A
- ⊗ High voltage battery, higher efficiency
- ⊗ 6 time periods for battery charging/discharging
- ⊗ Support storing energy from diesel generator



Technical Data

Model	SUN-29.9K-SG01HP3 -EU-BM3	SUN-30K-SG01HP3 -EU-BM3	SUN-35K-SG01HP3 -EU-BM3	SUN-40K-SG01HP3 -EU-BM4	SUN-50K-SG01HP3 -EU-BM4
Battery Input Data					
Battery Type	Lithium-ion				
Battery Voltage Range (V)	160-800				
Max. Charging Current (A)	50+50				
Max. Discharging Current (A)	50+50				
Number of battery input	2				
Charging Strategy for Li-Ion Battery	Self-adaption to BMS				
PV String Input Data					
Max. DC Input Power (W)	38870	39000	45500	52000	65000
Max. DC Input Voltage (V)	1000				
Start-up Voltage (V)	180				
MPPT Range (V)	150-850				
Full Load DC Voltage Range (V)	360-850	360-850	360-850	360-850	450-850
Rated DC Input Voltage (V)	600				
PV Input Current (A)	36+36+36	36+36+36	36+36+36	36+36+36+36	
Max. PV I _{SC} (A)	55+55+55	55+55+55	55+55+55	55+55+55+55	
No.of MPP Trackers	3			4	
No.of Strings per MPP Tracker	2				
AC Output Data					
Rated AC Output Active Power (W)	29900	30000	35000	40000	50000
Max AC Output Active Power (W)	29900	33000	38500	44000	55000
AC Output Rated Current (A)	45.4/43.4	45.5/43.5	53.1/50.8	60.7/58	75.8/72.5
Max. AC Output Rated Current (A)	45.4/43.4	50/47.8	58.4/55.8	66.7/63.8	83.4/79.7
Max. Three-phase Unbalanced Output Current (A)	60	60	60	70	83.3
Max. Continuous AC Passthrough (A)	200				
Peak Power (off grid)	1.5 time of rated power, 10 S				
Generator input/Smart load /AC couple current (A)	45.4 / 200 / 45.4	45.5 / 200 / 45.5	53.1 / 200 / 53.1	60.7 / 200 / 60.7	75.8 / 200 / 75.8
Power Factor Adjustment Range	0.8 leading to 0.8 lagging				
Output Frequency and Voltage	50/60Hz; 3L/N/PE 220/380, 230/400Vac				
Grid Type	Three Phase				
Total Harmonic Distortion (THD)	<3% (of nominal power)				
DC current injection	<0.5% I _n				
Efficiency					
Max. Efficiency	97.60%				
Euro Efficiency	97.00%				
MPPT Efficiency	99.90%				
Protection					
Integrated	PV Input Lightning Protection, Anti-islanding Protection, PV String Input Reverse Polarity Protection, Insulation Resistor Detection, Residual Current Monitoring Unit, Output Over Current Protection, Output Shorted Protection, Surge protection				
Output Over Voltage Protection	DC Type II/AC Type III				
Certifications and Standards					
Grid Regulation	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150				
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2				
General Data					
Operating Temperature Range (β _F)	-40-60°C, >45°C derating				
Cooling	Smart cooling				
Noise (dB)	≤65 dB				
Communication with BMS	RS485; CAN				
Weight (kg)	75				
Size (mm)	527W×894H×294D				
Protection Degree	IP65				
Installation Style	Wall-mounted				
Warranty	5 years				

*Note: The function of Multiple units work in parallel mode will be available in Q1 2023



ON-GRID INVERTER 50KW

6 / 7 MPPTs



Smart diagnosis

High efficiency up to 99%

Local WIFI connection

String monitoring

AC&DC type II SPD

AFCI protection

Data storage up to 25 years

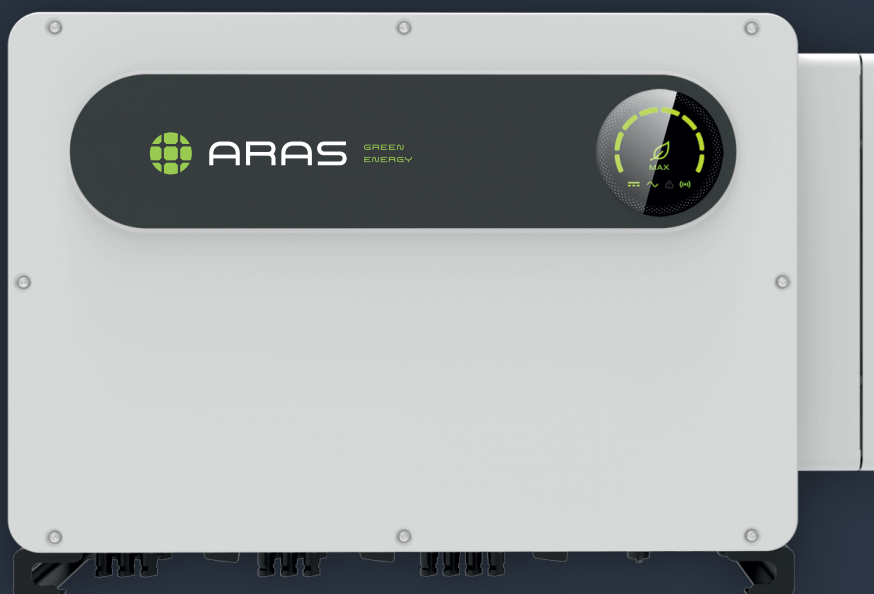
DC side 2 in 1 connection enabled



Primary Specification

Datasheet	MAX 50KTL3 LV	MAX 60KTL3 LV	MAX 70KTL3 LV	MAX 80KTL3 LV
Input data (DC)				
Max. recommended PV power (for module STC)	75000W	90000W	105000W	120000W
Max.DC voltage	1100V			
Start voltage	250V			
Nominal voltage	580V			
MPPT voltage range	200V-1000V			
No. of MPP trackers	6	6	7	7
No. of PV strings per MPP tracker	2			
Max. input current per MPP tracker	25A			
Max. short-circuit current per MPP tracker	32A			
Output data (AC)				
AC nominal power	50000W	60000W	70000W	80000W
Max. AC apparent power	55500VA	66600VA	77700VA	88800VA
Nominal AC voltage (range*)	220V/380V, 230V/400V (340-440V)			
AC grid frequency (range*)	50/60 Hz (45-55Hz/55-65 Hz)			
Max. output current	80.5A	96.6A	112.7A	128.8A
Adjustable power factor	0.8leading ...0.8lagging			
THDi	<3%			
AC grid connection type	3W+N+PE			
Efficiency				
Max.efficiency	98.8%	98.8%	99%	99%
European efficiency	98.4%	98.4%	98.5%	98.5%
MPPT efficiency	99.9%			
Protection devices				
DC reverse polarity protection	Yes			
DC switch	Yes			
DC surge protection	Type II / Type II			
Insulation resistance monitoring	Yes			
AC short-circuit protection	Yes			
Ground fault monitoring	Yes			
Grid monitoring	Yes			
Anti-islanding protection	Yes			
Residual-current monitoring unit	Yes			
String monitoring	Yes			
AFCI protection	Optional			
Anti-PID function	Optional			
General data				
Dimensions (W / H / D)	860/600/300mm			
Weight	82kg	82kg	86kg	86kg
Operating temperature range	-25°C ... +60°C			
Noise emission (typical)	≤60dB(A)			
Self-consumption	< 1W			
Topology	Transformerless			
Cooling	Smart air cooling			
Protection degree	IP65			
Relative humidity	0-100%			
Altitude	4000m			
DC connection	H4/MC4(Optional)			
AC connection	Cable gland+OT terminal			
Display	LED/WIFI+APP			
Interfaces: RS485 / USB /WIFI/ RF/GPRS	Yes/Yes /Optional/Optional/Optional			
Warranty: 5 years / 10 years	Yes /Optional			
CE , VDE0126, Greece, EN50438, EN50549, C10/C11, UTE C 15-712, IEC62116, IEC61727, IEC 60068, IEC 61683, CEI0-21, CEI 0-16, N4105, BDEW, DRRG, TOR Erzeuger G98/G99, G100, AS/NZS3100, AS4777, UNE217001, UNE206007, PO12.2, NRS 097-2-1, MEA , PEA , KSC8565				

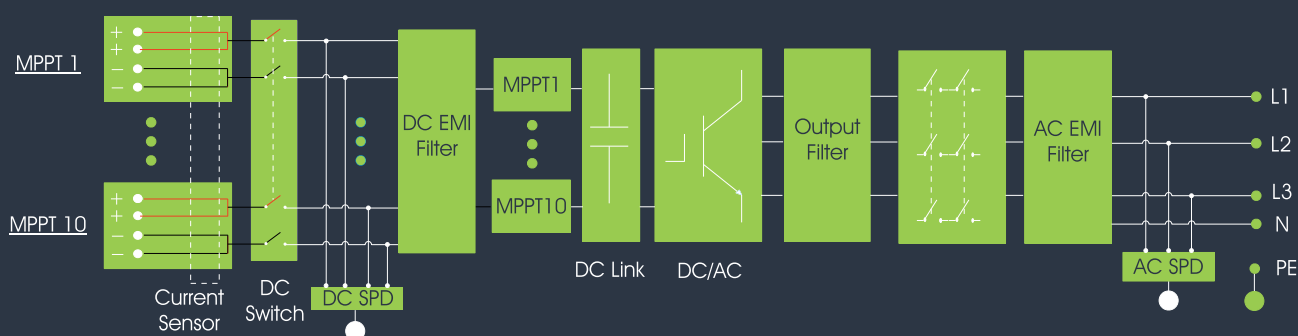
* The AC voltage range and frequency range may vary depending on specific country grid standard.
All specifications are subject to change without notice.



ON-GRID INVERTER 125KW

- 10 MPPTs fusefree design -
- Smart IN scan and diagnosis -
- Intelligent string monitoring -
 - AC&DC type II SPD -
- IP66 and C5 protection -

Topology Diagram





Primary Specification

Datasheet	MAX 100KTL3-X LV	MAX 110KTL3-X LV	MAX 120KTL3-X LV	MAX 125KTL3-X LV
Input data (DC)				
Max. DC voltage	1100V			
Start voltage	195V			
Nominal voltage	600V			
MPP voltage range	180V-1000V			
No. of MPP trackers	10			
No. of PV strings per MPP tracker	2			
Max. input current per MPP tracker	32A			
Max. short-circuit current per MPP tracker	40A			
Output data (AC)				
AC nominal power	100000W	110000W	120000W	125000W
Max. AC apparent power	110000VA	121000VA	132000VA	137500VA
Nominal AC voltage(range*)	400V/380V(340-440VAC)			
AC grid frequency (range*)	50/60 Hz(45~55Hz/55-65 Hz)			
Max. output current	158.8A@400V 167.1A@380V	174.6A@400V 183.8A@380V	190.5A@400V 200.5A@380V	198.5A@400V 208.9A@380V
Adjustable power factor	0.8leading ...0.8lagging			
THDi	<3%			
AC grid connection type	3W/N/PE			
Efficiency				
Max.efficiency	98.8%			
European efficiency	98.4%	98.5%	98.5%	98.5%
MPPT efficiency	99.9%			
Protection devices				
DC reverse polarity protection	Yes			
DC switch	Yes			
AC/DC surge protection	Type II / Type II			
Insulation resistance monitoring	Yes			
AC short-circuit protection	Yes			
Ground fault monitoring	Yes			
String detection	Yes			
Anti PID function	Opt			
Arc fault detection (AFCI)	Opt			
General data				
Dimensions (W / H / D)	970/640/345mm			
Weight	84kg			
Operating temperature range	-30°C ... +60°C			
Nighttime power consumption	< 1W			
Topology	Transformerless			
Cooling	Smart Cooling			
Protection degree	IP66			
Relative humidity	0~100%			
Altitude	4000m			
DC connection	H4/MC4 (Max.6mm²)			
AC connection	OT Terminal (Max. 240mm²)			
Display	LED/WIFI+APP			
Interfaces: RS485 / USB /PLC/GPRS/4G/WIFI	Yes/Yes/Optional/Optional/Optional/Optional			
Warranty: 5 years / 10 years	Yes /Optional			
CE,IEC62116, IEC61727, CQC, VDE0126, VFR2019, EN50549-1/2, C10/C11, UNE206007, G99 CEI 0-21/0-16, N4105&N4110, UNE206006,MEA, PEA, KSC8565				

* The AC voltage range and frequency range may vary depending on specific country grid standard.
All specifications are subject to change without notice.



**ON GRID
INVERTER
136 KW**

- 8 MPP trackers, Max. efficiency up to 98.8%
- Zero export application, VSG application
- String intelligent monitoring (optional)
- Wide output voltage range
- Anti-PLD function (Optional)
- Type II DC/AC SPD



Technical Data

Model	SUN-120K-G01P3 -EU-AM8	SUN-125K-G01P3 -EU-AM8	SUN-130K-G01P3 -EU-AM8	SUN-135K-G01P3 -EU-AM8	SUN-136K-G01P3 -EU-AM8
Input Side					
Max. DC Input Power (kW)	180	187.5	195	202.5	204
Max. DC Input Voltage (V)	1100				
Start-up DC Input Voltage (V)	250				
MPPT Operating Range (V)	200-1000				
Max. DC Input Current (A)	40+40+40+40+40+40+40+40				
Max. Short Circuit Current (A)	60+60+60+60+60+60+60+60				
No.of MPP Trackers	8				
No.of Strings per MPP Tracker	4+4+4+4+4+4+4+4				
Output Side					
Rated Output Power (kW)	120	125	130	135	136
Max. Active Power (kW)	132	135	135	135	136
Nominal Output Voltage / Range (V)	3L/N/PE 220/380V, 230/400V				
Rated Grid Frequency (Hz)	50 / 60 (Optional)				
Operating Phase	Three Phase				
Rated AC Grid Output Current (A)	181.9/174	189.4/181.2	197/188.5	204.6/195.7	206.1/197.2
Max. AC Output Current (A)	200/191.4	204.6/195.7	204.6/195.7	204.6/195.7	206.1/197.2
Output Power Factor	>0.99				
Total Harmonics Current Distortion (THDi)	<3%				
DC Injection Current (mA)	<0.5%				
Grid Frequency Range	45~55 or 55~65 (Optional)				
Efficiency					
Max. Efficiency	98.8%				
Euro Efficiency	98.3%				
MPPT Efficiency	>99%				
Protection					
DC Reverse-Polarity Protection	Yes				
AC Short Circuit Protection	Yes				
AC Output Overcurrent Protection	Yes				
Output Overvoltage Protection	Yes				
Insulation Resistance Protection	Yes				
Ground Fault Monitoring	Yes				
Anti-islanding Protection	Yes				
Temperature Protection	Yes				
Integrated DC Switch	Yes				
Remote Software Upload	Yes				
Remote Change of Operating Parameters	Yes				
Surge Protection	DC Type II / AC Type II				
General Data					
Cabinet Size (WxHxD mm)	1006×516×325.5 (Excluding Connectors and Brackets)				
Weight (kg)	103				
Topology	Transformerless				
Internal Consumption	<1W (Night)				
Running Temperature	-25-60°C, >45°C Derating				
Ingress Protection	IP65				
Noise Emission (Typical)	≤65 dB				
Cooling Concept	Smart Cooling				
Permissible Altitude (m)	4000				
Designed Lifetime	>20 Years				
Grid Connection Standard	IEC 61727, IEC 62116, CEI 0-21, CEI 0-16, EN 50549, NRS 097, RD 140, UNE 217002, OVE-Richtlinie R25, G99, VDE-AR-N 4105, VDE-AR-N 4110				
Operating Surroundings Humidity	0-100%				
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2				
Features					
Display	LCD 240 × 160				
Interface	RS485/RS232/Wifi/LAN				



PLATINUM
TUBULAR BATTERIES



APPLICATIONS

- HOME APPLIANCES
- POWER BACK-UP
- OFFICE EQUIPMENT
- SECURITY INSTRUMENTS
- EMERGENCY LIGHTING
- SOLAR

**MEETS IEC 61427-1
SPECIFICATIONS**

**CHARGE
YOUR
TOMORROW**

INTERLIGHT®



**NO
INTERNAL PACKING**



**LOW
MAINTENANCE**



**FASTER
RECHARGE**



**SUPERIOR
VOLTAGE**



**PATENTED CONTAINER
287292, 287295**



**PARTIAL STATE OF
CHARGE CONDITION**



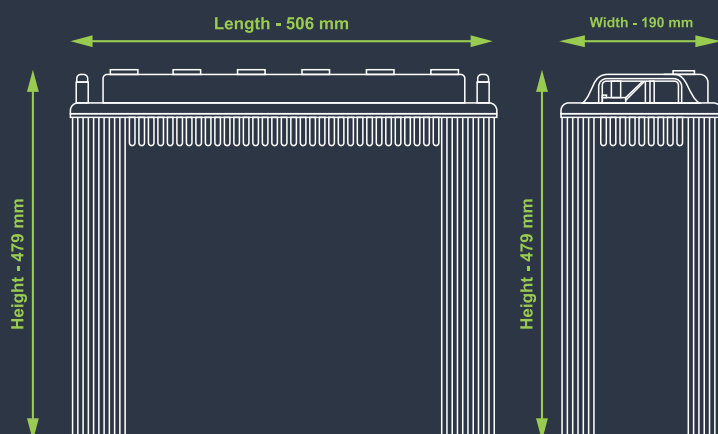
**LONGER
LIFE**



**INCREASED
BACK-UP**

Note: Color of the product may vary from the original color in this document.

This catalogue is issued to provide outline information only and is not deemed to form part of an offer or contract. Our policy is one of continued improvement and we reserve the right to change details without prior notice.



Product Features :-

1. Robust Tubular with High Pressure diecasted spine- resulting low rate of spine corrosion.
2. Spill Proof Vent plug – resulting in no spillage on top and low controlled acid fumes.
3. Optimized Negative paste receipt for fast charge acceptance
4. Consistent backup throughout life
5. Excellent behavior in PSOC condition as compare
6. Low Self Discharge
7. Excellent performance on deep cyclic application as compare to AGM VRLA
8. Patented Design & Service Life
9. Low water loss
10. Long Cycles [1100@80% DOD]

TECHNICAL DATA

Type of Battery	Nominal Voltage	Capacity @C20 at 27°C	Gross Battery Weight +/- 3% (Kg)	Overall Dimension			Battery Layout
				Length +/- 3mm	Width +/- 3mm	Height upto float top +/- 3mm	
				(mm)	(mm)	(mm)	
ST50N100J	12	50	23	410	177	275	-[]+
ST75N100J	12	75	28	410	177	275	-[]+
TT100IT	12	100	55	506	190	479	-[]+
TT120IT	12	120	57	506	190	479	-[]+
TT150IT	12	150	60	506	190	479	-[]+
TT200IT	12	200	66	506	190	479	-[]+
TT220IT	12	220	68	506	190	479	-[]+
TT240IT	12	240	70	506	190	479	-[]+
TT260IT	12	260	72	506	190	479	-[]+

Technical Specifications Are Subject To Change Without Prior Notice.

Conditions Apply*

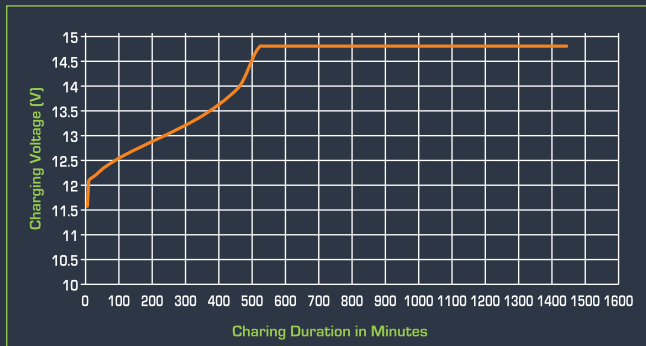
Electrical Parameters & Charging Profile

Battery Specified Capacity Test @ 27°C					
MODEL	C20 @ 10.5V	C10 @ 10.5V	C5 @ 10.5V	C3 @ 10.5V	C1 @ 10.5V
ST50N100J (12 V 50AH @ C20)	50	44	42	36	25
ST75N100J (12 V 75AH @ C20)	75	66	63	54	38
TT100IT (12 V 100AH @ C20)	100	88	84	72	50
TT120IT (12 V 120AH @ C20)	120	106	100	86	60
TT150IT (12 V 150AH @ C20)	150	135	125	108	75
TT200IT (12 V 200AH @ C20)	200	180	167	145	100
TT220IT (12 V 220AH @ C20)	220	200	184	160	110
TT240IT (12 V 240AH @ C20)	240	215	200	172	120
TT260IT (12 V 260AH @ C20)	260	230	217	187	130
Ah & Wh Efficiency					
Ah Efficiency	>90%		Wh Efficiency	>75%	

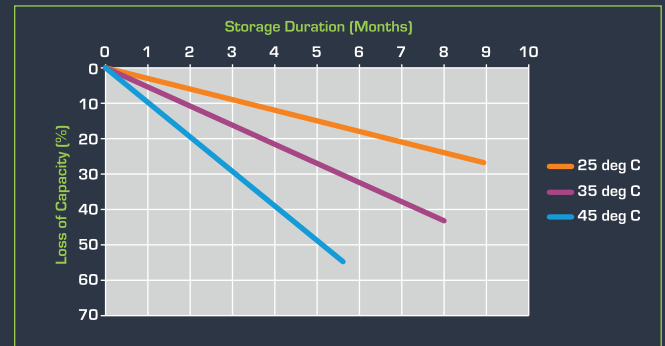


- **Poly Components Material:** Polypropylene Co polymer
- **Watering system :** Individual to every cell in Monobloc
- **Color :** Blue
- **Testing Parameters :** IS 13369:1992 & IEC 61427

Charging Profile



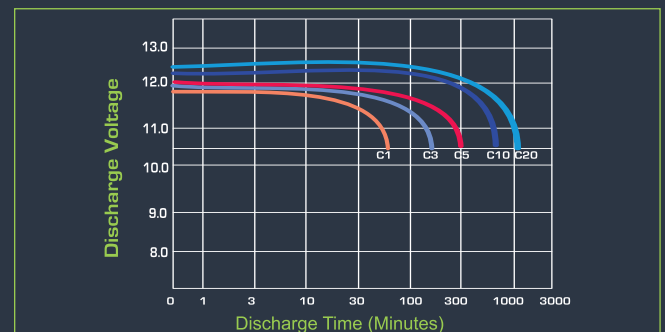
Self Discharge Characteristics @ Different Temperature



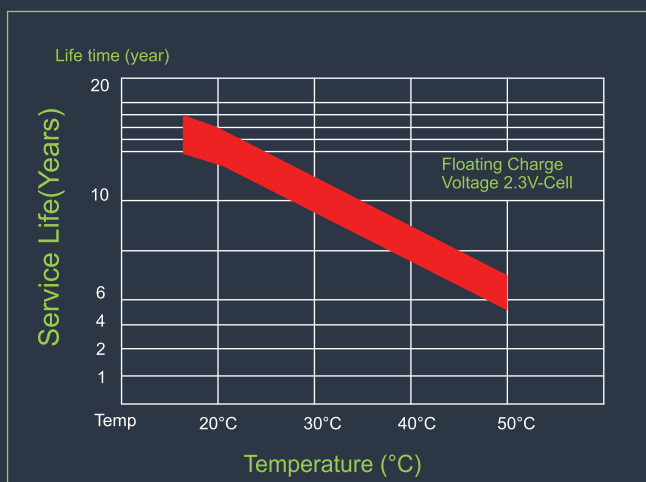
State of Charge Measure of Open-circuit Voltage @ 27°C

State of Charge	Specific Gravity	Voltage
100%	1.240±10	12.55V-12.70V
75%	1.125±10	≤12.4V
50%	1.200±10	≤12.1V
25%	1.175±10	≤12.0V
0%	1.150±10	11.8V

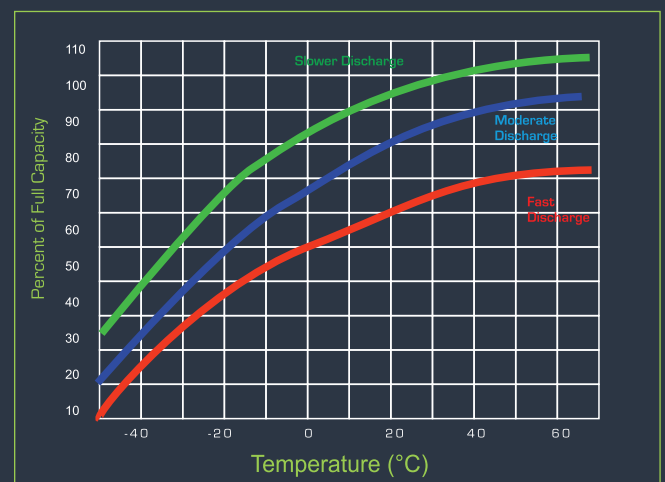
Discharging Characteristics at various rates @ 27°C



Service (Float) Life and Temperature



Expected Capacity vs Temperature



Interlight Battery Manufacturing Certified by

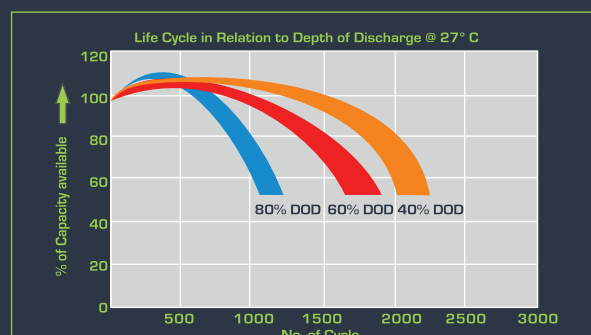




Specific Gravity & Self Discharge w.r.t. Temperature

	Add	Subtract
CHARGING TEMPERATURE COMPENSATION	0.005 volt per cell for every 1°C below 25°C	0.005 volt per cell for every 1°C above 25°C or
	0.0028 volt per cell for every 1°F below 77°F	0.0028 volt per cell for every 1°F above 77°F
OPERATIONAL DATA	Operating Temperature	Self Discharge
	-4°F to 131°F [-20°C to +55°C] At temperatures below 32°F [0°C] maintain a state of charge greater than 60%.	As per discharge Graph

Expected Life



Charging Instructions

Charger Voltage Settings (at 77° F/ 25°C)			
System Voltage	12V	24V	48V
Maximum Charge Current	0.2C10		
Maximum Absorption Phase Time (hours)	4		
Absorption Voltage	14.4	28.8	57.6
Float Voltage	13.6	27.2	54.4
Equalization Voltage	16	32	64
Do not install or charge batteries in a sealer or non-ventilated compartment. Constant under or overcharging will damage the battery and shorten its life as with any battery.			
Periodic Charge	Provide a periodic freshening charge to maintain a SOC greater than the threshold of 70%		

Terminal Configuration

Terminal Type : L

Terminal Height : 26.5 mm

Terminal Width : 25.7 mm

Terminal Length : 42 mm

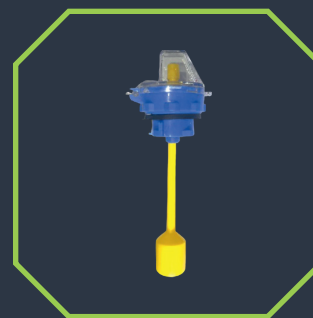
Bolt Type : M8

Transport Vent Plug Type

MF Locking

Flot Type

Locking Flot indicator cum watering lid for each cell



Recycle Responsibly





ARAS GREEN ENERGY

60



Solar
EPIQ SERIES



3X TUBULAR
TECHNOLOGY



TALL TUBULAR BATTERY

(200Ah to 230Ah)

MEETS IEC 61427-1 SPECIFICATIONS

C10
(EPIQ SERIES)



NO
INTERNAL PACKING



LOW
MAINTENANCE



FASTER
RECHARGE



SUPERIOR
VOLTAGE



PATENTED CONTAINER
287292, 287295



PARTIAL STATE OF
CHARGE CONDITION



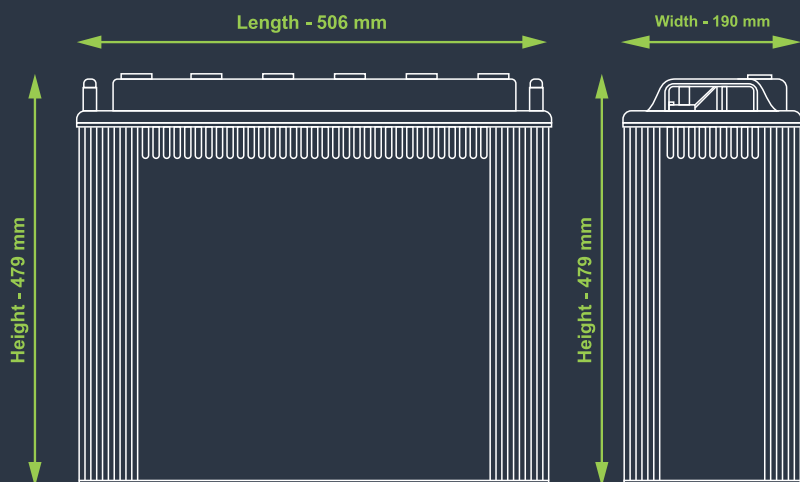
LONGER
LIFE



INCREASED
BACK-UP

Note: Color of the product may vary
from the original color in this document.

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and is not deemed to form part of an offer or contract. Our policy is one of
continued improvement and we reserve the right to change details without prior notice.



Range available: 200Ah to 230Ah

Features

Benefits

Long Cycles (1100@80% DOD,5000@20% DOD)

Long design life

Topping up frequency: 8 to10 months

Very low maintenance

High temperature performance

Can handle extreme weather conditions

High charge acceptance

Rugged Performance

Self discharge rate - 3 % per month @ STC

Longer life without charging

Higher AH Efficiency > 90% WH Efficiency > 80%

More efficient and saves money



TECHNICAL DATA

Type of Battery	Nominal Voltage	Capacity @C10 at 27°C	Gross Battery Weight +/- 3% (Kg)	Overall Dimension			Terminal Type
	(V)	(Ah)		Length +/-3 mm	Width +/-3 mm	Height upto float top +/-3 mm	
				(mm)	(mm)	(mm)	
IL 750-EP	12	200	65	506	190	479	L
IL 800-EP	12	210	70	506	190	479	L
IL 1000-EP	12	230	72	506	190	479	L

Technical Specifications Are Subject To Change Without Prior Notice.

Conditions Apply*

Electrical Parameters & Charging Profile

Battery Specified Capacity Test @ 27°C

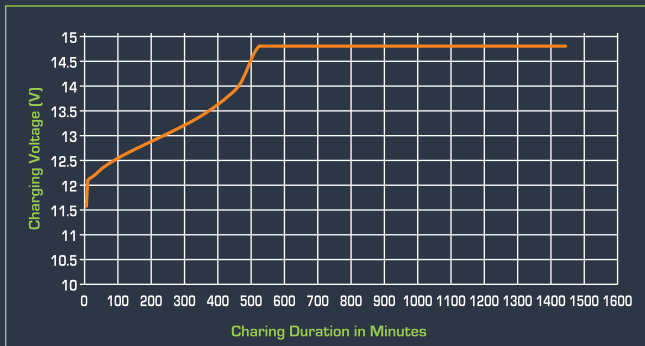
MODEL	C10 @ 10.5V	C5 @ 10.5V	C3 @ 10.5V	C1 @ 10.5V
IL 750-EP (12 V 200AH @ C10)	200	165	140	100
IL 800-EP (12 V 210AH @ C10)	210	176	151	106
IL 1000-EP (12 V 230AH @ C10)	230	191	164	115

Ah & Wh Efficiency			
Ah Efficiency	>90%	Wh Efficiency	>80%

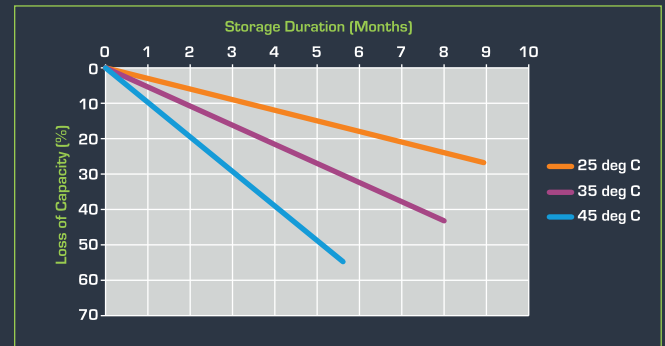


- **Poly Components Material:** Polypropylene Co polymer
- **Watering system :** Individual to every cell in Monobloc
- **Color :** Blue
- **Testing Parameters :** IS 13369:1992 & IEC 61427

Charging Profile



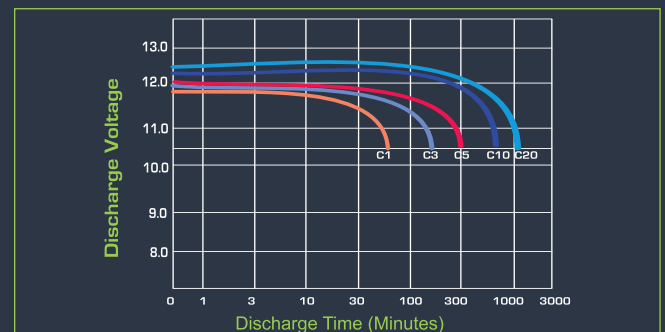
Self Discharge Characteristics @ Different Temperature



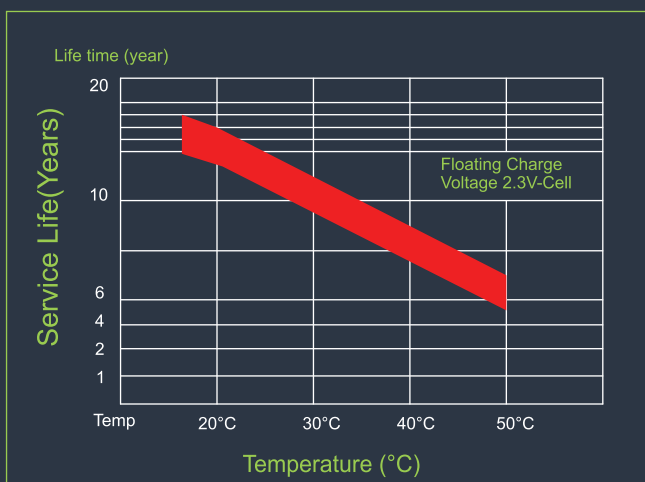
State of Charge Measure of Open-circuit Voltage @ 27°C

State of Charge	Specific Gravity	Voltage
100%	1.240±10	12.55V-12.70V
75%	1.125±10	≤12.4V
50%	1.200±10	≤12.1V
25%	1.175±10	≤12.0V
0%	1.150±10	11.8V

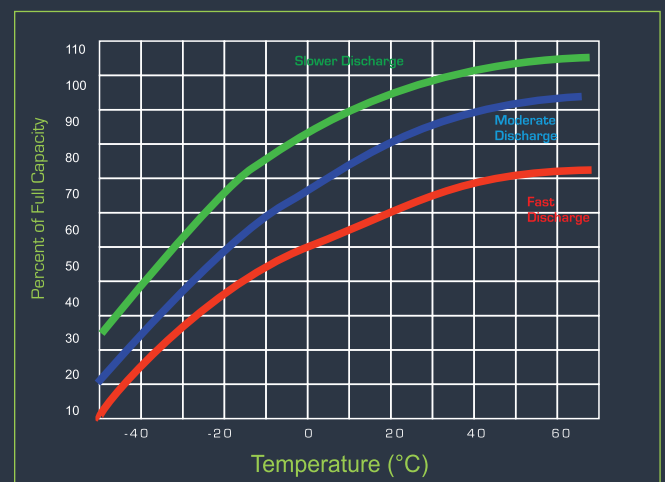
Discharging Characteristics at various rates @ 27°C



Service (Float) Life and Temperature



Expected Capacity vs Temperature



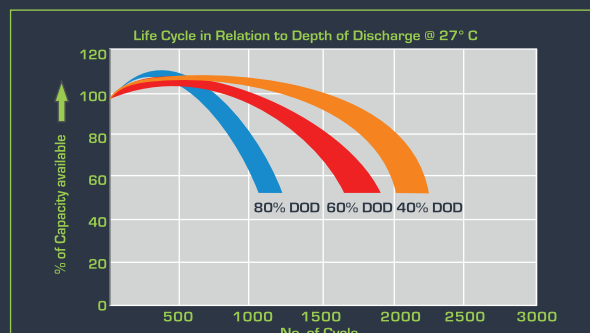
Interlight Battery Manufacturing Certified by



Specific Gravity & Self Discharge w.r.t. Temperature

	Add	Subtract
CHARGING TEMPERATURE COMPENSATION	0.005 volt per cell for every 1°C below 25°C 0.0028 volt per cell for every 1°F below 77°F	0.005 volt per cell for every 1°C above 25°C or 0.0028 volt per cell for every 1°F above 77°F
OPERATIONAL DATA	Operating Temperature -4°F to 131°F [-20°C to +55°C] At temperatures below 32°F [0°C] maintain a state of charge greater than 60%.	Self Discharge As per discharge Graph

Expected Life



Charging Instructions

Charger Voltage Settings (at 77° F/ 25°C)			
System Voltage	12V	24V	48V
Maximum Charge Current	0.2C10		
Maximum Absorption Phase Time (hours)	4		
Absorption Voltage	14.4	28.8	57.6
Float Voltage	13.6	27.2	54.4
Equalization Voltage	16	32	64
Do not install or charge batteries in a sealer or non-ventilated compartment. Constant under or overcharging will damage the battery and shorten its life as with any battery.			
Periodic Charge	Provide a periodic freshening charge to maintain a SOC greater than the threshold of 70%		

Terminal Configuration

Terminal Type : L

Terminal Height : 32.5 mm

Terminal Width : 32.8 mm

Terminal Length : 50.5 mm

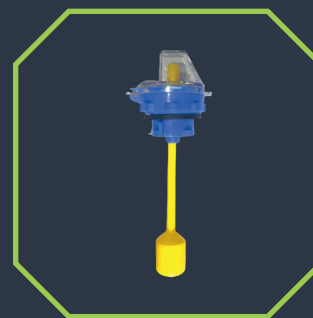
Bolt Type : M8

Transport Vent Plug Type

MF Locking

Flot Type

Locking Flot indicator cum watering lid for each cell



Recycle Responsibly





C10
RATED



Heavy Duty Tubular Batteries

APPLICATIONS

- Solar • Home Appliances • Power Back-up • Security Instruments
- Office Equipment • Emergency Lighting • Industrial Use



NO
INTERNAL PACKING



LOW
MAINTENANCE



FASTER
RECHARGE



SUPERIOR
VOLTAGE



PATENTED CONTAINER
287292, 287295



PARTIAL STATE OF
CHARGE CONDITION

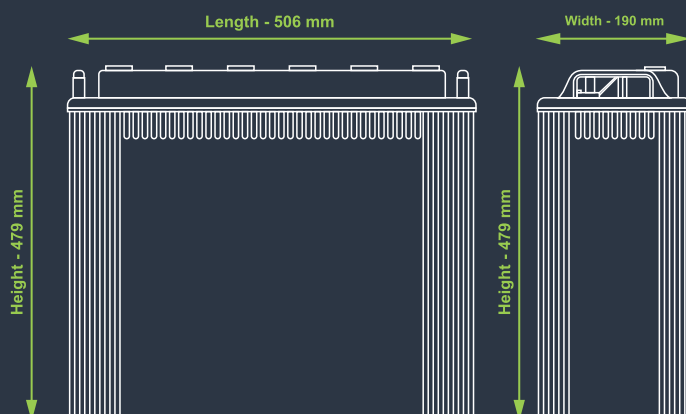


LONGER
LIFE



INCREASED
BACK-UP

MEETS IEC 61427-1 SPECIFICATIONS



Range available: 40Ah to 200Ah

Features Benefits

Long Cycle Life upto 1800 cycles	Long design life
Topping up frequency: 8 to 10 months	Very low maintenance
High temperature performance	Can handle extreme weather conditions
High charge acceptance	Rugged Performance
Self discharge rate - 3 % per month @ STC	Longer life without charging

TECHNICAL DATA

Type of Battery	Nominal Voltage	Capacity @C10 at 27°C	Gross Battery Weight +/- 3% (Kg)	Overall Dimension			Battery Layout
				Length +/- 3mm	Width +/- 3mm	Height upto float top +/- 3mm	
	(V)	(Ah)		(mm)	(mm)	(mm)	
HD40STC10	12	40	23.5	412	173	267	-[]+
HD50STC10	12	50	17	305	175	275	+ [] -
HD75STJC10	12	75	30.5	410	177	275	-[]+
HD100STJC10	12	100	46	520	220	290	-[]+
HD150ITC10	12	150	65	506	190	479	-[]+
HD180ITC10	12	180	67	506	190	479	-[]+
HD200ITC10	12	200	70	506	190	479	-[]+
HD200ITC10L	12	200	80	506	190	479	-[]+

Terminal Configuration

Terminal Type : L

Terminal Height : 26.5 mm

Terminal Width : 25.7 mm

Terminal Length : 42 mm

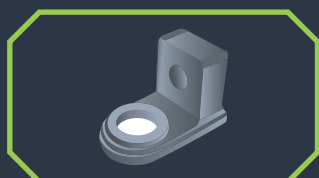
Bolt Type : M8

Transport Vent Plug Type

MF Locking

Flot Type

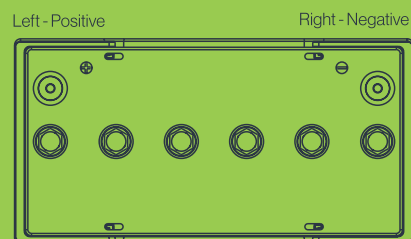
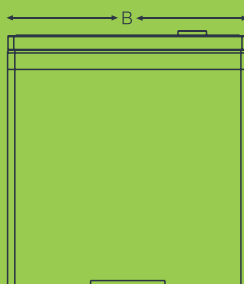
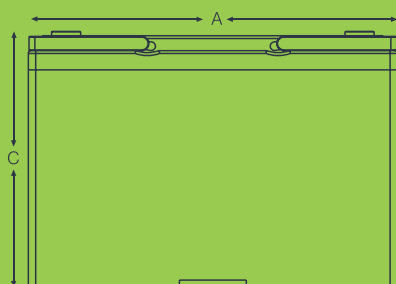
Flot indicator cum watering lid for each cell





S06-12-100

Gel Solar Bloc Battery



Electrical Specifications

Voltage	12V
80% DOD Voltage Cutoff	11.2V
Low Voltage Cutoff	10.8V
Self Discharge	Less than 3% per month (20°C/68°F)
Charge Temperature	Min: -10°C (14°F) / Max: 50°C (122°F)
Discharge Temperature**	Min: -40°C (-40°F) / Max: 50°C (122°F)
Storage	Min: -20°C (-4°F) / Max: 60°C (140°F)

Amp Hours (AH)						
120 HR	100 HR	72 HR	20 HR	10 HR	5 HR	3 HR
122	120	115	110	103	90	83

** CAUTION: Depths of discharge, operating voltages and currents, when designing systems for use at maximum temperatures, will vary.

Applications

Solar

Home Inverter

Renewable Energy

Deep Cycle Applications

Compliant with IEC 61427 / 60896-21/22

Terminal Options Available:

M8
A-Pole
Dual
Stud



Mechanical Specifications

Industry Reference	12	
Length (A)	13 in	329 mm
Width (B)	6.7 in	170 mm
Height (C)	10.2 in	260 mm
Weight	82 lbs	37 kgs
Terminal (Opt'l)*	M8	
Cell(s)	6	
Electrolyte	Gel	
Terminal Torque Nm	8	

NOTE: There is a tolerance of +/-2%.

Features

Maintenance-free bloc batteries in Gel technology (no topping up during lifetime)

Good high current performance for extreme operating conditions

High-class patented safety valve

1200 cycles (IEC 61427 / 60896-21/22)

Capacity: 12V 55Ah-220Ah(C₂₀)

Valve-regulated lead-acid battery

Recyclable

Long cycle life

Low self discharge rate allows for up to 2 years shelf life

Classified as a non-spillable battery is not restricted for transportation by:

- Air (IATA/ICAO provision 67)
- Ground (STB, DOT-CFR-HMR49)
- Water (IMDG amendment 27)



Charging profile

IU Charging

$I = \text{min. } 12\% C_5 \text{ max. } 18\% C_5$

$U = 2.4 \text{ V per cell}$

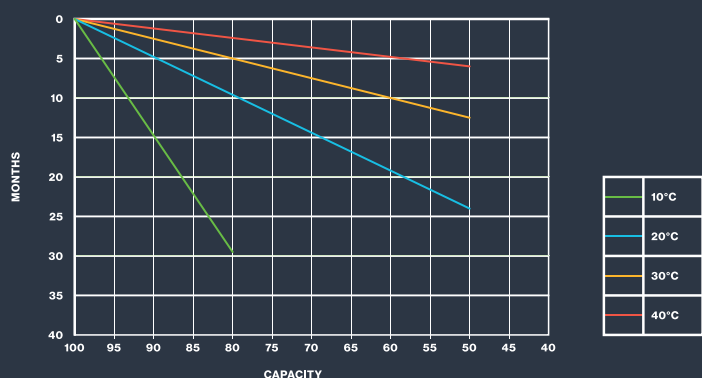
IUI Charging

$I_1 = \text{min. } 12\% C_5 \text{ max. } 18\% C_5$

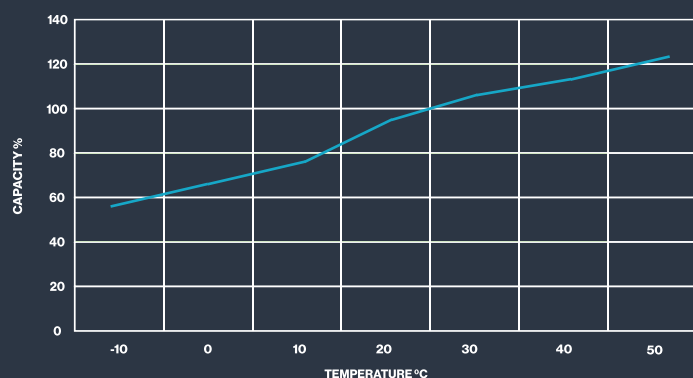
$U = 2.35 \text{ V per cell}$

$I_2 = 1.5\% C_5 \text{ for max. 4 hours}$

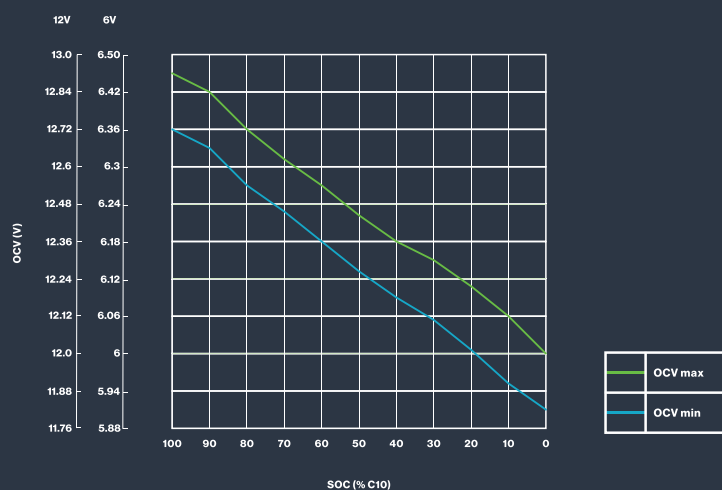
Self discharge at different temperatures



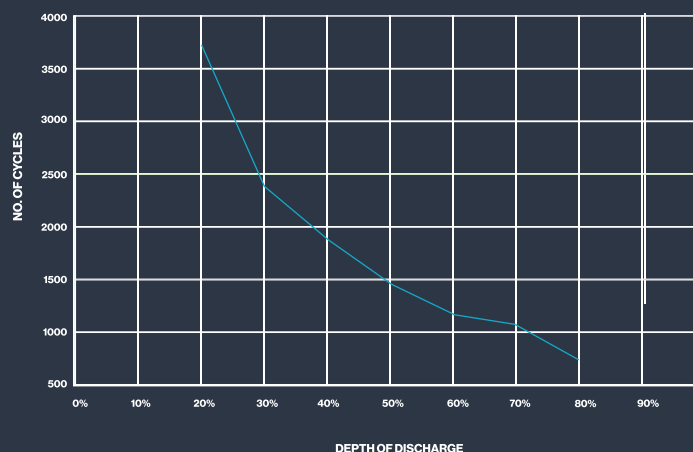
Capacity vs. temperature



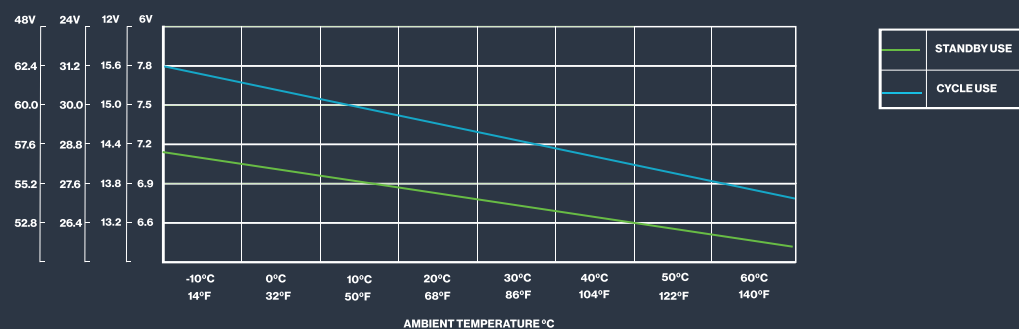
Storage: Determine the state of charge



Cycle life vs. depth of discharge (25°C)



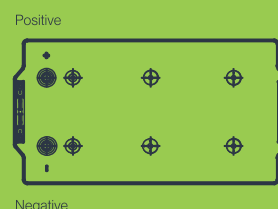
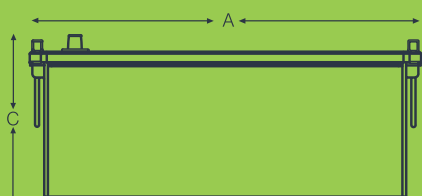
Relation between charging, voltage and temperature





S06-12-170

Gel Solar Bloc Battery



Electrical Specifications

Voltage	12V
80% DOD Voltage Cutoff	11.2V
Low Voltage Cutoff	10.8V
Self Discharge	Less than 3% per month (20°C/68°F)
Charge Temperature	Min: -10°C (14°F) / Max: 50°C (122°F)
Discharge Temperature**	Min: -40°C (-40°F) / Max: 50°C (122°F)
Storage	Min: -20°C (-4°F) / Max: 60°C (140°F)

Cell Type Ue (100%) / VPC Ref Temp	C120 1.80 25°C	C100 1.80 25°C	C72 1.80 25°C	C20 1.75 25°C	C10 1.75 25°C	C5 1.70 25°C
S06 12 170	174	170	164	159	150	132

** CAUTION: Depths of discharge, operating voltages and currents, when designing systems for use at maximum temperatures, will vary.

Applications

Solar

Home Inverter

Renewable Energy

Deep Cycle Applications

Compliant with IEC 61427 / 60896-21/22

Terminal Options Available:

M8

A-Pole

Dual

Stud



Mechanical Specifications

Industry Reference	DIN B / BCI 4D (Reverse Polarity)	
Length (A)	20.2 in	513 mm
Width (B)	8.8 in	223 mm
Height (C)	7.7 in	196 mm
Weight	119 lbs	54 kgs
Terminal (Opt'l)*	A-Pole	
Cell(s)	6	
Electrolyte	Gel	
Terminal Torque Nm	n/a	

NOTE: There is a tolerance of +/-2%.

Features

Maintenance-free bloc batteries in Gel technology (no topping up during lifetime)

Good high current performance for extreme operating conditions

High-class patented safety valve

1200 cycles (IEC 61427 / 60896-21/22)

Capacity: 12V 55Ah-220Ah(C₂₀)

Valve-regulated lead-acid battery

Recyclable

Long cycle life

Low self discharge rate allows for up to 2 years shelf life

Classified as a non-spillable battery is not restricted for transportation by:

- Air (IATA/ICAO provision 67)
- Ground (STB, DOT-CFR-HMR49)
- Water (IMDG amendment 27)



Charging profile

IU Charging

$I = \text{min. } 12\% C_5 \text{ max. } 18\% C_5$
 $U = 2.4 \text{ V per cell}$

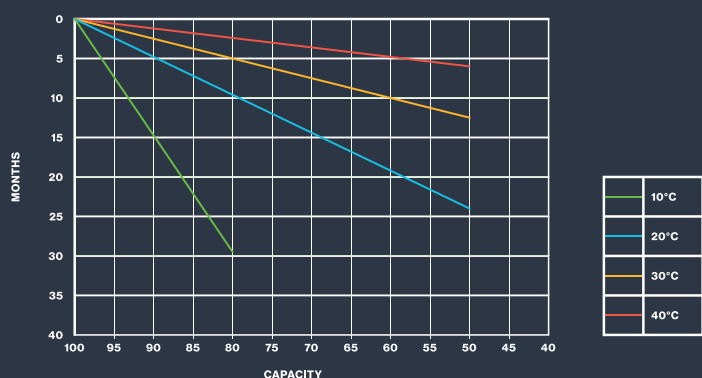
IUI Charging

$I_1 = \text{min. } 12\% C_5 \text{ max. } 18\% C_5$
 $U = 2.35 \text{ V per cell}$
 $I_2 = 1.5\% C_5 \text{ for max. 4 hours}$

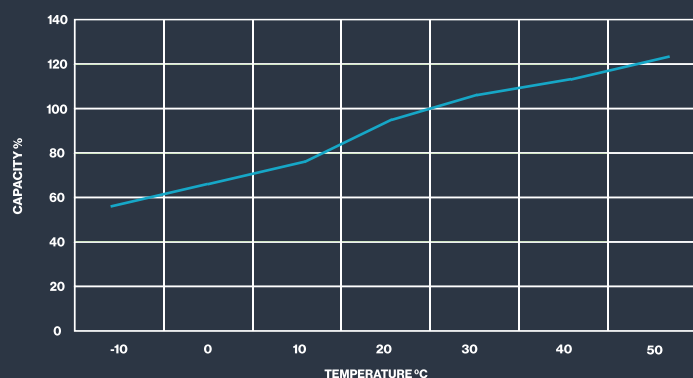
Torque



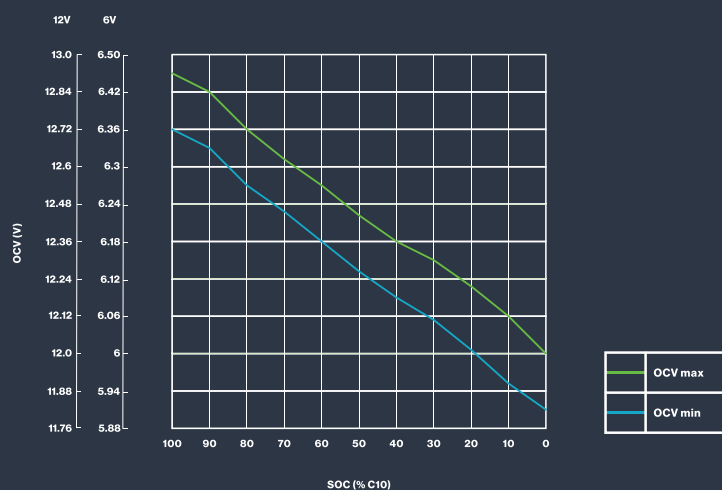
Self discharge at different temperatures



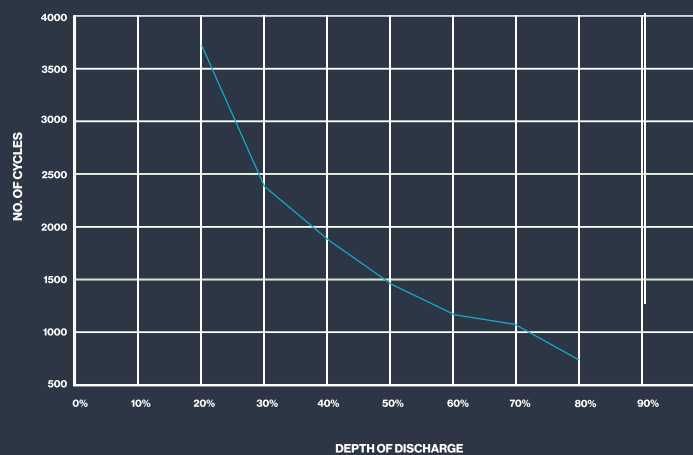
Capacity vs. temperature



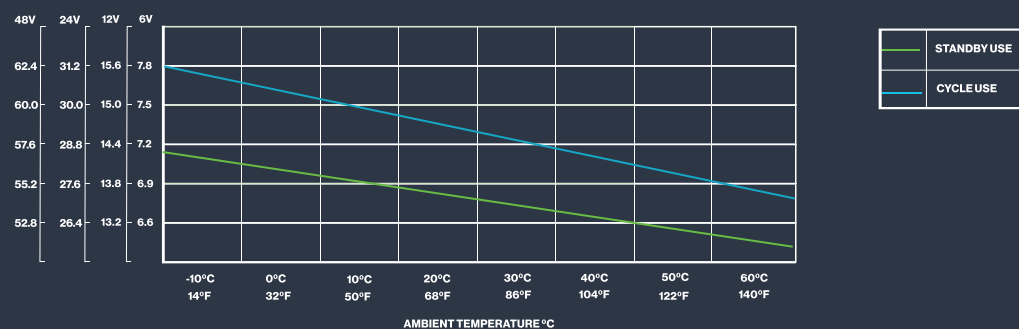
Storage: Determine the state of charge



Cycle life vs. depth of discharge (25°C)



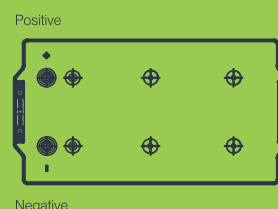
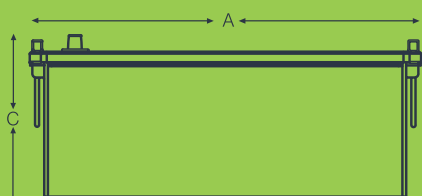
Relation between charging, voltage and temperature





S06-12-220

Gel Solar Bloc Battery



Electrical Specifications

Voltage	12V
80% DOD Voltage Cutoff	11.2V
Low Voltage Cutoff	10.8V
Self Discharge	Less than 3% per month (20°C/68°F)
Charge Temperature	Min: -10°C (14°F) / Max: 50°C (122°F)
Discharge Temperature**	Min: -40°C (-40°F) / Max: 50°C (122°F)
Storage	Min: -20°C (-4°F) / Max: 60°C (140°F)

Cell Type Ue (100%) / VPC Ref Temp	C120 1.80 25°C	C100 1.80 25°C	C72 1.80 25°C	C20 1.75 25°C	C10 1.75 25°C	C5 1.70 25°C
S06 12 220	235	230	221	212	200	177

** CAUTION: Depths of discharge, operating voltages and currents, when designing systems for use at maximum temperatures, will vary.

Applications

Solar

Home Inverter

Renewable Energy

Deep Cycle Applications

Compliant with IEC 61427 / 60896-21/22

Terminal Options Available:

M8

A-Pole

Dual

Stud

ET/DATAGELSOLAR S06 12 220 V4 1022



Mechanical Specifications

Industry Reference	DIN C / BCI 8D (Reverse Polarity)	
Length (A)	20.4 in	518 mm
Width (B)	10.8 in	274 mm
Height (C)	8.5 in	215 mm
Weight	150 lbs	68 kgs
Terminal (Opt'l)*	A-Pole (Industrial Terminal optional)	
Cell(s)	6	
Electrolyte	Gel	
Terminal Torque Nm	n/a	

NOTE: There is a tolerance of +/-2%.

Features

Maintenance-free bloc batteries in Gel technology (no topping up during lifetime)

Good high current performance for extreme operating conditions

High-class patented safety valve

1200 cycles (IEC 61427 / 60896-21/22)

Capacity: 12V 55Ah-220Ah(C₂₀)

Valve-regulated lead-acid battery

Recyclable

Long cycle life

Low self discharge rate allows for up to 2 years shelf life

Classified as a non-spillable battery is not restricted for transportation by:

- Air (IATA/ICAO provision 67)
- Ground (STB, DOT-CFR-HMR49)
- Water (IMDG amendment 27)



Charging profile

IU Charging

$I = \text{min. } 12\% C_5 \text{ max. } 18\% C_5$
 $U = 2.4 \text{ V per cell}$

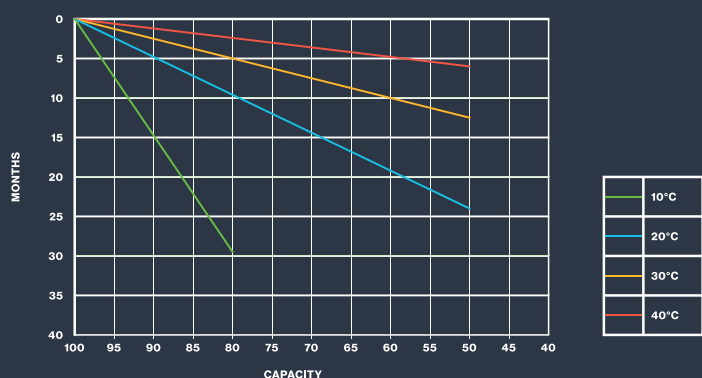
IUI Charging

$I_1 = \text{min. } 12\% C_5 \text{ max. } 18\% C_5$
 $U = 2.35 \text{ V per cell}$
 $I_2 = 1.5\% C_5 \text{ for max. 4 hours}$

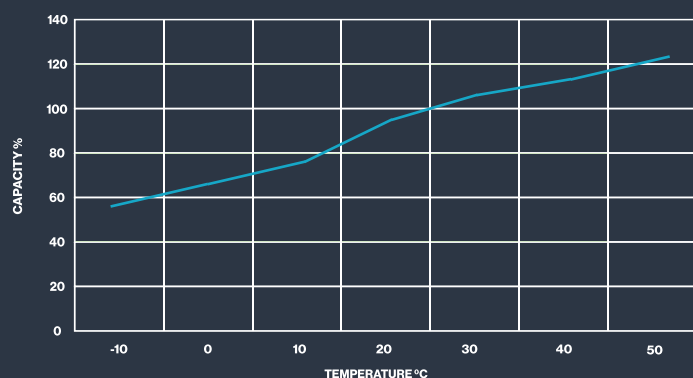
Torque



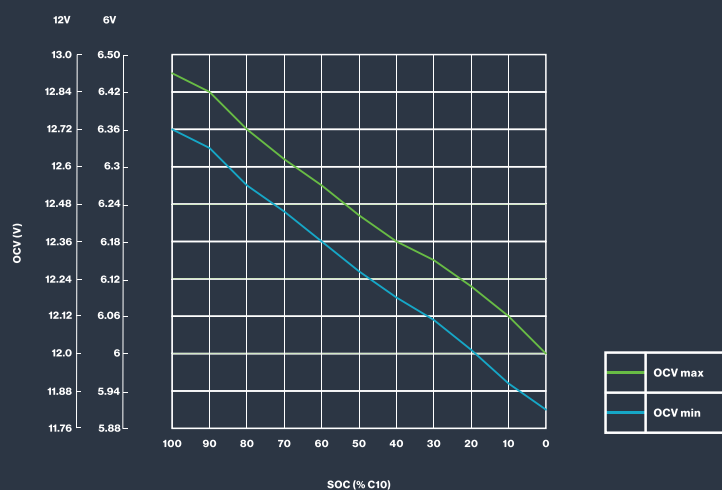
Self discharge at different temperatures



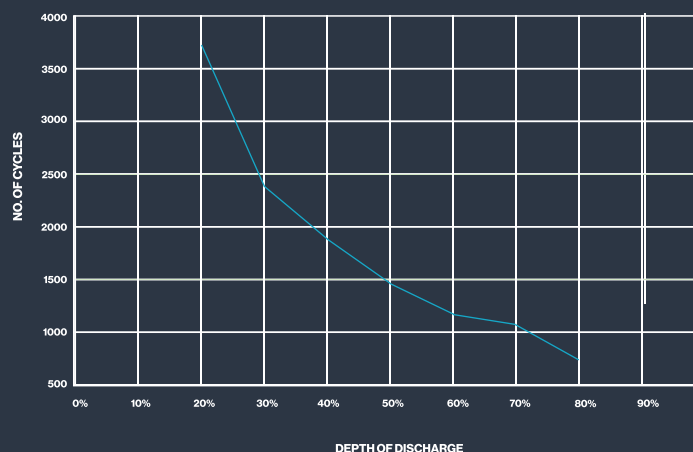
Capacity vs. temperature



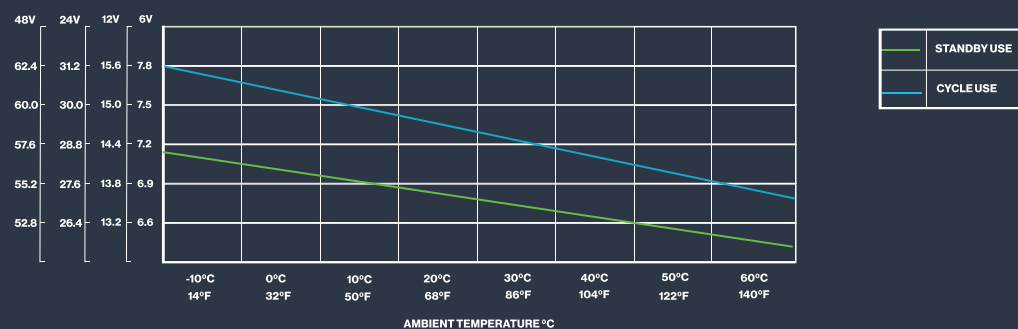
Storage: Determine the state of charge



Cycle life vs. depth of discharge (25°C)



Relation between charging, voltage and temperature





GIANT POWER

Lithium Iron Phosphate



⊗ High Temperature ⊗ High Discharge ⊗ Fast Charge

Giant Power

Nominal Power	1.344 KWH	2.688 KWH	5.376KWH
Nominal Voltage	12.8 v	25.6 v	51.2 v
Nominal Capacity	105 AH		
Cell Type	(LiFeP04) Grade A+		
Rated Voltage of Cell	3.2 v		
Rated Capacity Of Cell	105 AH		
Voltage Range of Cell	2.5 v. ~ 3.2 v		
C Rate	1C		
weight of Cell	2.56 KG		
Number Of cycle	2500		
Working Temperature	20°C - 55°C		
Parallel Function	16 PCS		
Weight	15 kg	28 kg	48 kg
cell Dimension (H*W*D)m	0.26 * 0.175 * 0.02725		



GIANT POWER

Lithium Iron Phosphate

⊗ High Temperature ⊗ High Discharge ⊗ Fast Charge

Giant Power

Nominal Power	3.5 KWH	7.1 KWH	14.4 KWH
Nominal Voltage	12.8 v	25.6 v	51.2 v
Nominal Capacity	280 AH		
Cell Type	(LiFePO4) Grade A+		
Rated Voltage of Cell	3.2 v		
Rated Capacity Of Cell	280 AH		
Voltage Range of Cell	2.5 v ~ 3.65 v		
weight of Cell	5.42 ± 0.3 KG		
Number of Cycle	≥ 6000		
Working Temperature	-20°C - 55°C		
Parallel Function	16 Units		
weight	27 KG	50 KG	90 KG
Cell Dimension (H*W)	217.5 mm * 173.7 mm	217.5 mm * 173.7 mm	217.5 mm * 173.7 mm
Battery Box Dimension (H* W * D)	260 mm * 640 mm * 360 mm	260 mm * 640 mm * 340 mm	260 mm * 640 mm * 520 mm



AGE POWER STATION



AGE POWER STATION

AGE POWER STATION	
Solar Panel	6000 w -18000 w
Hybrid -On-OffGrid Inverter	6000 w -18000 w
Battery (LIFEP04)	14.34 Kwh 57.36 Kwh

- Aras Green Energy dedicated storage power plant has a continuous solar inverter capacity from 6KW to 18KW, which converts the DC power generated from the solar panels into AC power for use in your home or building. In addition, it includes intelligent devices, which help protect the power system from overload and error by automatically interrupting power flow when necessary. That protects the system from power surges and voltage surges, displaying battery charge rate. The presence of smart home technology allows automation and remote control of various electrical appliances, enhancing convenience and energy efficiency.
- Solar capacity ranges from 6KW to 18KW. Includes special protective guards for solar panels , preventing potential damage due to over current or other electrical faults. The power plant also includes special mechanisms that ensure that electricity is supplied safely and continuously through monitoring of electrical phases.
- The plant will include LiFePO4 batteries to store the excess energy generated by the solar panels. The battery will range from 14.34KWh to 57.36KWh. This high capacity battery provides energy storage, allowing you to harness solar-generated energy during periods of low sunlight or at night when solar panels are not producing electricity.



Giant 3P/3P

- ⊕ Online double-conversion
- ⊕ DSP technology guarantees high reliability
- ⊕ True galvanic isolation transformer design
- ⊕ Control designed to withstand all kinds of loads
- ⊕ Intelligent battery management to prolong battery lifecycle
- ⊕ Independent ventilation enhance durable operation under harsh environment
- ⊕ Adjustable battery numbers
- ⊕ Accept dual-mains input
- ⊕ Parallel operation with up to 4 units (option)
- ⊕ Varieties of communication options available
- ⊕ Optional 7" touch LCD
- ⊕ Reverse phase frequency operation and supports non-neutral input



GIANT 3P / 3P

Giant 3-phase in/3-phase out Online UPS Selection Guide

MODEL		Giant 10K	Giant 15K	Giant 20K	Giant 30K	Giant 40K	Giant 60K	Giant 80K	Giant 100K	Giant 120K	Giant 160K	Giant 200K
CAPACITY		10 KVA / 8 KW	15KVA / 12KW	20 KVA / 16 KW	30 KVA / 24 KW	40 KVA / 32 KW	60 KVA / 48 KW	80 KVA / 64 KW	100 KVA / 80 KW	120 KVA / 96KW	160 KVA / 128KW	200 KVA / 160KW
INPUT												
Nominal Voltage		3 x 380VAC/400VAC (3Ph + N)										
Acceptable Voltage Range		165VAC ~ 280VAC (Ph-N) 285VAC ~ 485VAC (Ph-Ph)										
Frequency		50/60 Hz ± 10 %										
INVERTER												
Nominal Voltage		3 x 380VAC/400VAC (3Ph + N)										
Precision		Stationary: ±1% Transitory: ±5% (load variations 100-0-100%)										
Frequency		50/60 Hz synchronised ±1 % With mains absent ±0.1 Hz										
Max. Synchronization Speed		±1 Hz/s										
Waveform		Pure Sinewave										
Total Harmonic Distortion (THDv)		<2% (Linear Load) ; <5% (Non-linear Load)										
Phase Displacement		120° ±1% (balanced load) ; 120° ±2% (imbalances 50% of the load)										
Dynamic Recovery Time		3 cycles at 90 % of the static value										
Admissible Overload		110% ~ 150% 10 min ~ 60 sec ; 150% ~ 160% 60 sec~ 200ms ; >160% 200ms										
Admissible Crest Factor		3:1										
Admissible Power Factor		0.6~1 (inductive or capacitive)										
Imbalance Output Voltage @ 100% Unbalanced Load		<1%										
Current Limit		High overload, short-circuit: RMS Voltage Limit High Crest-Factor current: Peak Voltage Limit										
STATIC BYPASS												
Type		Solid state										
Voltage		176VAC ~ 264VAC (Ph-N) ; 304VAC ~ 456VAC (Ph-Ph)										
Frequency		50/60 Hz ± 10 %										
Activation Criterion		Microprocessor control										
Transfer Time		Zero										
Admissible Overload		0% ~ 150% continuous working ; 150% ~ 180% 60 min~5 min ; >180% 5 min										
Transfer to Bypass		Immediate, for overloads above 160%										
Retransfer		Automatic after alarm clear										
MAINTENANCE BYPASS												
Type		Without interruption										
Voltage		3 x 400V (3Ph + N)										
Frequency		50/60 Hz										
Overall Efficiency	Line Mode	89%	90%	91%	92%							
	Battery Mode	90%	91%	92%	93%							
BATTERY & CHARGER												
Battery Type and Numbers		12VDC x 32 pcs (29~32 pcs adjustable)										
Nominal Battery Voltage		384 VDC (Based on 32pcs batteries)										
Charging Method		CC/CV										
Precision		±1%										
Charging Current		Default 10A, *Maximum= Capacity(KW)/Battery (real-time).			Default 10A; Maximum 40A; 5A@ full load							
Charging Voltage		432 VDC (Based on 32pcs batteries)										
PHYSICAL												
Dimensions, D x W x H (mm)		656 x 405 x 817			656 x 405 x 941	821 x 432 x 1159		975 x 554 x 1286		975 x 554 x 1326	1051 x 705 x 1646	
Net Weight (Kgs)		118	120	145	193	278	365	471	573	650	760	790

* The maximum current is never higher than 40A.
Product specifications are subject to change without further notice.



AGE 33 10K-80K (5' LCD)

» Embedded with isolation transformer, series will eliminate common mode noise and the need to install expensive dedicated circuits. It provides reliable galvanically isolated power to critical equipment.

- ⊕ Dual Inputs
- ⊕ Very powerful charger to shorten the recharge time
- ⊕ Parallel up to 6 units with common battery pack
- ⊕ Optional programmable relay dry contact card
- ⊕ High overload capability
- ⊕ Adjustable battery design
- ⊕ Dynamic password feature optimizes service performance
- ⊕ Power walk-in while paralleling



MODEL		10K (L)*	15K(L)	20K (L)*	30K (L)*	40K (L)	60KL	80KL
PHASE		3-phase in / 3-phase out						
CAPACITY		10KVA /10KW	15KVA /15KW	20KVA /20KW	30KVA /30KW	40KV /40KW	60KVA /60KW	80KVA /80KW
PARALLEL CAPABILITY		up to 6 units in parallel						
INPUT								
Nominal Voltage		3 x 380/400/415 VAC (3Ph+N)						
Voltage Range		-30% ~ +20%						
Frequency Range		40~70 Hz						
Power Factor		≥ 0.99 @ 100% Load						
Harmonic Distortion (THDi)		< 3% at full linear load						
OUTPUT								
Output Voltage		3 x 360*/380/400/415 VAC (3Ph+N)						
AC Voltage Regulation (Batt. Mode)		± 1%						
Frequency Range (Synchronized Range)		46~54Hz or 56~64Hz						
Frequency Range (Batt. Mode)		50/60 Hz ± 1%						
Current Crest Ratio		3:1 (max.)						
Harmonic Distortion		≤ 1 % THD (Linear Load) ; ≤ 3 % THD (Non-linear Load)						
Transfer Time	AC Mode to Batt. Mode	Zero						
	Inverter to Bypass	Zero						
Waveform (Batt. Mode)		Pure Sine wave						
Overload Capability		100-110% for 60 min, 111-125% for 10 min, 126%~150% for 1 min; >150% or 400ms						
BYPASS								
Nominal Voltage		3 x 380/400/415 VAC (3Ph+N)						
Voltage Range		-30% ~ +20% (Adjustable)						
Frequency Range (Synchronized Range)		46~54Hz or 56~64Hz						
Overload Capability		> 130% 1 minute (default) Continuously working until breaker protection (optional)						
EFFICIENCY								
AC Mode		96.0%						
ECO Mode		99.0%						
Battery Mode		96.0%						
BATTERY								
Standard Model	Battery Type	12 V/9 Ah	12 V/9 Ah	12 V/9 Ah	12 V/7 Ah	12 V/9 Ah	N/A	
	Numbers	(10+10) pcs	(16+16) pcs	(16+16) pcs	(16+16) pcs x 2 strings			
	Typical Recharge Time	9 hours recover to 90% capacity						
	Charging Current (max.)	1A ~ 12A (Adjustable)				1A ~ 16 A (Adjustable)		
	Charging Voltage	+/-136.5 VDC ± 10%	+/-218 VDC ± 10%					
Long-run Model	Battery Type	Depending on the applications						
	Numbers	+/- 10 pcs	+/-16 pcs ~ +/- 20 pcs (Adjustable)					
	Charging Current (max.)	1A ~ 12A (Adjustable)				1A ~ 16 A (Adjustable)	2A ~ 24 A (Adjustable)	2A ~ 32A (Adjustable)
	Charging Voltage	+/-136.5 VDC ± 10%	+/-13.65V x N (N=16~20)					
INDICATORS								
LCD Panel		UPS status, Load level, Battery level, Input/Output voltage, Discharge timer, and Fault conditions						
PHYSICAL								
Standard Model	Dimension,DxWxH (mm)	630 x 250 x 826			815 x 300 x 1000		N/A	
	Net Weight (kgs)	124	139		225	250		
Long-run Model	Dimension,DxWxH (mm)	630 x 250 x 826			815 x 300 x 1000		790 x 360 x 1010	
	Net Weight (kgs)	28	43		60	67	108	113
ENVIRONMENT								
Operation Temperture		0-40°C						
Operation Humidity		< 95% and non-condersing						
Altitude**		0 ~ 1500m at full load						
Noise Level		Less than 60 dB @1 Meter			Less than 63 dB @1 Meter		Less than 65 dB @1 Meter	
MANAGEMENT								
Smart RS-232 / USB		Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7/8/10, Linux and MAC						
Optional SNMP		Power management from SNMP manager and web browser						

*If output voltage is set as 3 x 360VAC, the output power of the unit will be de-rated to 90%.

**If the UPS is installed or used in a place where the altitude is higher than maximum height, the output power will be derated 1% per 100m.

Product specifications are subject to change without further notice.



HEAT PUMP WATER HEATER

X7 Indoor Integrated Series Heat Pump Water Heater (Dual ducts on top)

Model	RS-3.6FAD/150L	RS-3.6FAD/190L	RS-3.6FAD/260L	RS-3.6FAD/300L
Rated Input Power	0.7 KW	0.7 KW	0.7 KW	0.7 KW
Rated Heating Capacity	2.8 KW	2.8 KW	2.8 KW	2.8 KW
Rated current	3.2A	3.2A	3.2A	3.2A
Power Supply	220V/50HZ			
Refrigerant	R134a (110Og)			
Compressor	Panasonic / Rotary for R134a			
Outlet water temperature	60°C (highest temperature= 70°C)			
COP	2.6 in 7°C; 3.5 in 15°C; 3.9 in 20°C			
Certification obtained	CE, EN16147	CE, EN16147	CE, EN16147	CE, EN16147
Capacity of Water Tank	150L	190L	260L	300L
Exterior casing	Brushed stainless steel SUS304 (0.6mm thickness)			
Inner water tank	Stainless steel SUS304 (1.5mm thickness)			
Condenser coil	Stainless steel SUS316L (9.52mm X 0.7mm X 30m)			
Expansion valve	Electronic expansion valve			
Evaporator	6CTJ(480mm*64.5mm*350mm)			
Ventilation	Centrifugal (input power 65W)			
Air flow	450m ³ /h			
Air duct size	150mm			
Electric resistance	2KW			
Working range with resistance	-15°C-43°C			
Working range without resistance	-7°C-43°C			
Anti-corrosion-for water-tank	Magnesium anode (21 mm X 450mm)			
Anti Legionella/anti disease	Water heated up to 70°C			
Size	650 x 1415mm	650 x 1520mm	650 x 1790mm	650 x 1920mm
Net Weight	76Kg	88Kg	98Kg	110Kg
Noise	46 dBA			



PDS33 SOLAR PUMP CONTROLLER

PDS33-4T022 | PDS33-4T030 | PDS33-4037 | PDS33-4T045
PDS33-4T055 | PDS33-4T065 | PDS33-4T093 | **PDS33-4T110**



Up to 99.8% MPPT efficiency



Zero programming



Automatic hybrid
compensation



AM PMSM single phase,
Multi types of pumps



Multi pump protection



Automatic start and stop



Technical Data

Model	PDS33-4T022	PDS33-4T030	PDS33-4T037	PDS33-4T045	PDS33-4T055	PDS33-4T075	PDS33-4T093	PDS33-4T110
DC Input								
Max. Input Voltage [V]	800							
Start Voltage [V]	350							
Min. Input Voltage [V]	220							
MPPT Voltage Range [V]	500-750							
Recommended Input Working Voltage[V]	560							
Recommended PV Array Power [kW]	26.4~35.2	36~48	44~59.2	54~72	66~88	90~120	112~149	132~176
AC Input								
Input Voltage [V]	380(±15%)							
Input Frequency [Hz]	50/60							
AC Output								
Output Power [kW]	22	30	37	45	55	75	93	110
Rated Current [A]	45	60	75	91	115	150	176	210
Output Voltage [V]	380(±15%)							
Output Frequency [Hz]	50/60							
Control Performance								
Control Mode	V/F _r SVC							
Overload Capability	150% of rated current: 60 seconds; 180% of rated current: 1 seconds							
Protection								
Undervoltage Protection	Integrated							
Overvoltage Protection	Integrated							
Overload Protection	Integrated							
Short-circuit Protection	Integrated							
Overheat Protection	Integrated							
Lack of Water Protection	Integrated							
Surge Protection	Integrated							
General Data								
Ingress Protection Degree	IP20							
Cooling Mode	Air cooling							
Communication Interface	RS485 communication interface							
Ambient Operating Temperature	-20t 60t (>450c, rated power will be derated for 1% by every additional 1t)							
Operation Altitude	Ecommend<3000m(the rated power will be decreased for 1% by every additional 100m when the altitude is> 2000m)							
Physical Dimension [H*W*D] [mm]	360*219*197	442*256*228		543*310*280		580*358*328		
Weight [kg]	10.45	13.5	13.8	22.3	22.7	38.93	39.45	40.7
Standard Warranty [Month]	18							
Certification Standards	CE							

Note: Inductor is suggested to be added to the solar pumping system if the distance between solar pump controller and water pump is over 50m.



DC CABLE

MC4

DESCRIPTIONS

H1Z2Z2-K/62930 IEC 131 6.0mm² Tinned Copper Non-Halogen EN1500V

STANDARDS

IEC 60228, IEC 60332 -1-2, IEC 60754, IEC 60811 -2-1, IEC 61034, IEC 61215

EN 50618 File No.:J50419123

IEC 62930 File No.:R50413678

ROHS 2011/65/EU

CABLE CONSTRUCTION

Conductor	Stranded tinned copper
Size	6mm ²
Stranding	78/0.295±0.01mm
Diameter	3.0mm
Primary Insulation	XLPE
Color	Black±Red
Secondary Insulation	XLPE
Color	Black°Cred bar°C
Outer Diameter	6.10±0.2×12.50±0.40mm

ELECTRICAL CHARACTERISTICS

Voltage Rating	
EN50618 & IEC62930	AC: 1.0/1.0kV; DC: Max.1.5kV
Ambient Temperature	-40°C up to 90°C
Insulation Resistance At 20±:	≥ 610 MΩ.km
Current carrying capacity AT 60±:	72A
Spark test	10000 VAC
Voltage Withstand	6500 VAC
Conductor Resistance AT 20±:	≤3.39 Ω/km

OTHER CHARACTERISTICS

Bending Radius	
Dynamic	≥ 5 X O.D.
Static	≥ 4 X O.D.
Ozone resistant	IEC 60811-403
Low smoke emission	IEC 61034-2, light transmittance ≥ 60%
Weathering/UV resistance	IEC 62930 Annex E
Halogen free	IEC 62821-1 Annex B
Flame retardant	IEC 60332-1-2

PRINT LEGEND

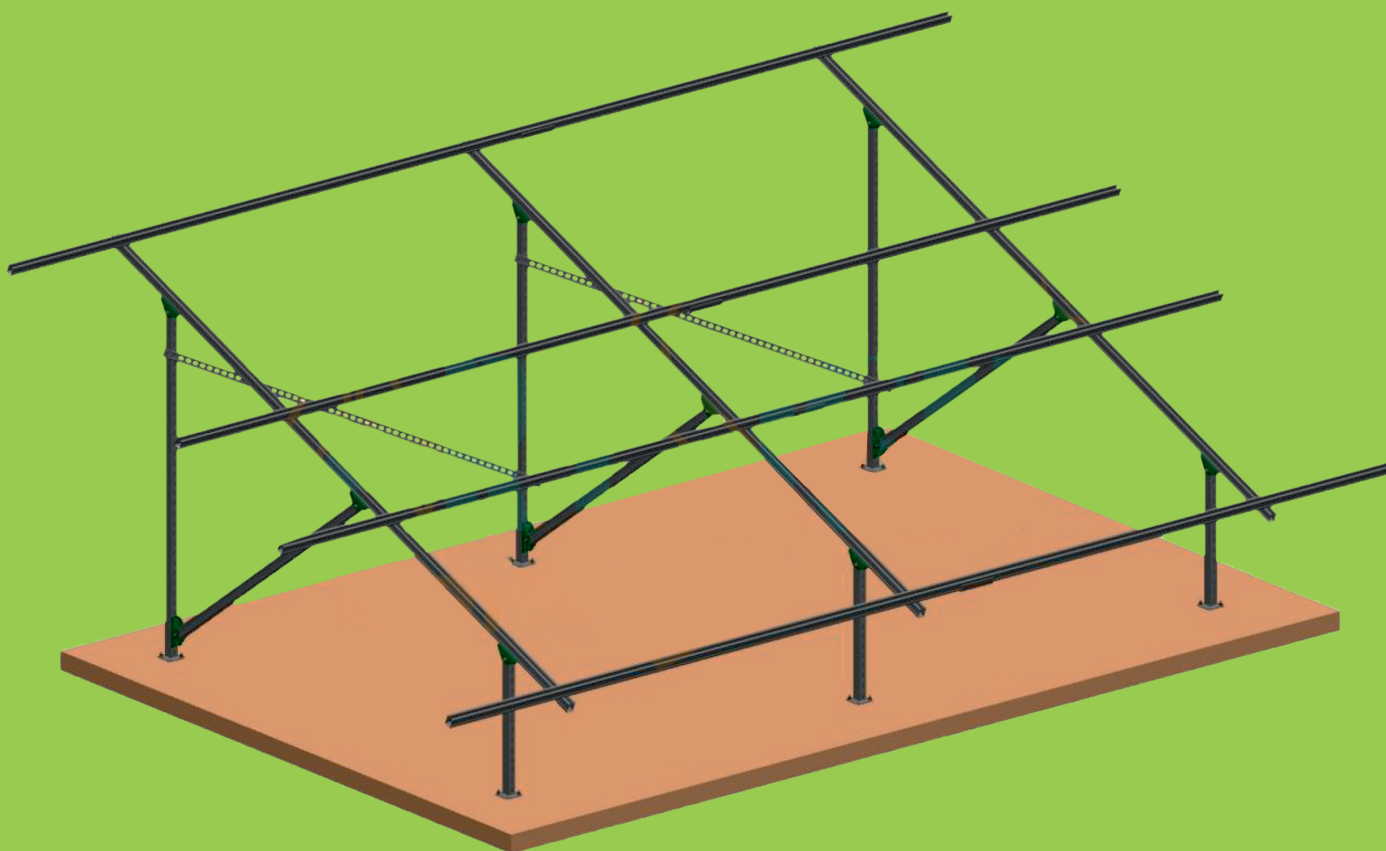
KIBOR CABLE  TÜV H1Z2Z2-K 62930 IEC 131 2×6.0mm² DC1500V FOR DC USE ONLY °C DO NOT DISCONNECT UNDER LOAD °C 120±:SOLAR DC CABLE NINGBO KIBOR WIRE & CABLE CO.,LTD EN Certificate No. J50419123 IEC Certificate No.R50413678 Lot No.xxxxxxxxxxxx Meter Code

PACKAGING

- a) 100m/Roll
- b) Consulting if delivering in other ways.

HISTORY

Sep 9,2020 First issue
Mar30,2022 Adjust primary insulation color black,red to white,white



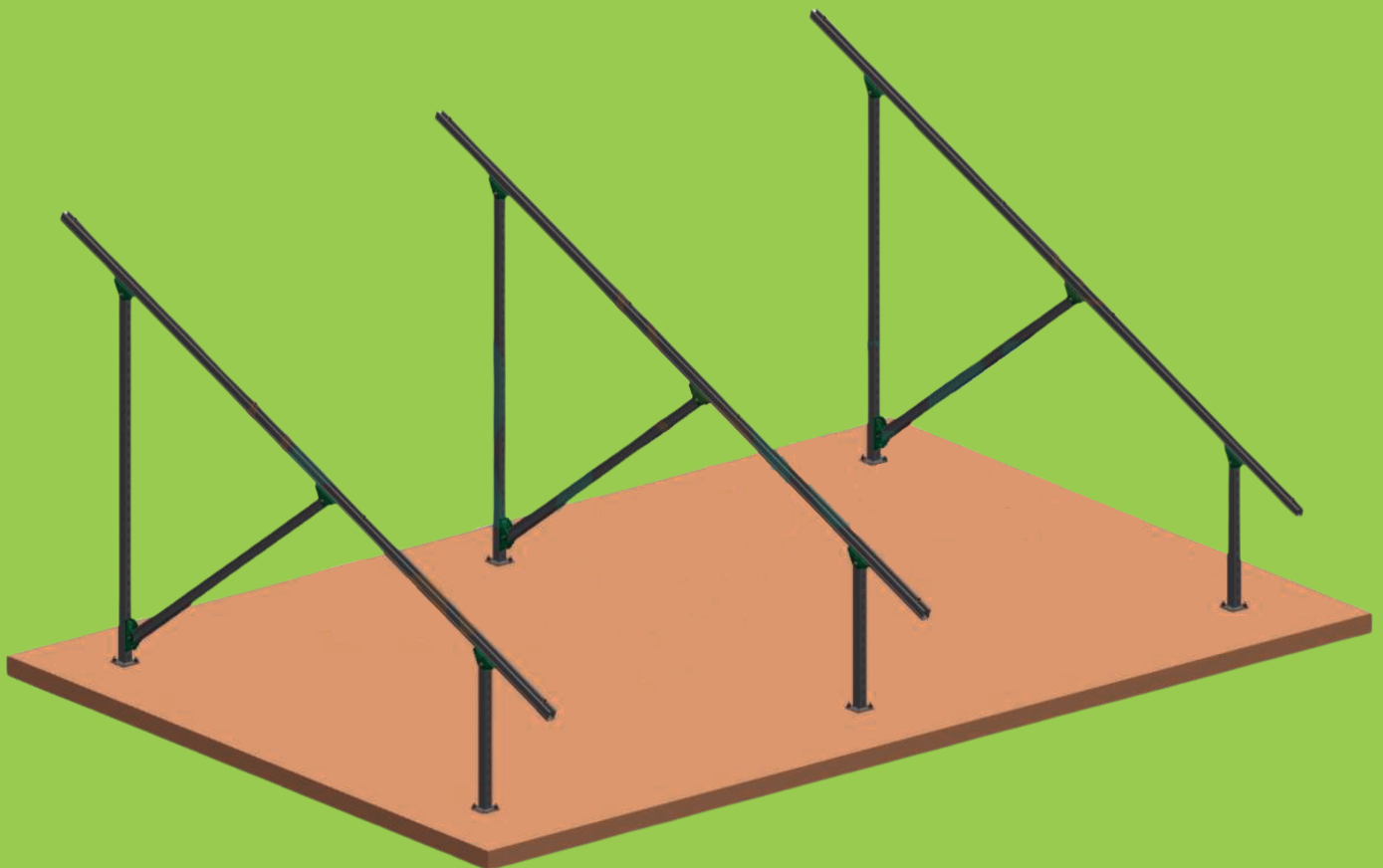
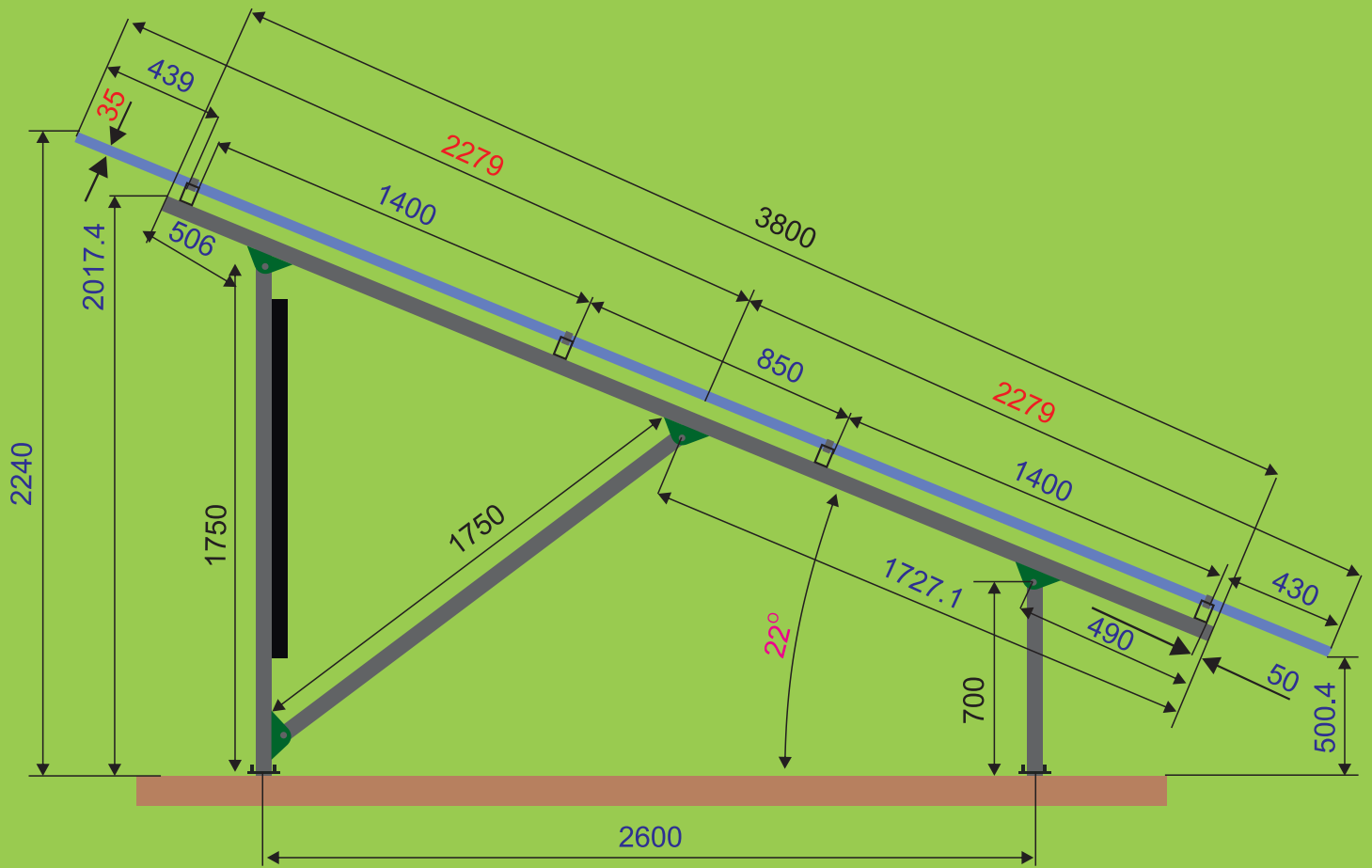
SOLAR STAND

STATEMENT OF PROJECT

Project Name	400pv		
ArtSign Internal Code	Q-ZXC220415	Issue Date	2022.04.15
Design Enginner	Mr. Qiu	Client	IQ-ARAS
Auditor	Mr. Lin	Country	Iraq

GENERAL INFORMATION OF THE STRUCTURE

Structure Material	Galvanized steel		
Solar panel dimension	2279 x 1134 x 35mm	Ground clearance	50cm
Solar panel layout	2x5PV	Ground Foudation	Concrete
Solar panel orientation	Portrait	Wind load	120km/h
Inclination angle	220	Snow load	1.6kn/m ²





ARAS

GREEN ENERGY



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