Shinson®
Technology Beyond Limits

AURORA
Datasheets

HYBRID

Hybrid
Photovoltaic System Kits

HYBRID

3kW / 4kW / 5kW / 6kW / 8kW / 10kW

Product Description

Hybrid solar kits are unique in their ability to operate in either on-grid or off-grid conditions. These systems include advanced BMS technology that enables users to modify the charge/ discharge rate & schedules of the battery storage unit as well as to manage power consumption and PV generation usage.

Adaptable and friendly

Operational in both on-grid and off-grid mode, Aurora kits are a valuable investment for those seeking an adaptable and user-friendly combination for solar and storage resources.

The best investment

With the decreasing cost of solar PV and Li-Ion batteries, and the increasing local incentives, solar hybrid systems have become an attractive investment opportunity for home and business owners.

Schedule your system

These systems have the ability to generate and store power at periods when electricity prices are at their highest and deliver it to the load on a scheduled time frame.

What's in the Box

- Solar modules
- Hybrid inverter/charger
- Custom roof mounting system
- Battery bank
- Battery storage unit
- PV,battery bank&grounding wiring harnesses
- DC and AC disconnects
- Wire management kit
- Grounding hardware
- Safety label kit

Stackable and Scalable

Our hybrid solar storage systems include Lithium Iron Phosphate (LiFePO4) battery packs (48V) connected in high voltage DC configurations. The batteries offer 4000 cycles and up to 80% DOD (Depth of Discharge). Each battery is offered in a 2.4kWh block and can be stacked in different storage options.
Each system can be paralleled with one another up to 10 times to achieve up to100kW's of PV power and almost unlimited battery back up power. Offered in both single and three phase configurations.

Common Applications

- Residential locations with unstable grids
- Locations that do not allow net metering
- People who want to take advantage of the utility rate changes
- Those who cannot affor to lose power or have power outages

Product Benefits

- Can operate in on-grid or off-grid mode
- Sell power back to the grid or storeexcess power for later use
- Use grid power or solar energy to charge the battery bank

Shinson | Product Line

Hybrid On-Grid / Off-Grid Battery PV Kits

SYSTEM SIZE	3.6KW	5KW	4KW	5KW	6KW	8KW	10KW	12KW
PRODUCT MODEL	AR-3KW	AR1-5KW	AR4KW	AR5KW	AR6KW	AR8KW	AR10KW	AR12KW
PV System size Nominal(Wp)	3320	4980	3735	4980	6225	8715	9960	12450
PV MODULE SPECIFICATION (MONO)								
Panel Model	SS415M54P3							
Power(W)	415							
Vmp(V)	30.79							
Voc(V)	37.31							
Isc(A)	14							
Imp(A)	13.48							
Dimen sions(L x W x H)(mm)	1722x1134x30mm							
PV module weight(kg)	20.7							
Certifications	VDE CE CEC ETL INMETRO							
INVERTER SPECIFICATIONS (600VDC)								
Inverter Size(kw)	3.6	5	4	5	6	8	10	12
Max DC Power(W)	7.36	10	8	10	12	16	20	22
Max DC Voltage(V)	1000							
MPPT Voltage range(V)	90-580					360-850		
No.of MPPT'S	2		3					
Max AC Power to Grid (KVA)	7.36	10	8	10	12	16	20	22
AC Nom.Voltage/Voltage Range(V)	220/230/240(180-270)					400/230;380/220		
AC Grid Freque ncy range(Hz)	50/60							
Number of phases	1	1	3			3		
Dimensions(L x W x H)(mm)	482*503*183					571*515*264		
Inverter weight(kg)	22.5					33		
Certifications	EN61000-6-2 EN61000-6-3 EN61000-3-2 VDE4105 EN50549 CEI0-21							
BATTERY SPECIFICATIONS								
Nomintated Capacity (Kwh)	10	10	10	10	15	20	20	25
Useable Capacity(Kwh)	9.6	9.6	9.2	9.2	13.8	19.2	19.2	23
Depth of Discharge (DoD)	95%							
Operating Voltage (V)	90-108V							
Max charging and discharging Current (A)	52.5							
No. of Cycle for lifespan	8000							
Commnunication	CAN/RS-485							
Safety regulations	IEC62619,IEC62040,UN38.3							
Protection Rating	IP65							
Warranty	10Years							
BOS								
#DC Isolator 1200V	2	3	3	3	3	3	3	3
#AC Breaker	1							
*PV Wire Harmess.4mm(meters)	50	50	100	100	200	200	250	250
*Ground Wire.4mm(meters)	50							
Battery Cables	2m							

* Extra wire is avaible upon request

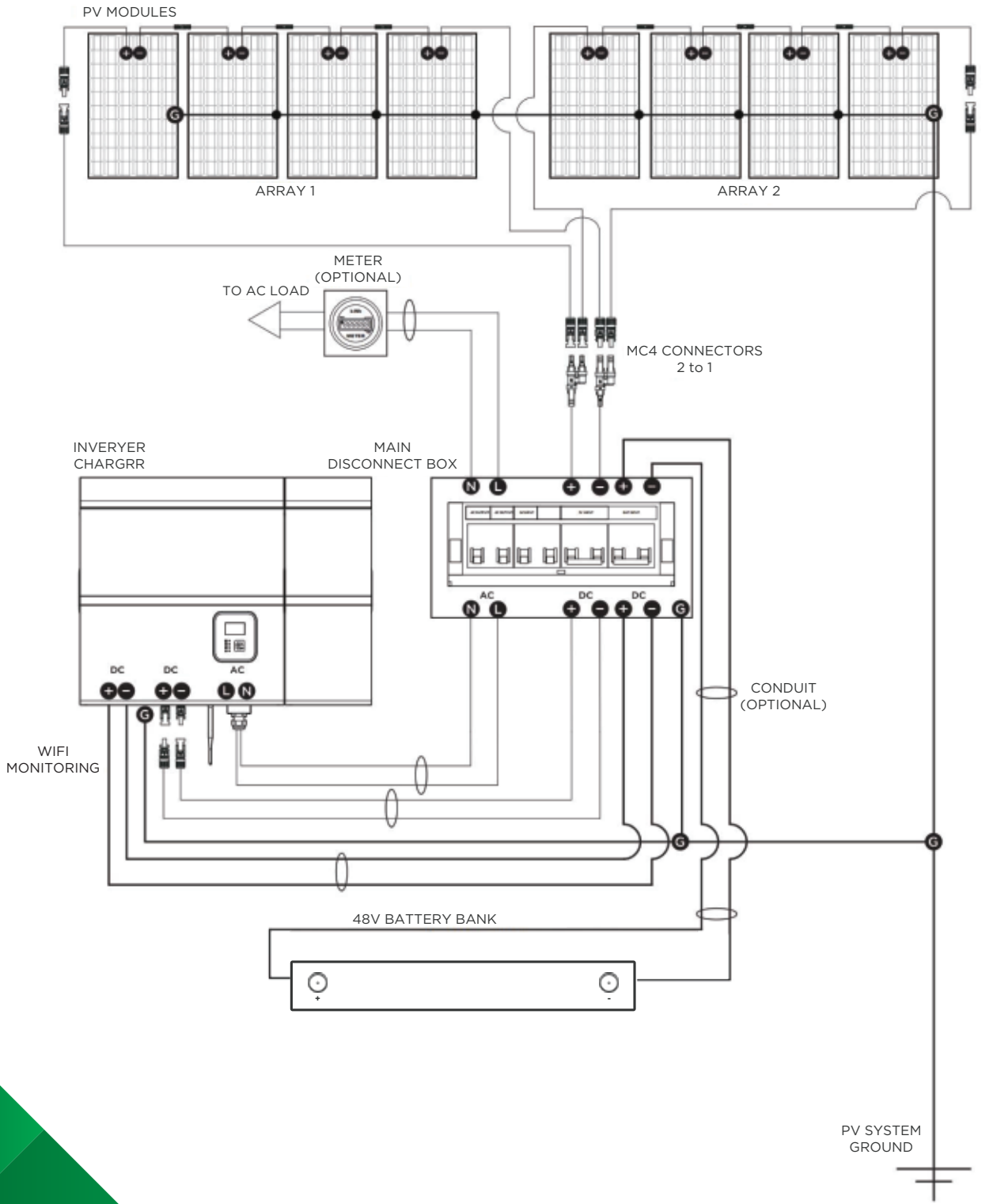
SYSTEMLAYOUT									
# of Modules		8	12	9	12	15	21	24	30
# of inverters		1							
PV Layout options		Landscape or Portrait							
PV Arrary Surface Area(m²)		14.67	25.67	22.00	25.67	29.34	36.67	40.34	45.35
PV Arrary Weight(kg)		160	280	240	280	320	400	440	480
PV Module Configuration 6000VDC	No.of PV Modules/String	4	6	3	4	5	7	8	10
	Total Strings	2	2	3	3	3	3	3	3
	String Voc	149.2	223.8	111.9	149.2	186.5	261.1	298.4	373.1
	String Vmp	123.16	184.74	92.37	123.16	153.95	215.53	246.32	307.9
	String Imp	13.48							
PRODUCTION ESTIMATES(KWh)									
*Projectedyearly outputat 1100GHI/year		2805	4908.75	4207.5	4908.75	5610	7480	9350	11687.5
*Projectedyearly outputat 1460GHI/year		3723	6515.25	5584.5	6515.25	7446	9928	12410	15512.5
*Projectedyearly outputat 1825GHI/year		4653.75	8144.0625	6980.625	8144.0625	9307.5	12410	15512.5	19390.6

* Based on 0.85% system deraling(formula=DC Power x peak sunshine hour/year x derate factor)(GHI=Global Horizotall radiance)

SYSTEM OPTIONS	
Wifi Monitor	Wifi or GPRS
PV System Color	Siliver or Full Black
Mounting System Types	Metal Roof Aspht Shingle,Tile roof,Flat Concrete

Hybrid Exanple Layout (3kW)

Hybrid Exanple Layout (3kW)



The all-in-one Box Solution

The difference is clear, get better results with our all in a box packaging solutions. Shinson's heavy duty ISPM15 compliant care design not only protects the contents during international shipping but also ensures that the solar kits arrive to their destination site undamaged and ready for installation.

Shinson's BOS toolboxes are included in all our solar kits and designed with the installer in mind. With years of installation experience, we understand the benefits of having a safe and well organized jobsite.

Packaging Specs

Designed to be warehouse friendly for distribution centers and local logistics companies, our kits are easily stacked, inventoried, and consolidated.

3kW
1.8 x 0.8 x 1
1 kit per pallet
20 kits per 20'
40 kits per 40'

4kW
1.8 x 0.9 x 1
1 kit per pallet
12 kits per 20'
24 kits per 40'

5kW
1.8 x 1 x 1
1 kit per pallet
12 kits per 20'
24 kits per 40'

6kW
1.8 x 1 x 1
1 kit per pallet
12 kits per 20'
24 kits per 40'

8kW
1.8 x 1 x 1
2 pallets per kit
6 kits per 20'
12 kits per 40'

10kW
1.8 x 1 x 1
2 pallets per kit
6 kits per 20'
12 kits per 40'