

# Single Phase Hybrid Storage Inverter

## 1-6 kW



The Solareast Ares low voltage series storage Inverters are designed to increase energy independence for homeowners. The power range is from 1kW to 6kW, compatible with low voltage (40-60V) batteries.

Energy management is based on time-of-use and demand charge rate structures, which significantly reduce the amount of energy purchased from the public grid.

Thanks for the UPS function (switch time < 10ms), that enables the crucial loads power on during outages. Additionally, under the backup operation mode, the inverter provides you up to 150% peak output overloading.

The Ares low voltage series storage inverters are integrated with Arc Fault Circuit Interrupter (AFCI) and rapid shutdown.

<b>Max. 1.5</b>	<b>2 MPPT</b>	<b>&lt;10 ms</b>		
<b>PV OVERSIZE</b> 1.5 Times PV Oversize	<b>MPPT CHANNELS</b> Up to 2 MPPT Channels	<b>UPS FUNCTION</b> Switch Time < 10ms	<b>PARALLEL</b> Max.6 Parallel Stacking	<b>INPUT</b> Support Generator

- |   |  |  |
|---|--|--|
| Support for Time-of-use Optimization            |  | Build in Anti-feed-in Function             |
| Configurable Operation Modes                    |  | Compact Size and Easy Installation         |
| Arc Fault Circuit Interrupter (AFCI) (Optional) |  | Smart Monitoring & Remote Firmware Upgrade |

# Single Phase Hybrid Storage Inverter

## 4-6 kW Plus Series



The Solareast Ares low voltage series storage Inverters are designed to increase energy independence for homeowners. The power range is from 4kW to 6kW, compatible with low voltage (40-60V) batteries.

Energy management is based on time-of-use and demand charge rate structures, which significantly reduce the amount of energy purchased from the public grid.

Thanks for the UPS function (switch time < 10ms), that enables the crucial loads power on during outages. Additionally, under the backup operation mode, the inverter provides you up to 150% peak output overloading.

The Ares low voltage series storage inverters are integrated with Arc Fault Circuit Interrupter (AFCI) and rapid shutdown.

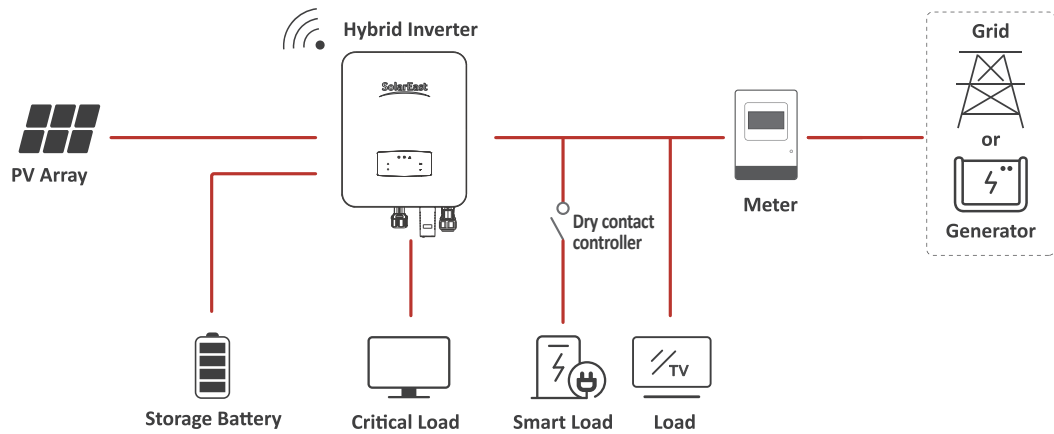
	<b>Max. 1.5</b>	<b>2 MPPT</b>	<b>&lt;10 ms</b>	
<b>MAX. 120A</b> Max. Charge/ Discharge Current 120A	<b>PV OVERSIZE</b> 1.5 Times PV Oversize	<b>MPPT CHANNELS</b> Up to 2 MPPT Channels	<b>UPS FUNCTION</b> Switch Time < 10ms	<b>PARALLEL</b> Max.6 Parallel Stacking

- |  |  |  |
|--|--|--|
| Support for Time-of-use Optimization                         |  | Build in Anti-feed-in Function   |
| Configurable Operation Modes                                 |  | Compact Size and Easy Installation                                       |
| Arc Fault Circuit Interrupter (AFCI) (Optional)              |  | Smart Monitoring & Remote Firmware Upgrade                               |
| The charging and discharging power of the battery is greater |  | Off-grid mode, with a larger load capacity, the maximum load can be 6KVA |

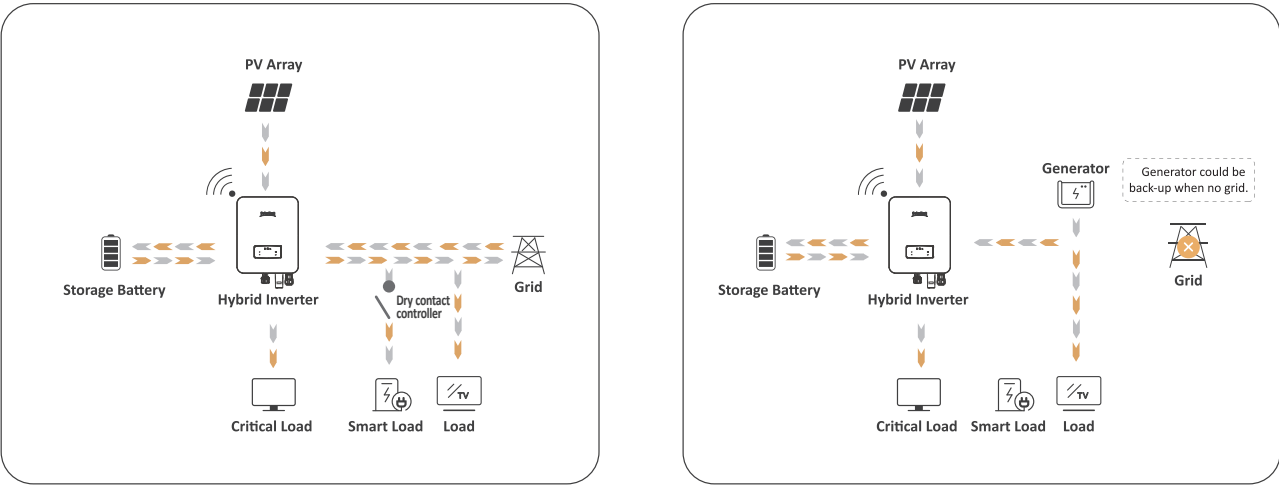
Technical Data	Ares 1KL1	Ares 1.5KL1	Ares 2KL1	Ares 2.5KL1	Ares 3KL1	Ares 3.6KL1
PV Input						
Max. Input Power (kW)	1.5	2.3	3.0	3.8	4.5	5.4
Max. PV Voltage (V)	550					
MPPT Range (V)	80 - 500					
Full MPPT Range (V)	80 - 500	90 - 500	120 - 500	150 - 500	170 - 500	210 - 500
Normal Voltage (V)	360					
Startup Voltage (V)	100					
Max. Input Current (A)	18.5 x 1					
Max. Short Current (A)	26 x 1					
No. of MPP Tracker / No. of PV String	1 / 1					
Battery Port						
Max. Charge/Discharge Power (kW)	1.0	1.5	2.0	2.5	3.0	3.6
Max. Charge/Discharge Current (A)	25	40	50	63	80	80
Battery Normal Voltage (V)	51.2					
Battery Voltage Range (V)	40 - 60					
Battery Type	Li-ion / Lead-acid etc.					
AC Grid						
Max Continuous Current (A)	5.0	7.0	10.0	12.0	14.0	17.0
Max Continuous Power (kVA)	1.0	1.5	2.0	2.5	3.0	3.6
Nominal Grid Current (A)	4.6 / 4.4	6.9 / 6.6	9.1 / 8.7	11.4 / 10.9	13.7 / 13.1	16.4 / 15.7
Nominal Grid Voltage (V)	198 to 242 @ 220 / 207 to 253 @ 230					
Nominal Grid Frequency (Hz)	50 / 60					
Power Factor	0.999 (Adjustable from 0.8 overexcited to 0.8 underexcited)					
Current THD (%)	< 3					
AC Load Output						
Max Continuous Current (A)	5.0	7.0	10.0	12.0	14.0	17.0
Max Continuous Power (kVA)	1.0	1.5	2.0	2.5	3.0	3.6
Max Peak Current (A) (10min)	6.9 / 6.6	10.5 / 10.0	13.7 / 13.1	17.3 / 16.6	20.5 / 19.6	24.6 / 23.5
Max Peak Power (kVA) (10min)	1.5	2.3	3.0	3.8	4.5	5.4
Nominal AC Voltage L-N (V)	220 / 230					
Nominal AC Frequency (Hz)	50 / 60					
Switching Time (ms)	Seamless					
Voltage THD (%)	< 3					
Efficiency						
CEC Efficiency (%)	97.0					
Max. Efficiency (%)	97.6					
PV to Bat. Efficiency (%)	98.1					
Bat. between AC Efficiency (%)	96.8					
Protection						
PV Reverse Polarity Protection	Yes					
Over Current/Voltage Protection	Yes					
Anti-Islanding Protection	Yes					
AC Short Circuit Protection	Yes					
Residual Current Detection	Yes					
Ground Fault Monitoring	Yes					
Insulation Resister Detection	Yes					
PV Arc Detection	Yes					
Enclosure Protect Level	IP65 / NEMA4X					
General Data						
Dimensions (W x H x D, mm)	370 x 535 x 192					
Weight (kg)	18.5					
Topology	Transformerless					
Cooling	Intelligent Fan					
Relative Humidity	0 - 100 %					
Operating Temperature Range (°C)	- 25 to 60					
Operating Altitude (m)	< 4000					
Noise Emission (dB)	< 25					
Standby Consumption (W)	< 10					
Mounting	Wall Bracket					
Communication with RSD	SUNSPEC					
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G					
Certification & Approvals	NRS097, G98, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2					
EMC	EN61000-6-2, EN61000-6-3					

Technical Data	Ares 3KL	Ares 3.6KL	Ares 4KL	Ares 4.6KL	Ares 5KL	Ares 5.5KL	Ares 6KL
PV Input							
Max. Input Power (kW)	4.5	5.4	6.0	6.9	7.5	8.3	9.0
Max. PV Voltage (V)				550			
MPPT Range (V)				80 - 500			
Full MPPT Range (V)	90 - 500	110 - 500	120 - 500	130 - 500	150 - 500	160 - 500	170 - 500
Normal Voltage (V)				360			
Startup Voltage (V)				100			
Max. Input Current (A)				18.5 x 2			
Max. Short Current (A)				26 x 2			
No. of MPP Tracker / No. of PV String				2 / 2			
Battery Port							
Max. Charge/Discharge Power (kW)	3.0	3.6	4.0	4.6	4.8	4.8	4.8
Max. Charge/Discharge Current (A)				80			
Battery Normal Voltage (V)				51.2			
Battery Voltage Range (V)				40 - 60			
Battery Type	Li-ion / Lead-acid etc.						
AC Grid							
Max Continuous Current (A)	14.0	17.0	19.0	22.0	23.0	26.0	28.0
Max Continuous Power (kVA)	3.0	3.6	4.0	4.6	5.0	5.5	6.0
Nominal Grid Current (A)	13.7 / 13.1	16.4 / 15.7	18.2 / 17.4	21.0 / 20.0	22.8 / 21.8	25.0 / 24.0	27.3 / 26.1
Nominal Grid Voltage (V)	198 to 242 @ 220 / 207 to 253 @ 230						
Nominal Grid Frequency (Hz)	50 / 60						
Power Factor	0.999 (Adjustable from 0.8 overexcited to 0.8 underexcited)						
Current THD (%)	< 3						
AC Load Output							
Max Continuous Current (A)	14.0	17.0	19.0	22.0	23.0	26.0	28.0
Max Continuous Power (kVA)	3.0	3.6	4.0	4.6	5.0	5.5	6.0
Max Peak Current (A) (10min)	20.5 / 19.6	24.6 / 23.5	27.3 / 26.1	31.4 / 30	34.1 / 32.7	37.8 / 36.1	41.0 / 39.2
Max Peak Power (kVA) (10min)	4.5	5.4	6.0	6.9	7.5	8.3	9.0
Nominal AC Voltage L-N (V)				220 / 230			
Nominal AC Frequency (Hz)				50 / 60			
Switching Time (ms)				Seamless			
Voltage THD (%)				< 3			
Efficiency							
CEC Efficiency (%)				97.0			
Max. Efficiency (%)				97.6			
PV to Bat. Efficiency (%)				98.1			
Bat. between AC Efficiency (%)				96.8			
Protection							
PV Reverse Polarity Protection				Yes			
Over Current/Voltage Protection				Yes			
Anti-Islanding Protection				Yes			
AC Short Circuit Protection				Yes			
Residual Current Detection				Yes			
Ground Fault Monitoring				Yes			
Insulation Resister Detection				Yes			
PV Arc Detection				Yes			
Enclosure Protect Level				IP65 / NEMA4X			
General Data							
Dimensions (W x H x D, mm)				370 x 535 x 192			
Weight (kg)	18.5				20.5		
Topology				Transformerless			
Cooling				Intelligent Fan			
Relative Humidity				0 - 100 %			
Operating Temperature Range (°C)				- 25 to 60			
Operating Altitude (m)				< 4000			
Noise Emission (dB)				< 25			
Standby Consumption (W)				< 10			
Mounting				Wall Bracket			
Communication with RSD				SUNSPEC			
Display & Communication Interfaces				LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G			
Certification & Approvals	NRS097, G98/G99, EN50549-1, C10/C11, AS4777-2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2						
EMC	EN61000-6-2, EN61000-6-3						

For New Storage System:

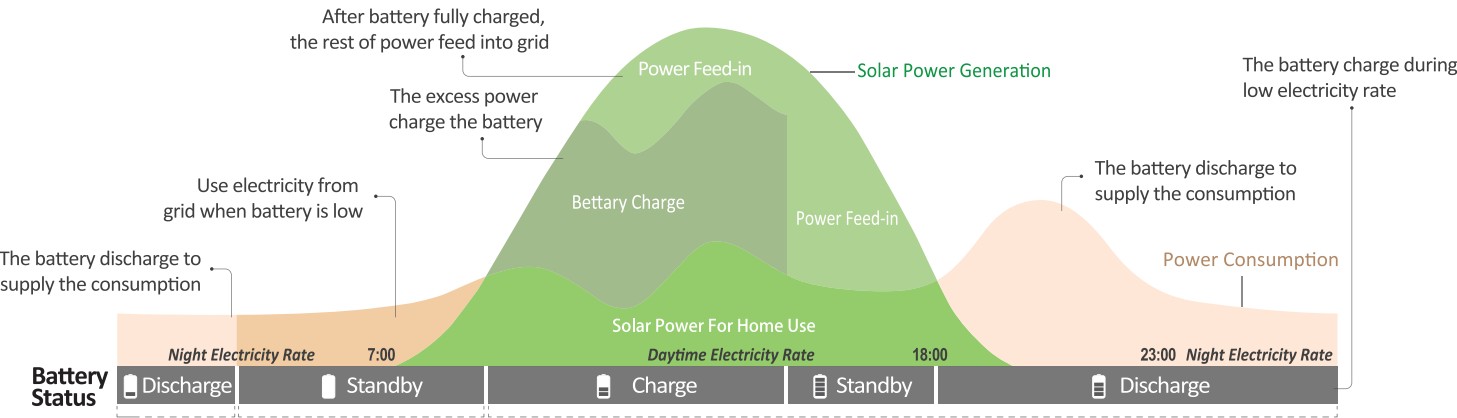


Optimizing Self-Consumption (on-grid) + Emergency Power Supply (off-grid)



Optimizing Self-Consumption Mode

With home energy storage installed, home owners may also be able to change from a flat rate electricity tariff to a time-of-use tariff. For the areas and regions, where peak shaving can be applied.



Technical Data	Ares 4KLP	Ares 4.6KLP	Ares 5KLP	Ares 5.5KLP	Ares 6KLP
PV Input					
Max. Input Power (kW)	6	6.9	7.5	8.3	9
Max. PV Voltage (V)	550				
MPPT Range (V)	80 - 500				
Full MPPT Range (V)	120 - 500	130 - 500	150 - 500	160 - 500	170 - 500
Normal Voltage (V)	360				
Startup Voltage (V)	100				
Max. Input Current (A)	18.5 x 2				
Max. Short Current (A)	26 x 2				
No. of MPP Tracker / No. of PV String	2 / 2				
Battery Port					
Max. Charge/Discharge Power (kW)	4.0	4.6	5.0	5.5	6.0
Max. Charge/Discharge Current (A)	120				
Battery Normal Voltage (V)	51.2				
Battery Voltage Range (V)	40 - 60				
Battery Type	Li-ion / Lead-acid etc.				
AC Grid					
Max Continuous Current (A)	19.0	22.0	23.0	26.0	28.0
Max Continuous Power (kVA)	4.0	4.6	5.0	5.5	6.0
Nominal Grid Current (A)	18.2 / 17.4	21.0 / 20.0	22.8 / 21.8	25.0 / 24.0	27.3 / 26.1
Nominal Grid Voltage (V)	198 to 242 @ 220 / 207 to 253 @ 230				
Nominal Grid Frequency (Hz)	50 / 60				
Power Factor	0.999 (Adjustable from 0.8 overexcited to 0.8 underexcited)				
Current THD (%)	< 3				
AC Load Output					
Max Continuous Current (A)	19.0	22.0	23.0	26.0	28.0
Max Continuous Power (kVA)	4.0	4.6	5.0	5.5	6.0
Max Peak Current (A) (10min)	27.3 / 26.1	31.4 / 30	34.1 / 32.7	37.8 / 36.1	41.0 / 39.2
Max Peak Power (kVA) (10min)	6.0	6.9	7.5	8.3	9.0
Nominal AC Voltage L-N (V)	220 / 230				
Nominal AC Frequency (Hz)	50 / 60				
Switching Time (ms)	Seamless				
Voltage THD (%)	< 3				
Efficiency					
CEC Efficiency (%)	97.0				
Max. Efficiency (%)	97.6				
PV to Bat. Efficiency (%)	98.1				
Bat. between AC Efficiency (%)	96.8				
Protection					
PV Reverse Polarity Protection	Yes				
Over Current/Voltage Protection	Yes				
Anti-Islanding Protection	Yes				
AC Short Circuit Protection	Yes				
Residual Current Detection	Yes				
Ground Fault Monitoring	Yes				
Insulation Resister Detection	Yes				
PV Arc Detection	Yes				
Enclosure Protect Level	IP65 / NEMA4X				
General Data					
Dimensions (W x H x D, mm)	370 x 535 x 192				
Weight (kg)	20.5				
Topology	Transformerless				
Cooling	Intelligent Fan				
Relative Humidity	0 - 100 %				
Operating Temperature Range (°C)	- 25 to 60				
Operating Altitude (m)	< 4000				
Noise Emission (dB)	< 25				
Standby Consumption (W)	< 10				
Mounting	Wall Bracket				
Communication with RSD	SUNSPEC				
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G				
Certification & Approvals	NRS097, G98, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2				
EMC	EN61000-6-2, EN61000-6-3				

# Three Phase Hybrid Storage Inverter

## 3-30 kW



Three Phase Hybrid Inverter 3-30kW




Three Phase Hybrid Inverter 3-12kW


The Solareast Ares series three phase storage inverters are designed to increase energy independence for homeowners and commercial users. The power range is from 3.0kW to 30kW, compatible with high voltage (150-800V) batteries.

Energy management is based on time-of-use and demand charge rate structures, significantly reduce the amount of energy purchased from public grid.


Thanks for the UPS function (switch time < 10ms), that enables the crucial loads power on during outages. Additionally, under the backup operation mode, the inverter provides you up to 150% peak output overloading.




**SODIUM METAL CHLORIDE BATTERY**  
Support  
Sodium metal chloride battery




**WIDE RANGE**  
Voltage Range  
(150-800V)




**100% UNBALANCE**  
Support Unbalance Load




**Max. 1.5**  
**PV OVERSIZE**  
1.5 Times PV Oversize



**Max. 40A**  
**MAX. 40Adc**  
String Current Up To 40A



**<10 ms**  
**UPS FUNCTION**  
Switch Time < 10ms



**INPUT**  
Support Generator

Support for Time-of-use Optimization

Configurable Operation Modes

AFCI (Optional) & Rapid Shutdown Ready

- Build in Anti-feed-in Function
- 100% unbalanced output, each phase;  
200% unbalanced output, each phase (Below 10kW)
- Smart Monitoring & Remote Firmware Upgrade

# Three Phase Hybrid Storage Inverter


## 3-12 kW Plus Series



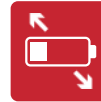
The Solareast Ares three phase storage inverters plus series are designed to increase energy independence for homeowners and commercial users. The power range is from 3.0kW to 12kW, compatible with high voltage (80-600V and 120-650V) batteries.

Energy management is based on time-of-use and demand charge rate structures, significantly reduce the amount of energy purchased from public grid.


Thanks for the UPS function (switch time < 10ms), that enables the crucial loads power on during outages. Additionally, under the backup operation mode, the inverter provides you up to 150% peak output overloading.




**SODIUM METAL CHLORIDE BATTERY**  
Support  
Sodium metal chloride battery




**MIN. 80V**  
**Battery Voltage**  
Minimum 80V




**MAX. 50A**  
**Max. Charge/**  
**Discharge Current 50A**




**100% UNBALANCE**  
Support Unbalance Load



**Max. 1.5**  
**PV OVERSIZE**  
1.5 Times PV Oversize



**Max. 20A**  
**MAX. 20Adc**  
String Current Up To 20A



**<10 ms**  
**UPS FUNCTION**  
Switch Time < 10ms

Support for Time-of-use Optimization

Configurable Operation Modes

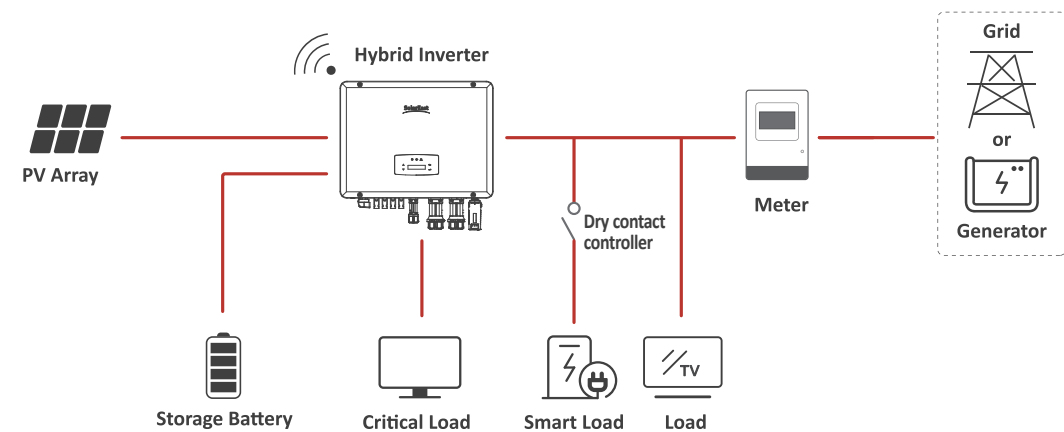
AFCI (Optional) & Rapid Shutdown Ready

- Build in Anti-feed-in Function
- 100% unbalanced output, each phase;  
200% unbalanced output, each phase (Below 10kW)
- Smart Monitoring & Remote Firmware Upgrade

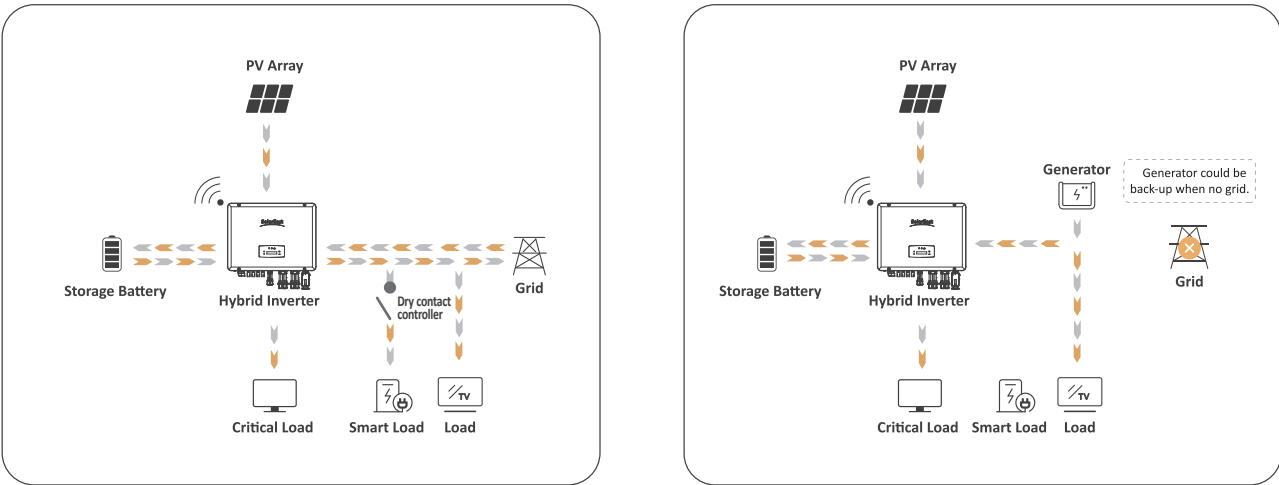
Technical Data	Ares 3KH3	Ares 4KH3	Ares 5KH3	Ares 6KH3	Ares 8KH3	Ares 10KH3
PV Input						
Max. DC Input Power (kW)	5	6	7.5	9	12	15
Max. PV Voltage (V)	1000					
Rated DC Input Voltage (V)	620					
DC Input Voltage Range (V)	150 - 1000					
MPPT Voltage Range (V)	150 - 850					
Full MPPT Range(V)	200 - 850			250 - 850	300 - 850	500 - 850
Start-up Voltage (V)	160					
Max. DC Input Current (A)	20x2					
Max. Short Current(A)	30x2					
No. of MPPT Tracker / Strings	2/2					
Battery Port						
Battery Nominal Voltage (V)	200	200	200	250	300	400
Battery Voltage Range (V)	150 - 800					
Max. Charge/Discharge Current (A)	30					
Max. Charge/Discharge Power (kW)	3	4	5	6	8	10
Charging Curve	3 Stages					
Compatible Battery Type	Li-ion / Lead-acid / Sodium metal chloride battery					
AC Grid						
Nominal AC Output Power (kW)	3	4	5	6	8	10
Max. AC Input/Output Power (kVA)	4.5 / 3.3	6 / 4.4	7.5 / 5.5	9 / 6.6	12 / 8.8	15 / 11
Max. AC Output Current (A)	5.3	7	8.5	10.5	13.5	17
Nominal AC Voltage (V)	230 / 400					
Nominal AC Frenquency (Hz)	50 / 60					
Power Factor	1 ( -0.8 - 0.8 ) adjustable					
Current THD (%)	< 3 %					
AC Load Output (Back-up)						
Nominal Output Power (VA)	3000	4000	5000	6000	8000	10000
Nominal Output Voltage (V)	230 / 400					
Nominal Output Frequency (Hz)	50 / 60					
Nominal Output Current (A)	4.4	5.8	7.3	8.7	11.6	14.5
Peak Output Power	3300VA, 60s	4400VA, 60s	5500VA, 60s	6600VA, 60s	8800VA, 60s	11000VA, 60s
THDV (with linear load)	< 3 %					
Switching Time (ms)	< 10					
Efficiency						
Europe Efficiency	97.50%					
Max. Efficiency	98.00%				98.20%	
Battery Charge/Discharge Efficiency	98.00%					
Protection						
Reverse Polarity Protection	Yes					
Over Current / Voltage Protection	Yes					
Anti-islanding Protection	Yes					
AC Short-circuit Protection	Yes					
Leakage Current Detection	Yes					
Ground Fault Monitoring	Yes					
Grid Monitoring	Yes					
Enclosure Protect Level	IP65					
General Data						
Dimensions (W x H x D, mm)	370 x 497 x 192 / 558 x 535 x 260 mm					
Weight (kg)	20.8 / 29kg					
Topology	Transformerless					
Cooling Concept	Natural Convection				Intelligent Fan	
Relatively Humidity	0 - 100%					
Operating Temperature Range (°C)	- 25 to 60 °C					
Operating Altitude (m)	<4000					
Noise Emission (dB)	<30					
Standby Consumption (W)	<5					
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G					
Certification & Approvals	NRS097, G98/G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2					
EMC	EN61000-6-2, EN61000-6-3					

Technical Data	Ares 12KH3	Ares 15KH3	Ares 17KH3	Ares 20KH3	Ares 25KH3	Ares 30KH3
PV Input						
Max. DC Input Power (kW)	18	22.5	25.5	30	37.5	45
Max. PV Voltage (V)	1000					
Rated DC Input Voltage (V)	620					
DC Input Voltage Range (V)	150 - 1000					
MPPT Voltage Range (V)	150 - 850					
Full MPPT Range(V)	500 - 850					
Start-up Voltage (V)	160					
Max. DC Input Current (A)	20x2	20+32	32x2	40x2		
Max. Short Current(A)	30x2	30+48	48x2	60x2		
No. of MPPT Tracker / Strings	2/2	2/3	2/4	2/4		
Battery Port						
Battery Nominal Voltage (V)	450	500	400	500	500	550
Battery Voltage Range (V)	150 - 800					
Max. Charge/Discharge Current (A)	30	50	50	50	60	60
Max. Charge/Discharge Power (kW)	12	15	17	20	25	30
Charging Curve	3 Stages					
Compatible Battery Type	Li-ion / Lead-acid / Sodium metal chloride battery					
AC Grid						
Nominal AC Output Power (kW)	12	15	17	20	25	30
Max. AC Input/Output Power (kVA)	18 / 13.2	22.5 / 16.5	25.5 / 18.7	30 / 22	37.5 / 27.5	45 / 33
Max. AC Output Current (A)	21.5	27	30	32	40	48
Nominal AC Voltage (V)	230/400					
Nominal AC Frenquency (Hz)	50/60					
Power Factor	1 ( -0.8 - 0.8 ) adjustable					
Current THD (%)	< 3%					
AC Load Output (Back-up)						
Nominal Output Power (VA)	12000	15000	17000	20000	25000	30000
Nominal Output Voltage (V)	230/400					
Nominal Output Frequency (Hz)	50/60					
Nominal Output Current (A)	17.4	21.8	24.7	29	36.3	43.5
Peak Output Power	13200VA, 60s	16500VA, 60s	18700VA, 60s	22000VA, 60s	27500VA, 60s	33000VA, 60s
THDV (with linear load)	< 3%					
Switching Time (ms)	< 10					
Efficiency						
Europe Efficiency	97.50%		97.80%		98.00%	98.10%
Max. Efficiency	98.30%				98.50%	
Battery Charge/Discharge Efficiency	98.00%					
Protection						
Reverse Polarity Protection	Yes					
Over Current / Voltage Protection	Yes					
Anti-islanding Protection	Yes					
AC Short-circuit Protection	Yes					
Leakage Current Detection	Yes					
Ground Fault Monitoring	Yes					
Grid Monitoring	Yes					
Enclosure Protect Level	IP65					
General Data						
Dimensions (W x H x D, mm)	370 x 497 x 192 / 558 x 535 x 260		558 x 535 x 260 mm			
Weight (kg)	20.8 / 29kg		29kg		36kg	
Topology	Transformerless					
Cooling Concept	Intelligent Fan					
Relatively Humidity	0 - 100%					
Operating Temperature Range (°C)	- 25 to 60 °C					
Operating Altitude (m)	< 4000					
Noise Emission (dB)	< 40					
Standby Consumption (W)	< 5					
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G					
Certification & Approvals	NRS097, G98/G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2					
EMC	EN61000-6-2, EN61000-6-3					

For New Storage System:

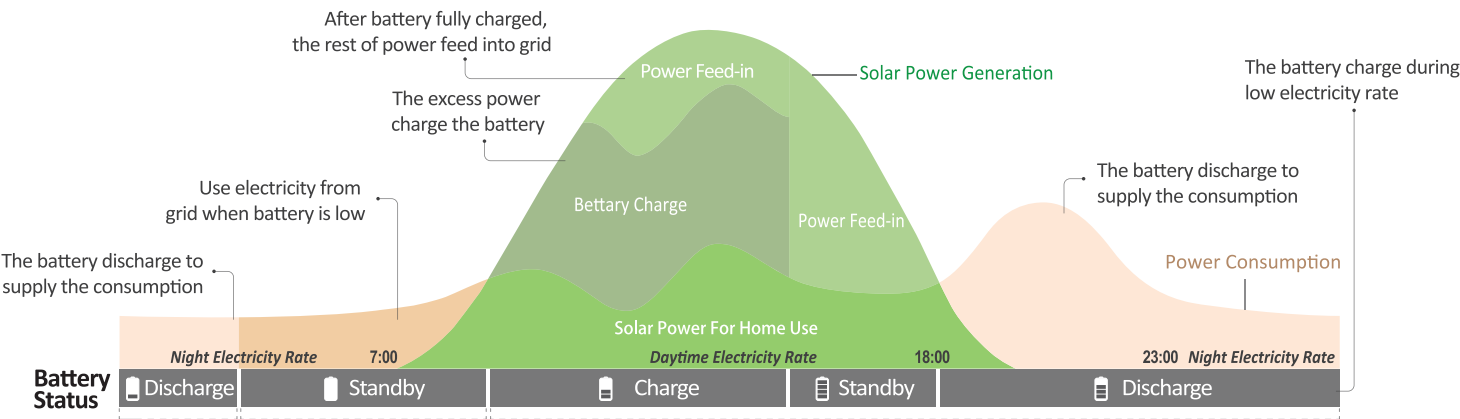


Optimizing Self-Consumption (on-grid) + Emergency Power Supply (off-grid)



Optimizing Self-Consumption Mode

With energy storage system installed, users may also be able to change from a flat rate electricity tariff to a time-of-use tariff. For the areas and regions, where peak shaving can be applied.



Technical Data	Ares 3KHP3	Ares 4KHP3	Ares 5KHP3	Ares 6KHP3	Ares 8KHP3	Ares 10KHP3	Ares 12KHP3
PV Input							
Max. DC Input Power (kW)	5	6	7.5	9	12	15	18
Max. PV Voltage (V)				1000			
Rated DC Input Voltage (V)				620			
DC Input Voltage Range (V)				150 - 1000			
MPPT Voltage Range (V)				150 - 850			
Full MPPT Range(V)	200 - 850			250 - 850	300 - 850	500 - 850	
Start-up Voltage (V)				160			
Max. DC Input Current (A)				20x2			
Max. Short Current(A)				30x2			
No. of MPPT Tracker / Strings				2/2			
Battery Port							
Battery Nominal Voltage (V)	100	100	100	150	200	250	300
Battery Voltage Range (V)	80 - 600					120 - 650	
Max. Charge/Discharge Current (A)				50			
Max. Charge/Discharge Power (kW)	3	4	5	6	8	10	12
Charging Curve	3 Stages						
Compatible Battery Type	Li-ion / Lead-acid / Sodium metal chloride battery						
AC Grid							
Nominal AC Output Power (kW)	3	4	5	6	8	10	12
Max. AC Input/Output Power (kVA)	4.5 / 3.3	6 / 4.4	7.5 / 5.5	9 / 6.6	12 / 8.8	15 / 11	18 / 13.2
Max. AC Output Current (A)	5.3	7	8.5	10.5	13.5	17	21.5
Nominal AC Voltage (V)	230 / 400						
Nominal AC Frenquency (Hz)	50 / 60						
Power Factor	1 ( - 0.8 - 0.8 )						
Current THD (%)	<3 %						
AC Load Output (Back-up)							
Nominal Output Power (VA)	3000	4000	5000	6000	8000	10000	12000
Nominal Output Voltage (V)	230 / 400						
Nominal Output Frequency (Hz)	50 / 60						
Nominal Output Current (A)	4.4	5.8	7.3	8.7	11.6	14.5	17.4
Peak Output Power	3300VA, 60s	4400VA, 60s	5500VA, 60s	6600VA, 60s	8800VA, 60s	11000VA, 60s	13200VA, 60s
THDV (with linear load)	<3 %						
Switching Time (ms)	<10						
Efficiency							
Europe Efficiency				97.50%			
Max. Efficiency	98.00 %			98.20 %		98.30 %	
Battery Charge/Discharge Efficiency				98.00 %			
Protection							
Reverse Polarity Protection				Yes			
Over Current / Voltage Protection				Yes			
Anti-islanding Protection				Yes			
AC Short-circuit Protection				Yes			
Leakage Current Detection				Yes			
Ground Fault Monitoring				Yes			
Grid Monitoring				Yes			
Enclosure Protect Level				IP65			
General Data							
Dimensions (W x H x D, mm)	558 x 535 x 260 mm						
Weight (kg)	29kg						
Topology	Transformerless						
Cooling Concept	Intelligent Fan						
Relative Humidity	0 - 100 %						
Operating Temperature Range (°C)	-25 to 60 °C						
Operating Altitude (m)	<4000						
Noise Emission (dB)	<40						
Standby Consumption (W)	<5						
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G						
Certification & Approvals	NRS097, G98/G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2						
EMC	EN61000-6-2, EN61000-6-3						