

AK HYBRID INVERTER

integrated MPPT solar regulator

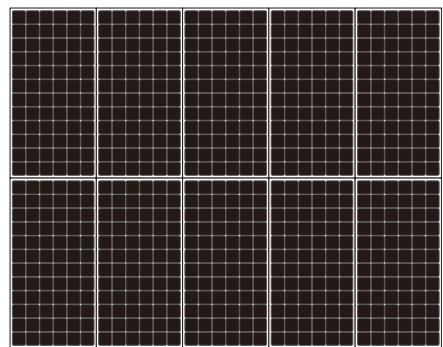
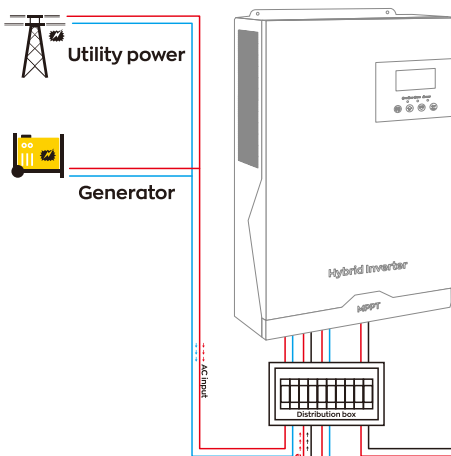


AK-3.2kW

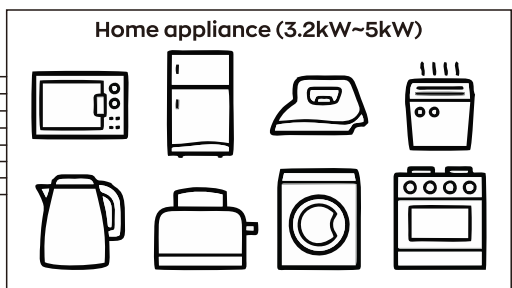
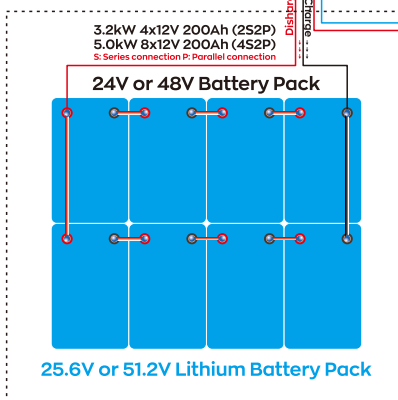
AK-3.5kW

AK-5.0kW

AK-5.5kW



400V PV Array (Maximum 4000W)
 380W-400W PERC MONO 10pcs in Series
 300V PV Array (Maximum 6000W)
 410W-440W PERC MONO 7pcs in Series, 2strings in parallel



All models can run without batteries

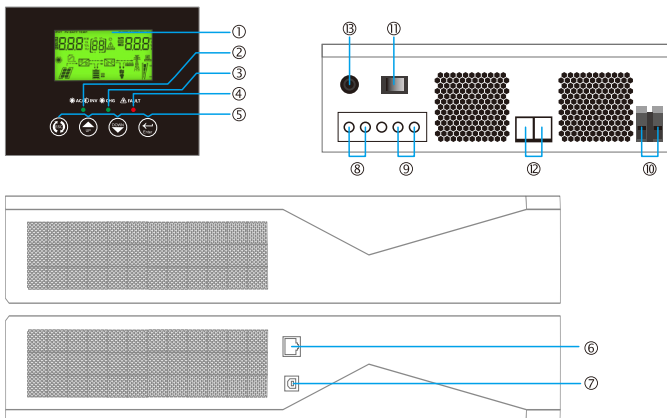
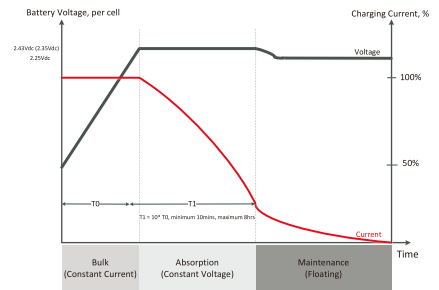
AK HYBRID INVERTER

integrated MPPT solar regulator



AK series is a multi-function inverter/charger, combining functions of inverter, solar charger and battery charger to offer uninterruptible power support with portable size. Its comprehensive LCD display offers user-configurable and easy-accessible button operation such as battery charging current, AC/solar charger priority, and acceptable input voltage based on different applications.

- ⓪ Pure sine wave output
- ⓪ Configurable input voltage range
- ⓪ Configurable battery charging current
- ⓪ Configurable Solar priority / AC priority
- ⓪ Compatible to utility power or generator
- ⓪ Auto restart while AC recovered
- ⓪ Overload / Over temperature / Short circuit protection
- ⓪ Smart battery charger design for optimized battery performance
- ⓪ Cold start function / Bulk-Absorb-Float-Equalization 4steps charging
- ⓪ Power all kinds of appliances in home or office
- ⓪ Including motor-type such as tube lights, refrigerator & air conditioner



1. LCD Display
2. Status Indicator
3. Charging Indicator
4. Fault Indicator
5. Function Buttons
6. RS-485 Communication port
7. USB
8. AC Input
9. AC Output
10. PV Input
11. Power On/Off Switch
12. Battery Input
13. Circuit breaker



AK HYBRID INVERTER

integrated MPPT solar regulator



PV Module Selection

Max. PV Array Open Circuit Voltage: $500V_{DC}$

PV Array MPPT Voltage Range: $120V_{DC} \sim 450V_{DC}$

Take 400W PV module as an example

	PV input connection ways	Qty of Panels	Total Power
PERC158.75x158.75 Mono 400W-72HV Vmp: 39.6V Imp: 7.66A Voc: 48.2V Isc: 8.09A	4pcs in series $39.6V \times 4 = 158.4V$	4pcs x 400Wp	1600Wp
	5pcs in series $39.6V \times 5 = 198.0V$	5pcs x 400Wp	2000Wp
	6pcs in series $39.6V \times 6 = 237.6V$	6pcs x 400Wp	2400Wp
	8pcs in series $39.6V \times 8 = 316.8V$	8pcs x 400Wp	3200Wp
	10pcs in series $39.6V \times 10 = 396V$	10pcs x 400Wp	4000Wp

Battery Backup Time Table

Model No.	Load percentage	24V 100Ah	24V 200Ah	24V 400Ah	24V 600Ah
AK-3.2KW	10% 320Watt	7.0Hours	17Hours	34Hours	51Hours
	20% 640Watt	3.0Hours	8.0Hours	16Hours	24Hours
	30% 960Watt	2.0Hours	5.0Hours	10Hours	15Hours
	50% 1600Watt	1.1Hours	3.0Hours	6.0Hours	9.0Hours
	60% 1920Watt	1.0Hours	2.1Hours	4.0Hours	6.0Hours
	80% 2560Watt	0.6Hours	1.2Hours	2.4Hours	3.6Hours
	100% 3200Watt	0.5Hours	1.0Hours	2.0Hours	3.0Hours
Model No.	Load percentage	48V 100Ah	48V 200Ah	48V 400Ah	48V 600Ah
AK-5.0KW	10% 500Watt	10.2Hours	21.5Hours	43Hours	64Hours
	20% 1000Watt	4.5Hours	10.2Hours	20Hours	30Hours
	30% 1500Watt	2.6Hours	6.7Hours	14Hours	20Hours
	50% 2500Watt	1.5Hours	3.6Hours	7.2Hours	11Hours
	60% 3000Watt	1.2Hours	3.0Hours	6.0Hours	9.0Hours
	80% 4000Watt	0.8Hours	1.9Hours	3.8Hours	5.7Hours
	100% 5000Watt	0.6Hours	1.5Hours	3.0Hours	4.5Hours



AK HYBRID INVERTER

integrated MPPT solar regulator



Model No.	AK-3.2kW	AK-3.5kW	AK-5.0kW	AK-5.5kW
Rated/Peak Power	3200W/6400W _{5s}	3500W/7000W _{5s}	5000W/10000W _{5s}	5500W/11000W _{5s}
DC Voltage Level	24V DC	24V DC	48V DC	48V DC
Cold start voltage	23V DC	23V DC	46V DC	46V DC
Cut-off voltage	21V DC	21V DC	42V DC	42V DC
Shut-down voltage	33V DC	33V DC	63V DC	63V DC
Float charging voltage	27V DC	27V DC	54V DC	54V DC
Bulk charging voltage	28.2V DC	28.2V DC	56.4V DC	56.4V DC
MPP Voltage range	120V-450V DC			
Nominal/Max PVV	240V DC / 500V DC			
Max. Charging PVA	80A	100A	80A	100A
Max. PV Power Wp	4000Wp	6000Wp	4000Wp	6000Wp
AC input Parameter	170-280V(90-280V wide range) 50Hz/60Hz Auto Sensing			
Inverter Output	220V-240V±5%, Peak efficiency 93%			
Self consumption	<35W			
Overload protection	110%~150% Load stay for 10s; >150% Load stay for 5s			
Temperature Range	-10°C~50°C			
Temperature Storage	-15°C~60°C			
Humidity	5%~95% Non-condensing			
Dimension	100 x 300 x 440mm			
Packing Size	57.5 x 37.7 x 20.7cm			
G.W./N.W.	10.5kg/9.5kg	11.0kg/10.0kg	11.5kg/10.5kg	12.5kg/11.5kg

