

Haier Solar & Storage

2025



ONE BRAND ONE SOLUTION

Haier HVAC Solutions boasts a comprehensive portfolio spanning three key sectors: Air Conditioning, Heating and Green Energy. Throughout this portfolio Haier HVAC covers both domestic and commercial solutions but what makes Haier truly unique, is the ability to connect and integrate its different products to create a one brand solution. Having the ability to do this simplifies all aspects of the supply chain from pre-sales through to after sales support.

The hOn application by Haier can be used to control and manage all Haier products. This gives users complete control over how they use their energy. The hOn app includes key features such as scheduling the units working time as well as monitoring the energy usage to ensure the system is working to its optimum level.

Haier's one brand solution reinvents the way that domestic and commercial properties consume energy putting complete control in the hands of the user to ensure all their Haier products are operating in a way that suits the user's lifestyle and environment.



Haier GLOBAL NETWORK

Haier currently has 10+ R&D centres, 29 industrial parks, 122 manufacturing centres and 108 marketing centres around the world, reaching out to more than 200 countries and regions and serving 1 billion user households.

Haier has 7 major home appliance brands worldwide: Haier, Casarte, Leader, AQUA, Fisher & Paykel, GE Appliances and Candy.

Each of these brands offers the best user experience to various consumer groups in many regions and countries around the world.



10+N R&D Centers	108 Marketing Centers	29 Industrial Parks	122 Factories	200+ Countries or Regions
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The data in this catalogue is purely indicative as the data may vary. Please be advised to check the accuracy of the data with the supplier before purchasing products.

Haier GLOBAL POSITION



WORLD'S NO.1 MAJOR APPLIANCES BRAND

Haier has been accredited with global No.1 in major household appliances by retail sales from 2008-2023, according to data from Euromonitor.



WORLD'S NO.1 SMART AC BRAND

Haier has been world's No.1 connected air conditioner brand, by retail sales in 2023, according to data from Euromonitor.



"ESG" INTERNATIONAL AWARDS

2021 ESG award 2021 BDO Environmental, Social and Governance Reporting Awards.



FORTUNE'S MOST ADMIRABLE COMPANIES

Haier Smart Home was named one of Fortune's most admired companies in the world since 2019 and is the only appliance company from Asia to receive this award.



TOP 100 MOST VALUABLE BRANDS

Haier, the world's only IoT ecosystem brand on the list for four consecutive years.



TOP 100 GLOBAL CHALLENGERS

With the global landing of the Smart Home ecosystem brand, Haier Smart Home was once again listed on the Fortune Global 500.

What Is A Smart Home Energy Management System

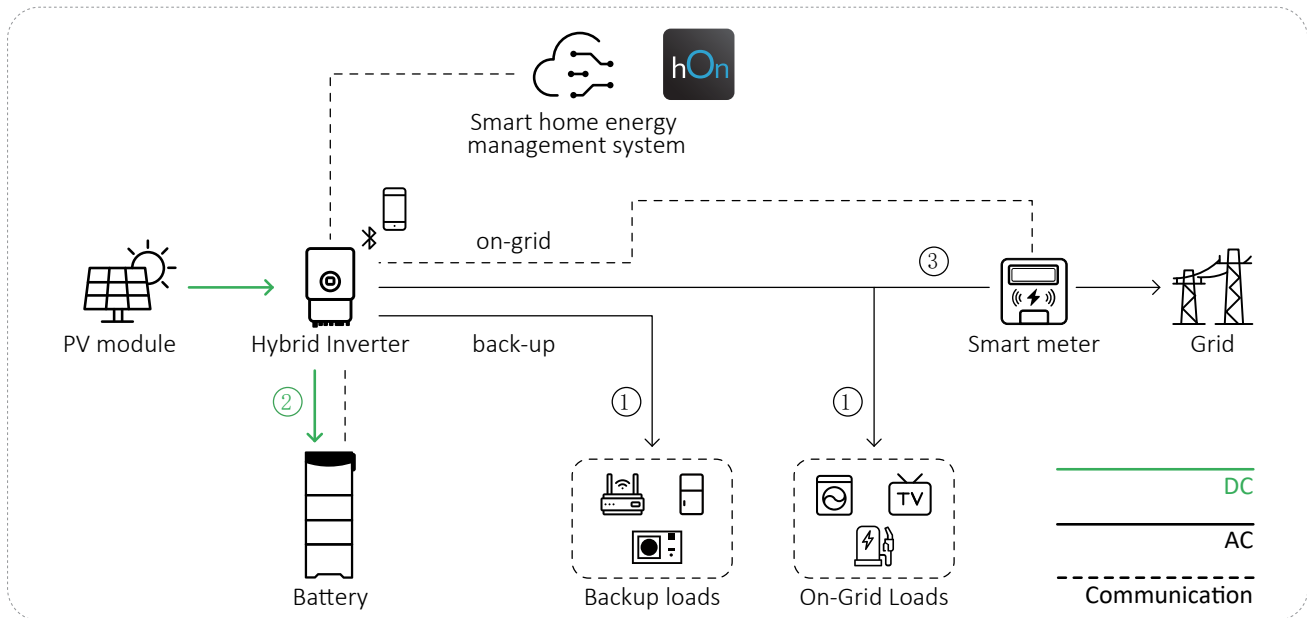
The Haier Energy solution effectively integrates and coordinates household storage, photovoltaic, and other equipment using digital technology. It ensures holistic energy management, offering users cost effective and comfortable energy solutions, all via the hOn App.

Two Scenarios, One Solution, One Brand

During the day when there is sufficient PV power generation.



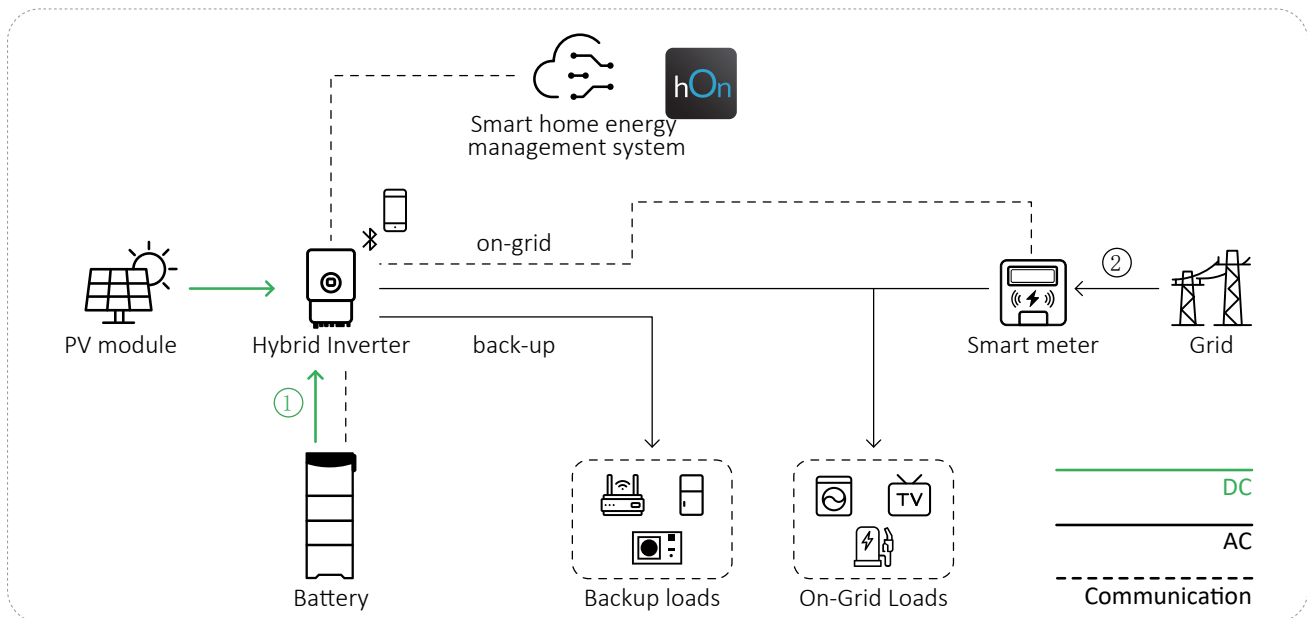
- ① Priority is given to supplying household loads.
- ② Excess electricity is stored.
- ③ Surplus electricity can be sold back to the grid.



If there is insufficient PV power generation during the day.



- ① Battery discharge is used to supplement the power shortage.
- ② The power shortage is supplied from the grid



SINGLE-PHASE HYBRID INVERTER

H1PL-1J3/3.6/5/6K-EU



Anti Arc
Integrated AFCI function, actively detects arc faults in PV Array



High Yields
Supports 1.6 DC:AC ratio to connect more PV capacity



Safe
IP66 protection



Harsh Environment
Can maintain operation at altitudes up to 4000 meters

MODEL	H1PL-1J3K-EU	H1PL-1J3.6K-EU	H1PL-1J5K-EU	H1PL-1J6K-EU
Input DC (PV side)				
Recommended max. PV power	4.8 kW	5.7 kW	8 kW	9.6 kW
Max. input voltage	600 V			
Rated voltage	330 V			
Start-up voltage	90 V			
MPPT voltage range	90-520 V			
Max. input current	16 A / 16 A			
Max. short circuit current	24 A / 24 A			
MPPT number	2			
Max. number of input strings per MPPT	1			
Battery				
Battery type	Li-ion / Lead-aci			
Battery voltage range	42 - 58 V			
Max. charge / discharge power	3 kW	3.6 kW	5 kW	6 kW
Max. charge / discharge current	62.5 A	75 A	105 A	125 A
Communication	CAN / RS485			
Output AC (Grid side)				
Rated output power	3 kW	3.6 kW	5kW	6kW
Max. apparent output power	3kVA	3.6kVA	5 kVA	6 kVA
Operation phase	1L / N / PE			
Rated grid voltage	220 /230 V			
Rated grid frequency	50 / 60 Hz			
Rated grid output current	13.6 A / 13 A	16.4 A / 15.7 A	22.7 A / 21.7 A	27.3 A / 26.1 A
Max. output current	13.6 A / 13 A	16.4 A / 15.7 A	22.7 A / 21.7 A	27.3 A / 26.1 A
Power factor	> 0.99 (0.8 leading - 0.8 lagging)			
THDi	< 2 %			
Input AC (Grid side)				
Input voltage range	187 - 253 V			
Max. input current	20.5 A	24.6 A	32 A	40 A
Frequency range	45 - 55 Hz / 55 - 65 Hz			
Output AC (Back-up)				
Rated output power	3 kW	3.6 kW	5 k	6 kW
Max. apparent output power	4.2 kVA, 60 sec	5 kVA, 60 sec	7 kVA, 60 sec	8 kVA, 60 sec
Back-up switch time	< 10 ms			
Rated output voltage	1L / N / PE, 220 / 230 V			
Rated frequency	50 / 60 Hz			
Max. output current	19.1 A	22.7 A	31.8 A	36.4 A
THDv (@linear load)	< 2 %			
Efficiency				
Max. efficiency	>97.5%			
EU efficiency	>96.2%			
Protection				
DC reverse-polarity protection	Yes			
Ground fault monitoring	Yes			
Residual current monitoring	Yes			
Integrated AFCI (DC arc-fault circuit protection)	Yes			
Protection class/Over voltage category	I/II			
General Data				
Dimensions (W x H x D)	405 x 480 x 205 mm			
Weight	24.2 kg			
Topology	High frequency isolation (for battery)			
Operating ambient temperature range	-25 ~ +60°C (13 ~140°F)			
Protection rating	IP66			
Cooling concept	Natural convection			
Max. operation altitude	4000 m			
Grid connection standard	EN 50549-1, RD 1699 / RD 244 / UNE 206006 / UNE 206007-1, CEI 0-21			
Safety / EMC standard	IEC/EN 62109-1/-2, EN 61000-6-1/-2/-3/-4			
Features				
DC connection	MC4 connector			
AC connection	Quick connection plug			
Display screen	LED + APP			
Communication	RS485, CAN, WiFi, LAN			
Noise	< 35 dB			

¹ Possible derating occurring

LOW VOLTAGE ESS (LV)

HLS-1X5/10/15/20K



Flexible scalability

5 kWh modular design, scalable from 5 kWh to 60 kWh



Smart balance

Balance between old lower capacity and new battery module



Quick installation

Plug & Play Connection



Harsh environment

-10°C ~ 50°C



Safe

LFP prismatic cell and 3-layer safety protection & 5 patented technologies

MODEL	HLS-1X5K	HLS-1X10K	HLS-1X15K	HLS-1X20K
Input DC (PV side)				
Cell type	LiFePO ₄ Prismatic Cell			
Battery module	B051100P03-H (5.12 kWh, 51.2 V, 50 kg)			
Number of battery modules	1	2	3	4
Nominal energy	5 kWh	10 kWh	15 kWh	20 kWh
Usable energy (90% DOD)	4.5 kWh	9 kWh	13.5 kWh	18 kWh
Nominal charge/Discharge current	50 A / 50 A	100 A / 100 A	150 A / 150A	200 A / 200A
Max charge/Discharge current	100 A / 100 A 1	80 A / 180 A	200 A / 200 A	200 A / 200 A
Nominal voltage	51.2 V			
Operating voltage range	44.8 ~ 55.2 V			
Communication	CAN / RS485 / WiFi			
Protection function	Charge overvoltage, discharge under-voltage, overcurrent, over-temperature, short circuit protection			
Cycle life	>6000 times (25 °C, 0.5 °C / 0.5 °C, 90% DOD, 70% EOL)			
Scalability	max. 3 systems in parallel			
Protection rating	IP65			
Cooling type	Natural convection			
Working temperature ¹	Charging: [-10, +50] °C			
	Discharging: [-20, +50] °C			
Working environment humidity	10% ~ 95% (non-condensation)			
Working altitude	< 2000 m (Derating over 2000 m)			
Warranty	10 Years			
Operating conditions	Indoor or outdoor			
Installation	Ground Installation			
Certifications	UL1973, FCC, UL9540, IEC62619, CE			
Transportation	UN 38.3			
size WxHxD (mm)	573 × 597 × 189	573 × 912 × 189	573 × 1227 × 189	573 × 1542 × 189
Weight	65 kg	115 kg	165 kg	215 kg

¹ to ensure maximum performance, installation in a temperature-controlled environment between 15°C and 40°C is recommended (< 15°C and > 40°C the batteries protect themselves by limiting the current)

THREE-PHASE HYBRID INVERTER

H3PH-1J6/8/10K-EU



4 MPPTs
Integrated 4 MPPTs, suitable for houses with multi-pitched rooftops, supports high current solar panels



EPS
Back up switch time <10ms



Safe
IP66 industry highest protection level. Supports unbalanced and half wave loads on both the grid and backup port.



Overload Capacity
Backup overload capacity increased to 1.6 times up to 60 seconds, support ref and AC inductive loads



Double Current
Maximum battery charge and discharge current 50A (Industry common level is 25A)

MODEL	H3PH-1J6K-EU	H3PH-1J8K-EU	H3PH-1J10K-EU
Input DC (PV side)			
Recommended max. PV power	9.6 kW	12.8 kW	16 kW
Max. input voltage		1000 V	
Rated voltage		600 V	
Start-up voltage		160 V	
MPPT voltage range		200 - 850 V	
Max. input current	16/ 16 / 16 / 16 A	16/ 16 / 16 / 16 A	16/ 16 / 16 / 16 A
Max. short circuit current	24/ 24 / 24 / 24 A	24/ 24 / 24 / 24 A	24/ 24 / 24 / 24 A
MPPT number	3	4	4
Max. number of input strings per MPPT	1	1	1
Battery			
Battery type		Li - ion	
Battery voltage range		120 - 600 V	
Max. charge / discharge power	6 kW	8 kW	10 kW
Max. charge / discharge current	25 A	50 A	50 A
Communication		CAN / RS 485	
Output AC (Grid side)			
Rated output power	6 kW	8 kW	10 kW
Max. apparent output power	6 kVA	8 kVA	10 kVA
Rated grid voltage		3L / N / PE, 380 / 400 V	
Rated grid frequency		50 / 60 Hz	
Rated grid output current	9.1 A / 8.7 A	12.2 A / 11.5 A	15.2 A / 14.4 A
Max. output current	9.1 A / 8.7 A	12.2 A / 11.5 A	15.2 A / 14.4 A
Power factor		> 0.99 (0.8 leading - 0.8 lagging)	
THDi		< 2%	
Input AC (Grid side)			
Max. input power	9 kW	12 kW	15 kW
Rated Input current		18.2 A	
Rated Input voltage		3L / N/PE, 380 / 400 V	
Rated Input frequency		50 / 60 Hz	
Output AC (Back-up)			
Rated output power	6 kW	8 kW	10 kW
Max. apparent output power	9.6 kVA, 60 sec	12.8 kVA, 60 sec	16 kVA, 60 sec
Back-up switch time		< 10 ms	
Rated output voltage		3L / N / PE, 380 / 400 V	
Rated frequency		50 / 60 Hz	
Rated output current	9.1 A / 8.7 A	12.2 A / 11.5 A	15.2 A / 14.4 A
THDv (@linear load)		< 2%	
Efficiency			
Max. efficiency	97.91%	98.03%	98.04%
EU efficiency	97.10%	97.41%	97.51%
Protection			
Anti-islanding protection		Yes	
Integrated AFCI (DC arc-fault circuit protection)		Yes	
Insulation Resistor detection		Yes	
Residual current monitoring un		Yes	
Output over current protection		Yes	
Output short protection		DC:II/AC:II	
Output over voltage protection		Yes	
Integrated DC switch		Yes	
DC reverse-polarity protection		Yes	
PV over voltage protection		Yes	
Battery reverse protection		Yes	
General Data			
Dimensions (W x H x D)		600 x 500 x 230	
Weight		32.6 kg	
Topology		Transformerless	
Self-consumption (night)		<25 W	
Operating ambient temperature range		25 ~ + 60°C (-13 ~ 140 °F)	
Protection rating		IP66	
Cooling concept		Natural convection	
Max. operation altitude		4000 m (with no derating)	
Grid connection standard		VDE - AR - N 4105 / VDE V 0124, AS/NSZ 4777.2:2020	
Safety / EMC standard		CE, IEC/EN 62109-1/-2, IEC/EN 61000-6-1/-3	
Features			
PV connection		MC4 connector	
Battery connection		Quick connection plug	
AC connection		Quick connection plug	
Display screen		LED + Bluetooth + APP	
Communication		CAN, RS485, Ethernet, Wi-Fi, LAN	
Max. Number of inverters		6 ¹	
Noise		47 dB	

¹ Only inverters of the same brand and power range are supported for parallel, and the battery capacity under each inverter must also be the same. ry. Please be advised to check r before purchasing products.

HIGH VOLTAGE ESS (HV)

HHS-1X5/10/15/20K



Flexible scalability

5 kWh modular design, scalable from 5 kWh to 60 kWh



Smart balance

Balance between old lower capacity and new battery module



DC - DC boost

Built-in DC-DC boost voltage to 400V, avoids overheating caused by high currents



Harsh environment

-10°C – 50°C operating temperature



Safe

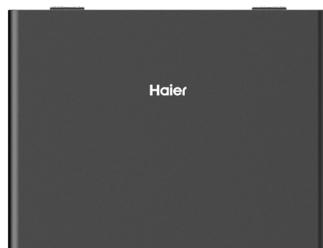
IP65, LFP prismatic cell and 3-layer safety protection & 5 patented technologies

MODEL	HHS-1X5K	HHS-1X10K	HHS-1X15K	HHS-1X20K
Input DC (PV side)				
Cell type	LiFePO ₄ Prismatic Cell			
Battery module	B40012DP03-H (5 kWh, 400 V, 52 kg)			
Number of battery modules	1	2	3	4
Nominal energy	5 kWh	10 kWh	15 kWh	20 kWh
Usable energy (90% DOD)	4.5 kWh	9 kWh	13.5 kWh	18 kWh
Nominal charge/Discharge current	6 A	12 A	18 A	24 A
Max charge/Discharge current	6.5 A	13 A	19.5 A	26 A
Nominal voltage	400 V			
Operating voltage range	350 - 450 V			
Communication	Can / RS485 / WiFi / LAN			
Protection function	Over and under voltage protection, overcurrent, short circuit protection. High and low temperature protection			
Cycle life	>6000 times (25°C, 0.5 C / 0.5 C, 90% DoD, 70% EoL)			
Scalability	max 3 systems in parallel			
Protection rating	IP65			
Cooling type	Natural convection			
Working temperature ¹	Charging: [-10, +50] °C; [14, 122] °F			
	Discharging: [-20, +50] °C; [-4, 122] °F			
Working environment humidity	10% ~ 95% (non condensation)			
Working altitude	< 2000 m (Derating over 2000 m)			
Warranty	10 Years			
Operating conditions	Indoor or outdoor			
Installation	Ground Installation			
Certifications	IEC 62619, CE			
Transportation	UN 38.3			
size WxHxD (mm)	653 × 597 × 189	653 × 912 × 189	653 × 1227 × 189	653 × 1542 × 189
Weight	67 kg	119 kg	171 kg	223 kg

¹ to ensure maximum performance, installation in a temperature-controlled environment between 15°C and 40°C is recommended (< 15°C and > 40°C the batteries protect themselves by limiting the current)

ALL IN ONE SYSTEM

HA1L



All-in-one

PCS, battery and DC distribution box



Quick installation

Modular design, stackable installation, plug and play



Extremely safe

Arc Fault detection, 4-layer cell level and 6-player system level protections



High Yields

Supports 1.6 DC: AC ratio to connect with different roof orientations



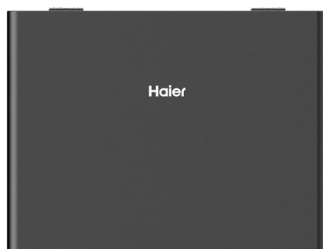
Harsh environment ¹

IP65, for outdoor application

MODEL	HA1L-3K5A1 HA1L-3.6K5A1 HA1L-5K5A1 HA1L-6K5A1	HA1L-3K10A1 HA1L-3.6K10A1 HA1L-5K10A1 HA1L-6K10A1	HA1L-3K15A1 HA1L-3.6K15A1 HA1L-5K15A1 HA1L-6K15A1
System Parameters			
Production configuration	H1PL-1J3/3.6/5/6K-EU B051100P03-H HQBK-00-1P	H1PL-1J3/3.6/5/6K-EU 2x B051100P03-H HQBK-00-1P	H1PL-1J3/3.6/5/6K-EU 3x B051100P03-H HQBK-00-1P
System capacity	5 kW	10 kW	15 kW
Weight (kg)	105 ± 2	155 ± 3	205 ± 4
Number of Parallel Batteries	1	2	3
Cycle life	6000 times (25 °C, 0.5 C / 0.5 C, 90% DOD, 70% EOL)		
Ambient temperature	Charging: [-10, 50] °C		
Working humidity	Discharging: [-20, 50] °C		
Storage temperature	10 % ~ 95 % RH		
Dimensions W x H x D (mm) (includes the casing and the base)	573 x 1529 x 263	573 x 1844 x 263	573 x 2159 x 263
Working Altitude	< 4000m (derate over 2000m)		
Enclosure type	IP65		
Warranty	10 years		
Certification	IEC62619, CE, UN38.3, CEI, UL 1973, UL 9540 EN 50549-1:2019, PN-EN 50549-1:2019, RD 1699:2011, RD 661:2007, RD 413:2014, RD 647:2020, RD 244/2019, UNE 217002:2020, ITC-BT-40, CEI 0-21, G98, G99		
Distribution Box			
Model	HQKK-00-1P		
Grid Side			
Grid Breaker	Electrical parameters	230 V / 40 A	
	Wire	2P	
Backup Breaker	Electrical parameters	230 V / 40 A	
	Leakage protection	30 mA (AC type)	
Surge Protection Device	Wire	1 P/N	
	Rated operating voltage	230 V	
	Vc (max continuous operating voltage)	385 V	
	In (nominal discharge current)	20 k1 (8/20 μs)	
	Imax (max discharge current)	40 kA (8 / 20 μs)	
	Wire	1 P/N	
Type	II		
Battery Side			
DC Breaker	Electrical parameters	80 V / 250 A	
	Wire	2P	
PV Box			
PV Switch	Electrical parameters	80 V / 25 A	
	Wire	4P	
Fuse	Electrical parameters	1000 V / 25 A	
	Breaking capacity	10 kA	
Surge Protection Device	Rated operating voltage	505 V	
	Vc (max continuous operating voltage)	1000 V	
	In/Nominal discharge current	20 kA (8 / 20 μs)	
	Imax/Max discharge current	40 kA (8 / 20 μs)	
	Wire	3P	
	Type	II	

ALL IN ONE SYSTEM

HA1L



All-in-one

PCS, battery and DC distribution box



Quick installation

Modular design, stackable installation, plug and play



Extremely safe

Arc Fault detection, 4-layer cell level and 6-player system level protections



High Yields

Supports 1.6 DC: AC ratio to connect with different roof orientations



Harsh environment ¹

IP65, for outdoor application

MODEL	HA1L-3K5A1 HA1L-3.6K5A1 HA1L-5K5A1 HA1L-6K5A1	HA1L-3K10A1 HA1L-3.6K10A1 HA1L-5K10A1 HA1L-6K10A1	HA1L-3K15A1 HA1L-3.6K15A1 HA1L-5K15A1 HA1L-6K15A1	
Battery Module				
Battery model	B051100P03-H			
Battery type	LiFePO4			
Rated Voltage	51.2 V			
Cell configuration	1P16S			
Rated Energy	5.12 kWh			
Working Voltage range	44.8 V~55.2 V			
Rated charging / Discharging current	50 A			
Max. discharging current	100 A			
Standard charging method	Constant current and voltage limit (constant voltage point: 55.2V, stop-charging current 5A)			
Dimensions W x H x D (mm)	573 x 347 x 189			
Noise level dBA	< 32.5 dB (When the fan is running, the measurement is 1 meter away)			
Weight (kg)	50 ± 2			
Hybrid Inverter				
Model	H1PL-1J3K-EU	H1PL-1J3.6K-EU	H1PL-1J5K-EU	H1PL-1J6K-EU
Rated power	3 kW	3.6 kW	5 kW	6 kW
PV String input data				
Max. PV input power	4800 W	5700 W	8000 W	9600 W
PV input voltage range	330 V (90 V ~ 520 V)	330 V (90 V ~ 520 V)	330 V (90 V ~ 520 V)	330 V (90 V ~ 520 V)
Full load MPPT voltage range	105 ~ 520 V	125 ~ 520 V	175 ~ 520 V	210 ~ 520 V
PV input current	16 A / 16 A	16 A / 16 A	16 A / 16 A	16 A / 16 A
No. of MPPTs/Max number of strings per MPPT	2 / 1	2 / 1	2 / 1	2 / 1
Back-up				
Rated output power	3 kW	3.6 kW	5 kW	6 kW
Max. output current	21.8 A	26.2 A	36.5 A	40 A
Rated output voltage	1 / N / PE, 220 / 230 V	1 / N / PE, 220 / 230 V	1 / N / PE, 220 / 230 V	1 / N / PE, 220 / 230 V
Output frequency	50 Hz / 60 Hz	50 Hz / 60 Hz	50 Hz / 60 Hz	50 Hz / 60 Hz
Output THDv (@linear load)	2 %	2 %	2 %	2 %
Output AC (Grid side)				
Rated output power	3 kW	3.6 kW	5 kW	6 kW
Rated output voltage	1 / N / PE, 220 / 230 V	1 / N / PE, 220 / 230 V	1 / N / PE, 220 / 230 V	1 / N / PE, 220 / 230 V
Voltage range of grid	187 ~ 253 V	187 ~ 253 V	187 ~ 253 V	187 ~ 253 V
Frequency of grid	50 Hz / 60 Hz (45 ~ 55 Hz / 55 ~ 65 Hz)	50 Hz / 60 Hz (45 ~ 55 Hz / 55 ~ 65 Hz)	50 Hz / 60 Hz (45 ~ 55 Hz / 55 ~ 65 Hz)	50 Hz / 60 Hz (45 ~ 55 Hz / 55 ~ 65 Hz)
Rated output current of grid	13.6 A / 13.0 A	16.4 A / 15.7 A	22.7 A / 21.7 A	27.3 A / 26.1 A
Max. output current	15 A	18.2 A	25 A	30 A
Power factor	> 0.99 (0.8 leading - 0.8 lagging)	> 0.99 (0.8 leading - 0.8 lagging)	> 0.99 (0.8 leading - 0.8 lagging)	> 0.99 (0.8 leading - 0.8 lagging)
Output THDi	< 2 %	< 2 %	< 2 %	< 2 %
Input AC (Grid Side)				
Input voltage range	187 ~ 253 V			
Max. input current	20 A	24.6 A	31.4 A	40 A
Frequency range	45 ~ 55 Hz / 55 ~ 65 Hz			
General Data				
Dimensions (WxDxH - mm)	405 x 480 x 205			
Weight (kg)	24.2 ± 2			
Topology	High frequency isolation (for battery)			
Ambient temperature	[-20, 50] °C			
Cooling concept	Natural convection			
Working Altitude	< 4000 m (derate over 2000m)			
Safety & EMC Standard	IEC/EN 62109-1/-2, EN 61000-6-1/-2/-3/-			
Features				
DC Connection	MC4 connector			
AC Connection	Quick connection plug			
Display	LED + App			
Communication	RS484, CAN, Wi-Fi, LAN			

¹ Battery performance (Based on cell temperature)

When T > 45 °C or T ≤ 10 °C, the battery will reduce its charging or discharging power;

Charging

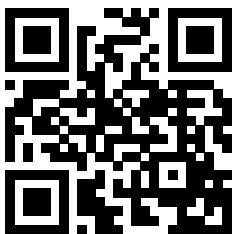
- When SOC ≥ 80%, the voltage protection strategy will start to execute and the battery charging power will decrease
- When -10 °C < T ≤ 0 °C, before charging the battery cell needs to be heated to a temperature greater than 3 °C
- When T > 45 °C, the battery cell will reduce power due to overheating, with a maximum temperature of 54 °C

Discharging

- When T < 10 °C, the battery cell will reduce power due to low temperature, with a minimum temperature of -20 °C
- When T > 45 °C, the battery cell will reduce power due to overheating, with a maximum temperature of 58 °C

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Haier
Green Energy



Haier HVAC
haierhvac.eu

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