

Wattsonic Li-HV Residential Single Phase Hybrid

3kW - 8kW optional



A home storage system designed to store your clean energy, so you can use it anytime you want. Say goodbye to power outage and power failure, our AIO system will accompany your new green life.

- ✓ Multiple protection, ultra safty
- ✓ Intimate functional design makes installation more easily
- ✓ All in one, plug and play
- ✓ Excellent quality assurance, a good companion to your family



Great Reliability

- Max. **97.6%** efficiency
- Max. **15A** PV input current
- Within **10ms** UPS-level switching
- Max. **30A** charge/discharge current



Ultra Smart

- System whole life running data cloud storage
- Remote monitoring, commissioning and service support
- Both inverter and BMS supports firmware update remotely





Installation


AIO kit, plug and play


- Power + Com. + Earthing together
- Wall mounted or stackable, easily single person installation




 Easy WiFi configuration via App

 Monitor anytime& anywhere

 All in one, plug and play

 Battery High Voltage

 Integrated smart EMS support various power applications

 LiFePO4, Superior Safety



Master BMS

| | Master BMS-2.3 | Master BMS-3.84 |
|--|---|--------------------------------|
| Operation Voltage [Vdc] | 150~900 | 200~900 |
| Max. Charge/Discharge Current [A] | 30 | 50 |
| Recommend Charge/Discharge Current [A] | 30 | 50 |
| Functions | Pre-charge, Over-Less Voltage/ Over-Less Temperature Protection, Cells Balancing/SOC-SOH calculation etc. | |
| Communication Protocol/Connector Type | CAN/RS485 ModBus, TCP/IP/ RJ45 | CAN/RS485 ModBus, TCP/IP/ RJ45 |
| Power Connection Type | Amphenol MC4 | Amphenol MC4 |
| User Interface | LCD Display(Optional, need to confirm upon order) | |
| Dimension [W*H*D mm] | 557*319*152.6 | 680*319*152.6 |
| Weight | 11kg | 13kg |
| Operating Temperature [| -20~55 | -20~55 |
| Ingress Protection | IP21(Optional IP65 , need to confirm upon order) | |
| Installation Method | Stackable or Wall Mounted | Wall Mounted |
| Warranty | 10 years | 10 years |



Battery Module

| | Master BMS-2.3 | Master BMS-3.84 |
|--|--|------------------------------------|
| Nominal Voltage/Capacity per Module | 76.8V/2.3KWH | 76.8V/3.84KWH[50Ah] |
| Expand Capability | 3~8 batteries series connection | 3~8 batteries series connection |
| DOD Recommended | 90% | 90% |
| Max. Charge/Discharge Current [A] | 30A Continual | 50A Continual |
| Recommend Charge/Discharge Current [A] | 30A Continual | 50A Continual |
| Communication Protocol/Connector Type | CAN/ RJ45 | CAN/ RJ45 |
| Power Connection Type | Amphenol MC4 | Amphenol MC4 |
| Dimension [W*H*D mm] | 557*319*152.6 per module | 656*322*173.3 per module |
| Weight | 28kg | 44kg |
| Charge Temperature Range [C] | 0~45 | 0~45 |
| Discharge Temperature Range [C] | -20~55 | -20~55 |
| Ingress Protection | IP21(Optional IP65,need to confirm before order) | |
| Installation Method | Stackable or Wall Mounted | Stackable or Wall Mounted |
| Cables Connection Method | Connection from side | Connection from side |
| Warranty | 10 years or 10,000 cycles @90% DOD | 10 years or 10,000 cycles @90% DOD |

*Battery System Configuration Options[2.3kWh]: 230V/6.9kWh, 307V/9.2kWh, 384V/11.5kWh,

*Battery System Configuration Options[3.84kWh]: 230V/11.5kWh, 307V/15.3kWh, 384V/19.2kWh.

*Wattsonic reserves the right to modify the technical datasheet and appearance of the product in the catalogue without prior advice to the users.



| PV Input | 3.0KW | 3.6KW | 4.2KW | 5.0KW | 6.0KW | 7.0KW | 8.0KW |
|--------------------------------|---------|-------|-------|-------|-------|-------|-------|
| Max. DC Input Power [kW] | 4.8 | 5.76 | 6.72 | 8.0 | 9.6 | 11.2 | 12.8 |
| Start-up Voltage [V] | 80 | | | | | | |
| Max. DC Input Voltage [V]* | 600 | | | | | | |
| Rated Input DC Voltage [V] | 360 | | | | | | |
| MPPT Voltage Range [V] | 100~550 | | | | | | |
| Number of MPP Trackers | 1 | 1 | 2 | 2 | 2 | 2 | 2 |
| Number of DC Inputs per MPPT | 1 | 1 | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 |
| Max. Input Current [A] | 15 | 15 | 15/15 | 15/15 | 15/15 | 15/15 | 15/15 |
| Max. Short-circuit Current [A] | 20 | 20 | 20/20 | 20/20 | 20/20 | 20/20 | 20/20 |

| Battery Side | 3.0KW | 3.6KW | 4.2KW | 5.0KW | 6.0KW | 7.0KW | 8.0KW |
|---------------------------------------|----------------------------|-------|-------|-------|-------|-------|-------|
| Battery Type | Lithium Battery (with BMS) | | | | | | |
| Battery Voltage Range [Vdc] | 85~465 | | | | | | |
| Max. Charging/Discharging Current [A] | 30/30 | | | | | | |

Hybrid Inverter

| Protection | Grid Side | 3.0KW | 3.6KW | 4.2KW | 5.0KW | 6.0KW | 7.0KW | 8.0KW | |
|---|------------|--------------------------------------|---------------------------|--------------------|-------|--------------------|-------|-------|------|
| DC Reverse Polarity Protection | Integrated | Rated Output Power [kW] | 3.0 | 3.6 | 4.2 | 5.0 ³⁾ | 6.0 | 7.0 | 8.0 |
| Battery Input Reverse Connection Protection | Integrated | Max. Output Apparent Power [kVA] | 3.3 | 3.96 ¹⁾ | 4.6 | 5.5 ⁴⁾ | 6.6 | 7.7 | 8.0 |
| Insulation Resistance Protection | Integrated | Max. Input Apparent Power [kVA]** | 6.0 | 7.2 | 8.4 | 10.0 | 12.0 | 12.0 | 12.0 |
| Surge Protection | Integrated | Max. Charging Power of Battery [kVA] | 3.0 | 3.6 | 4.2 | 5.0 | 6.0 | 7.0 | 8.0 |
| Over-temperature Protection | Integrated | Rated AC Voltage [V] | L/N/PE; 220/230/240V | | | | | | |
| Residual Current Protection | Integrated | Rated AC Frequency [Hz] | 50/60 | | | | | | |
| Islanding Protection | Integrated | Max. Output Current [A] | 15.0 | 18.0 ²⁾ | 21.0 | 25.0 ⁵⁾ | 28.7 | 35.0 | 36.3 |
| AC Over-voltage Protection | Integrated | Power Factor | 0.8 leading...0.8 lagging | | | | | | |
| Overload Protection | Integrated | Max. Total Harmonic Distortion | <3% @Rated output power | | | | | | |
| AC Short-circuit Protection | Integrated | DCI | <0.5%In | | | | | | |

| General Data | Back-up Side | 3.0KW | 3.6KW | 4.2KW | 5.0KW | 6.0KW | 7.0KW | 8.0KW | |
|----------------------------------|--------------------------------|------------------------------------|--|---------|---------|---------|---------|---------|--------|
| Over Voltage Category | PV:II ; Main:III | Rated Output Power [kW] | 3.0 | 3.6 | 4.2 | 5.0 | 6.0 | 7.0 | 8.0 |
| Dimensions(WxHxD mm) | 534x418x210 | Max. Output Apparent Power [kVA] | 3.3 | 3.96 | 4.6 | 5.5 | 6.6 | 7.7 | 8.0 |
| Weight (KG) | 27.0 | Max. Input Current [A] | 15.0 | 18.0 | 21.0 | 25.0 | 28.7 | 35.0 | 36.3 |
| Protection Degree | IP65 | UPS Switching Time | <10ms | | | | | | |
| Standby Self-consumption(W) | <15 | Rated Output Voltage [V] | L/N/PE; 220/230/240V | | | | | | |
| Topology | Transformerless | Rated Output Frequency [Hz] | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 |
| Operating Temperature Range (°C) | -30~60 | Peak Output Apparent Power [kVA]** | 3.9,60s | 4.7,60s | 5.5,60s | 6.5,60s | 7.8,60s | 9.1,60s | 10,60s |
| Relative Humidity(%) | 0~100 | Voltage Harmonic Distortion | <3%@Linear load | | | | | | |
| Operating Altitude(m) | 3000(>3000m derating) | Efficiency | 3.0KW | 3.6KW | 4.2KW | 5.0KW | 6.0KW | 7.0KW | 8.0KW |
| Cooling | Natural Convection | Max. Efficiency | 97.6% | | | | | | |
| Noise Level (dB) | <25 | European Efficiency | 97.0% | | | | | | |
| Display | OLED & LED | Compliance | IEC/EN 62109, IEC/EN 61000, EN50549-1, TOR Generator Type A, VDE-AR-N 4105 | | | | | | |
| Communication | CAN, RS485, WiFi/LAN(Optional) | | | | | | | | |

* Max. operating DC voltage is 600V, max. withstanding DC voltage is 550V.

** Max. apparent power from the grid means the maximum power imported from the utility grid used to satisfy the backup loads and charge the battery.

*** The output power will exceed the rated value only when the power in the PV array is sufficient, and the duration of the overload is related to the overload power.

1) G98: 3.68kVA; 2) G98: 16.00A; 3) AS 4777.2: 5.0kW, VDE-AR-N 4105: 4.6kW;

4) AS 4777.2: 5.0kVA, VDE-AR-N 4105: 4.60kVA, C10/11: 5.0kVA; 5) AS 4777.2: 21.7A, VDE-AR-N 4105: 21.0A, C10/11: 21.7A.