

Wattsonic Li-HV Commercial Three Phase Hybrid All-in-one ESS

Inverter Options

25/30/40/50kW-100A-3P

HV Battery Options

Li-HV-69/130/195/260/325kWh



Wattsonic provides you with its expertise in AIO business energy storage solutions. The Li-HV Commercial Three-Phase Hybrid is a compact energy storage solution for business or professional applications. It integrates an inverter, BMS, and battery to provide exceptional performance.

- Logistic/stock management(random pick-up& delivery)
- Plug and play, free from complicated setting
- Operating efficiency, one button to switch
- Service efficiency-> remote monitoring and update

More than capable, bring power to a new stage.

Up to **100%**
unbalanced load

Up to **110%**
AC output overloading

135-750V
super wide battery voltage range

Up to **60** kVA peak loading capability for **60** seconds at back-up output

from **KW** to **MW** level
Parallel operation capacity support system size





Dual Cells Voltage Sensors Channel, 10mA accuracy, 10K sensing frequency/S, full cells monitoring control



Max. 750mA cells passive balancing(10Ah/day), automatically/manually/local/remote



Automatically slave BMS(BMU) address series setting, plug in and play



Remote commissioning/monitoring/firmware update; 64G local data storage, full life data records



Multi external communication methods: WiFi/LAN/GPRS/RS485



Master BMS(BCU) integrate back-up power, 20000 hours black startup



BMS full data records 100K/frame(cold data <2S, hot data <100mS, command data<10mS)



BMS structure capacitor-free designing, 15-20 years' designing life



Optimized SOC calculation and reset algorithm, less than 2% tolerance



Low BMS self-consumption, running <5W/rack, standby <2mW/rack



BMS open interface for direct connection with fire fighting equipment and control



BMS SPD integrated for DC surge power protection

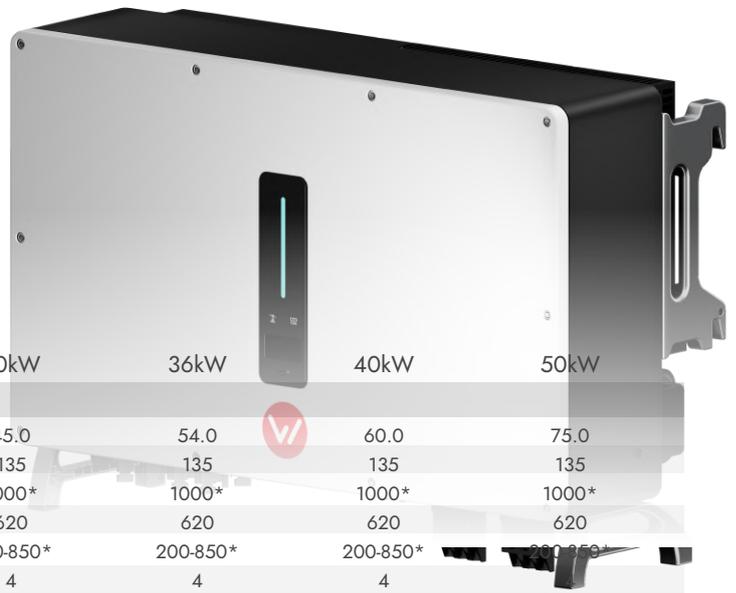
Master BMS

Operation Voltage [Vdc]	150~900V/900~1500V(Need to confirm upon order)
Max. Charge/Discharge Current [A]	100
Recommend Charge/Discharge Current [A]	100
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/WiFi/LAN/GPRS
Power Connection Type	Amphenol MC4
User Interface	LCD Display(Optional, need to confirm upon order)
Dimension [W*H*D mm]	465*180*356
Weight	10kg
Operating Temperature [°C]	-20~55
Ingress Protection	IP21
Installation Method	Rack Mounted
Warranty	10 years

38.4V/3.84kWh Battery Module

Nominal Voltage/Capacity per Module	38.4V/3.84KWH
Expand Capability	String:Max. 1000V[20*3.84kWh],Optional 1500V[34*3.84kWh]
DOD Recommended	90%
Max. Charge/Discharge Current[A]	100A Continual
Recommend Charge/Discharge Current[A]	100A Continual
Communication Protocol/Connector Type	CAN/ RJ45
Power Connection Type	Phoenix
Dimension [W*H*D mm]	465*194*403.5 per module
Weight	40kg
Charge Temperature Range [°C]	0~45
Discharge Temperature Range [°C]	-20~55
Ingress Protection	IP21
Installation Method	Rack Mounted
Cables Connection	Connection at front
Warranty	10 years or 8,000 cycles@90% DOD





Three Phase Hybrid Inverter

	25kW	30kW	36kW	40kW	50kW
PV Input					
Max. Input Power (kW)	37.5	45.0	54.0	60.0	75.0
Start-up Voltage (V)	135	135	135	135	135
Max. DC Input Voltage (V)*	1000*	1000*	1000*	1000*	1000*
Rated DC Input Voltage (V)	620	620	620	620	620
MPPT Voltage Range (V)*	200-850*	200-850*	200-850*	200-850*	200-850*
No. of MPP Trackers	4	4	4	4	4
No. of DC Inputs per MPPT	2	2	2	2	2
Max. Input Current (A)	30x4	30x4	30x4	30x4	30x4
Max. Short-circuit Current (A)	40x4	40x4	40x4	40x4	40x4
Battery Side					
Battery Type	Lithium Battery (with BMS)				
Battery Voltage Range (V)	135-750				
Max. Charge/Discharge Current (A)	100/100				
Grid Side					
Rated Output Power (kW)	25.0	30.0	36.0	40.0	50.0
Max. Output Apparent Power (kVA)	27.5	33.0/30.01)	39.6	44.0	55.0
Max. Input Apparent Power (kVA)**	30.0	36.0	43.5	48.0	60.0
Max. Charging Power of Battery (kW)	25.0	30.0	36.0	40.0	50.0
Rated AC Voltage (V)	3L/N/PE; 220/380V; 230/400V; 240/415V				
Rated AC Frequency (Hz)	50/60	50/60	50/60	50/60	50/60
Max. Output Current (A)	42.0	50.0/43.52)	60.0	66.0	83.0
Power Factor	0.8 leading ... 0.8 lagging				
Max. Total Harmonic Distortion	<3% @Rated output power				
DCI	<0.5%In	<0.5%In	<0.5%In	<0.5%In	<0.5%In
Back-up Side					
Rated Output Power (kW)	25.0	30.0	36.0	40.0	50.0
Max. Output Apparent Power (kVA)	27.5	33.0	39.6	44.0	55.0
Max. Output Current (A)	42.0	50.0	60.0	66.0	83.0
UPS Switching Time	<20ms	<20ms	<20ms	<20ms	<20ms
Rated Output Voltage (V)	3/N/PE; 220/380V; 230/400V; 240/415V				
Rated Output Frequency (Hz)	50/60	50/60	50/60	50/60	50/60
Peak Output Apparent Power (kVA)***	30, 60s	36, 60s	43.5, 60s	48, 60s	60, 60s
Voltage Harmonic Distortion	<3% @Linear load				
Compliance	IEC/EN 62109, IEC/EN 61000, EN50549-1, TOR Generator Type A, VDE-AR-N-4105				
Protection			General Data		
DC Reverse Polarity Protection	Integrated		Over Voltage Category	PV: II ; Main: III	
Battery Input Reverse Connection Protection	Integrated		Dimensions (WxHxD mm)	800x620x300	
Insulation Resistance Protection	Integrated		Weight (KG)	72.0	
Surge Protection	Integrated		Protection Degree	IP65	
Over-temperature Protection	Integrated		Standby Self-consumption (W)	<15	
Residual Current Protection	Integrated		Topology	Transformerless	
Islanding Protection	Integrated		Operating Temperature Range (°C)	-30~60	
AC Over-voltage Protection	Integrated		Relative Humidity (%)	0-100	
Overload Protection	Integrated		Operating Altitude (m)	3000 (>3000m derating)	
AC Short-circuit Protection	Integrated		Cooling	Smart Fan	
			Noise Level (dB)	<50	
			Display	OLED & LED	
			Communication	CAN, RS485, WiFi/LAN (Optional)	

* PV Max. Input voltage is 850V, otherwise inverter will be waiting

** 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) AS 4777.2, VDE-AR-N 4105: 30.0kW 2) AS 4777.2, VDE-AR-N 4105: 30.0kVA 3) AS 4777.2, VDE-AR-N 4105: 43.5A

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