





Wattsonic High Voltage 3-Phase All-In-One ESS

6kW - 20kW optional

Quick and easy installation 

<10ms UPS level emergency
grid power back-up 

Open interface for external
control and management 

Integrated smart EMS support
various power applications 

Within the compact appearance, wattsonic residential three phase hybrid series includes smart inverter, BMS and customizable energy storage batteries pack. You can easily find the suitable assemble while we have 6kW-20kW optional. Under the reliable control of the inverter, the whole system can work well without any disturbance or work as your custom mode.



Hybrid Inverter

PV Input	6.0KW	8.0KW	10.0KW	12.0KW	15.0KW	20.0KW
Max. DC Input Power [kW]	9.0	12.0	15.0	18.0	22.5	30.0
Start-up Voltage [V]	135	135	135	135	135	135
Max. DC Input Voltage [V]*	1000	1000	1000	1000	1000	1000
Rated Input DC Voltage [V]	620	620	620	620	620	620
MPPT Voltage Range [V]	120~950	200~950	200~950	200~950	200~950	200~950
Number of MPP Trackers	2	2	2	2	2	2
Number of DC Inputs per MPPT	1/1	1/1	1/1	2/2	2/2	2/2
Max. Input Current [A]	15/15	15/15	15/15	30/30	30/30	30/30
Max. Short-circuit Current [A]	20/20	20/20	20/20	40/40	40/40	40/40

Battery Side	6.0KW	8.0KW	10.0KW	12.0KW	15.0KW	20.0KW
Battery Type	Lithium Battery (with BMS)					
Battery Voltage Range [Vdc]	135~750					
Max. Charging/Discharging Current [A]	25/25		40/40		40/40	

Protection		Grid Side	6.0KW	8.0KW	10.0KW	12.0KW	15.0KW	20.0KW
DC Reverse Polarity Protection	Integrated	Rated Output Power [kW]	6.0	8.0	10.0	12.0	15.0	20.0
Battery Input Reverse Connection Protection	Integrated	Max. Output Apparent Power [kVA]	6.6	8.8	11.0	13.2	16.5/15.0 ¹⁾	22.0
Insulation Resistance Protection	Integrated	Max. Input Apparent Power [kVA]**	12.0	16.0	16.5	24.0	30.0	30.0
Surge Protection	Integrated	Max. Charging Power of Battery [kVA]	6.0	8.0	10.0	12.0	15.0	20.0
Over-temperature Protection	Integrated	Rated AC Voltage [V]	3L/N/PE; 220/380V; 230/400V; 240/415V					
Residual Current Protection	Integrated	Rated AC Frequency [Hz]	50/60	50/60	50/60	50/60	50/60	50/60
Islanding Protection	Integrated	Max. Output Current [A]	10.0	13.3	16.5	20.0	25.0/21.7 ²⁾	33.5
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	6.0/8.0/10.0KW 12.0/15.0/20.0KW	Back-up Side	6.0KW	8.0KW	10.0KW	12.0KW	15.0KW	20.0KW
Over Voltage Category	PV:II ; Main:III	Rated Output Power [kW]	6.0	8.0	10.0	12.0	15.0	20.0
Dimensions(WxHxD mm)	534x418x210	Max. Output Apparent Power [kVA]	6.6	8.8	11.0	13.2	16.5	22.0
Weight (KG)	26.0(6-10KW)/28.0(12KW)/31.0(15-20KW)	Max. Input Current [A]	10.0	13.3	16.5	20.0	25.0	33.5
Protection Degree	IP65	UPS Switching Time	<10ms	<10ms	<10ms	<10ms	<10ms	<10ms
Standby Self-consumption(W)	<15	Rated Output Voltage [V]	3/N/PE; 220/380V; 230/400V; 240/415V					
Topology	Transformerless	Rated Output Frequency [Hz]	50/60	50/60	50/60	50/60	50/60	50/60
Operating Temperature Range (C)	-30~60	Peak Output Apparent Power [kVA]*** 9,60s	12,60s		15,60s	18,60s	22.5,60s	30,60s
Relative Humidity(%)	0~100	Voltage Harmonic Distortion	<3%@Linear load					
Operating Altitude(m)	3000(>3000m derating)							
Cooling	Natural Convection Smart Fan	Efficiency	6.0KW	8.0KW	10.0KW	12.0KW	15.0KW	20.0KW
Noise Level (dB)	<25 <40	Max. Efficiency	98.1%	98.2%	98.2%	98.4%	98.4%	98.4%
Display	OLED & LED	European Efficiency	97.3%	97.4%	97.4%	97.5%	97.5%	97.5%
Communication	CAN, RS485, WiFi/LAN(Optional)	Compliance	IEC/EN 62109, IEC/EN 61000, EN50549-1, TOR Generator Type A, VDE-AR-N-4105					

*Max.operating DC voltage is 950V, max.withstanding DC voltage is 1000V.

**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: 15.0kVA; 2) AS 4777.2: 21.7A