

VHT-10K/12K/15K/20K-40-H

20A

Max. PV Input Current

110%

Unbalanced Output

40A

Max. Charge/Discharge

Residential | Three Phase | HV Battery | 2 MPPTS

Features

Maximized Energy Harvesting

- 110% unbalanced output enhances self-consumption
- 40A charging/discharging for efficiency energy transfer
- Continuous 110% AC overloading sustains power
- 10ms UPS-level switch secures supply

Engineered for Versatility

- Wide 135-750V range fits diverse batteries
- 200% max backup @60s handles overloads
- IP65 protects both indoors and outdoors

Intelligent Energy Dynamics

- Five work modes for diverse use
- SupperToU station management:supports flexible and customizable operation modes.
- Centralized smart management for efficiency
- Supports diesel generators for diverse energy sourcing

Simplified Interaction

- Remote upgrades maintain system health
- OLED and App for easy control

VHT-10K/12K/15K/20K-40-H
Hybrid Inverter



Technical Specifications

Mode		VHT-10K-40-H	VHT-12K-40-H	VHT-15K-40-H	VHT-20K-40-H
PV Input					
Recommended Max.input power	[kW]	15.0	18.0	22.5	30.0
Start-up voltage	[V]	135	135	135	135
Max.DC input voltage*	[V]	1000*	1000*	1000*	1000*
Rated DC input voltage	[V]	620	620	620	620
MPPT voltage range*	[V]	200-950*	200-950*	200-950*	200-950*
No.of MPP trackers		2	2	2	2
No.of DC inputs per MPPT		2/2	2/2	2/2	2/2
Max.input current	[A]	30/30	30/30	30/30	30/30
Max.short-circuit current	[A]	40/40	40/40	40/40	40/40
Battery Side					
Battery type		Lithium Battery (with BMS)			
Battery voltage range	[V]	135-750			
Maximum charging/discharge current	[A]	40/40			
Grid Side					
Rated output power	[kW]	10.0	12.0	15.0	20.0
Max.output apparent power	[kVA]	11.0 ¹⁾	13.2	16.5 ³⁾	22.0
Max.input apparent power**	[kVA]	20.0	24.0	30.0	30.0
Max.charging power of battery	[kW]	10.0	12.0	15.0	20.0
Rated AC voltage		3L/N/PE;220/380V;230/400V;240/415V			
Rated AC frequency	[Hz]	50/60	50/60	50/60	50/60
Max.output current	[A]	16.5 ²⁾	20.0	25.0 ⁴⁾	33.5
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
Back-up Side					
Rated output power	[kW]	10.0	12.0	15.0	20.0
Max.output apparent power	[kVA]	11.0	13.2	16.5	22.0
Max.output current	[A]	16.5	20.0	25.0	33.5
UPS switching time		<10ms	<10ms	<10ms	<10ms
Rated output voltage		3L/N/PE;220/380V;230/400V;240/415V			
Rated output frequency	[Hz]	50/60	50/60	50/60	50/60
Voltage harmonic distortion		<3%@Linear load			
Efficiency					
Max.efficiency		98.4%	98.4%	98.4%	98.4%
European efficiency		97.5%	97.5%	97.5%	97.5%
Protection					
DC reverse polarity protection		Integrated			
Battery input reverse connection protection		Integrated			
Insulation resistance protection		Integrated			
Surge protection		Integrated			
Over-temperature protection		Integrated			
Residual current protection		Integrated			
Islanding protection		Integrated			
AC over-voltage protection		Integrated			
Overload protection		Integrated			
AC short-circuit protection		Integrated			
General Data					
Over voltage category		PV:II Main:III			
Dimensions	[W×H×D mm]	534×418×210			
Weight	[KG]	28.0(10-12kW)/31.0(15-20kW)			
Protection degree		IP65			
Standby self-consumption	[W]	<15			
Topology		Transformerless			
Operating Temperature Range	[°C]	-30~60			
Relative Humidity	[%]	0~100			
Operating Altitude	[m]	3000 (>3000m derating)			
Cooling		Smart fan			
Noise Level	[dB]	<40			
Display		OLED & LED			
Communication		CAN,RS485,WiFi/LAN (Optional)			