All-In-One Three-Phase HV ESS

Consistent
Energy Storage Concept
CESC



PRODUCT MODEL

- Venus 4000 HVT (Hybrid Inverter)
- Venus 5000 HVT (Hybrid Inverter)
- Venus 6000 HVT (Hybrid Inverter)
- Venus 8000 HVT (Hybrid Inverter)
- Venus 10000 HVT (Hybrid Inverter)
- Venus 12000 HVT (Hybrid Inverter)
- Venus 15000 HVT (Hybrid Inverter)
- Venus HV5-01 (Battery)

Max. 2
2 Times PV Oversize

3 MPPT
Up to 3 MPPT Channels

<10 ms
Switch Time < 10ms

200% 50A
200% backup overload capacity, 50A battery current

Max. 98.4%
Max. efficiency 98.4%
Battery Efficiency 96%

10W
Load Monitoring Accuracy 10 W

- PV production forecast
- Online monitoring, online diagnosis, online sevice
- Three-level firmware and two-level hardware battery protection
- Built-in electric power service, FCAS, VPP, etc
- Internal EMS optimizes home energy supply automatically
- Multiple temperature monitoring, sophisticated thermal management

INVERTER	Venus 4000 HVT	Venus 5000 HVT	Venus 6000 HVT	Venus 8000 HVT	Venus 10000 HVT	Venus 12000 HVT	Venus 15000 HVT
BATTERY PORT							
Bttery Type	Li-on / Lead-acid						
Battery Voltage Range [V]	80-700						
Max. Charging Current [V]	50						
Max. Discharging Current [V]	50						
INPUT PV							
Max. PV Input Power [kW]	8	10	12	16	20	22.5	22.5
Max. PV Input Voltage [V]	1100						
MPPT Range [V]	140-950						
Startup Voltage [V]	120						
Max. Input Current [A]	16 / 16 / 16						
Max. Short Circuit Current [A]	24 / 24 / 24						
MPPT Trackers	3						
Strings Per MPPT Tracker	1 / 1 / 1						
GRID PORT							
Rated Output Power [kVA]	4	5	6	8	10	12	15
Max. Output Current [A]	6.7	8.3	10	13.3	16.7	19.1	23.9
Max. Output Apparent Power [kVA]	4	5	6	8	10	12	15
Max. Input Power [kVA]	8	10	12	16	20	22.5	22.5
Rated Grid Voltage [Vac]	220/380, 230/400, 3/N/PE						
Grid Voltage Range [Vac]	180-270						
Rated Grid Frequency [Hz]	50 / 60						
Power Factor	-0.8~+ 0.8						
THDi	＜3%						
BACKUP PORT							
Surge Backup Power [kVA]	8	10	12	16	20	24	30
Rated Backup Power [kVA]	4	5	6	8	10	12	15
Rated Backup Voltage [Vac]	220/380, 230/400, 3/N/PE						
Rated Backup Frequency [Hz]	50 / 60						
THDv	＜3%(Linear Load/) / ＜5%(Non-linear Load)						
DCV	＜100mA						
Crest Ratio	3:1						
Switch Time [ms]	＜10						
EFFICIENCY							
Max. Efficiency [Hz]	98%	98%	98.2%	98.4%	98.4%	98.4%	98.4%
Europe Efficiency [Hz]	97.5%	97.5%	97.7%	97.9%	97.9%	97.9%	98%
MPPT Efficiency [Hz]	99.9%						
Max. Round Trip Efficiency [Hz]	96.0%						
HMI&COMM.							
Communication With BMS	CAN / RS-485						
Load Monitoring	Meter / CT / Backup box						
External Communication	RS-485 / WIFI / 4G / Ethernet						
User Interface	LED / LCD						

BATTERY	Venus HV5-01-1	Venus HV5-01-2	Venus HV5-01-3
Battery Module	102.4V 5.3kWh		
Cell Type	LFP(LiFePO4)		
Number of Modules	1	2	3
Total Energy [kWh]	5.3	10.6	15.9
Nominal Voltage [V]	102.4	204.8	307.2
Operating Voltage [V]	80 - 116.8	160 - 233.6	240 - 350.4
Max Charge / Discharge Current [A]	52	52	52
Continue Discharge Output [kW]	5	10	15
GENERAL SPECIFICATIONS			
Dimensions (W*D*H)[mm]	740*220*982	740*220*1317	740*220*1652
Approximate Weight [KG]	91	141	191
Protection Degree	IP65		
Operating Temperature [°C]	Charge: 0°C - 50°C / Discharge: 0°C- 50°C		
Storage Temperature [°C]	0 °C - 35 °C		
Humidity	≤ 95%		
Altitude [m]	≤ 3000		
Cycle Life	Inverter: 5 years/10 years; Battery: 10+ years, 6000 cycles (90% DOD, 25°C)		
Installation	Stack, Floor-Mounted		
CETIFICATION			
Grid Regulation Safety	VDE-AR-N 4105:2018, G98, G99, C10/11:2021, NTS 631, RD647:2020,UNE 217002:2020, CEI 0-21, VDE 0126-1-1, NRS 097-2-1, AS/NZS 4777.2:2020, EN 50549-1		
Safety Regulation	IEC/EN 62109-1&2, IEC/EN 62477-1:2012		
EMC	IEC/EN 61000, IEC/EN 61000-6-2, IEC/EN 61000-6-3, IEC/EN 61000-6-4		
Battery	UN38.3, IEC62619		