

VEICHI

VPS20 Series Hybrid Microgrid Inverter



Product Highlights



Load Adaptability & Stable Operation

- Built-in isolation transformer supports 100% three-phase unbalanced loads.
- Optimized for high-impact inductive loads with strong surge withstand capability.
- Integrated anti-backflow, black start, VF, PQ and VSG control modes.
- Supports parallel operation across off-grid, grid-tied and microgrid applications.



Precise Control & Multi-Level Protection

- Built-in STS enables fast grid/off-grid transfer, with 0ms seamless switching in UPS mode.
- ARM+FPGA dual-core control for fast response and high control accuracy.
- Multi-level protection covering drive protection, overcurrent protection, CBC current limiting and overload protection.
- Customizable control strategies for application-specific configuration.



Modular Design & Flexible Expansion

- Modular design integrating PCS, MPPT, STS, isolation transformer and EMS for simplified O&M.
- Compact design with over 26% volume reduction and improved space utilization.
- Flexible PV expansion with up to 12 optional MPPT modules for different system sizes.
- Internal modular design enables faster on-site installation and maintenance.



Smart O&M & Easy Maintenance

- Remote monitoring and OTA upgrades for reduced on-site maintenance and labor costs.
- Intelligent EMS with DC-coupled design for higher PV and battery utilization.
- Bypass function for continuous system operation during maintenance.

Technical Specifications

Model	VPS20-0300	VPS20-0500	VPS20-1000
AC (Grid-Connected)			
Maximum output power (kW)	330	550	1100
Rated power (kW)	300	500	1000
Rated voltage (V)	400	400	400
Rated current (A)	433	722	1443
Voltage range (V)	340~460		
Rated frequency (Hz)	50/60		
Frequency range(Hz)	45~55/55~65		
THDI	< 3% (Linear balanced load)		
Power Factor	1.0 (0.8 leading~0.8 lagging configurable)		
AC connection	Three-phase four-wire + Ground (3W+N+PE)		
AC Power(off-grid)			
Max. output power (kW)	330	550	1100
Rated power (kW)	300	500	1000
Rated voltage (V)	400	400	400
Rated current (A)	433	722	1443
THDU	<3% (Linear balanced load)		
Rated frequency (Hz)	50/60		
Overload capacity	110% for non-stop operation		
PV Input			
Max. PV voltage (V)	900		
Max. PV power	120kW per MPPT	120kW per MPPT	120kW per MPPT
PV input channel	1	1	1
MPPT qty	3~4	5/6	10~12
Isc(A)	240		
Max. discharge current(A)	200		
MPPT voltage range (V)	250~850		
Battery			
Max. charge power (kW)	480	720	1440
Battery voltage range (V)	450~950		
System Configuration			
Dimension[W/D/H](mm)	1450*900*2082	643*728*2082+ 1500*1000*2081	(643*728*2082)*2+ 2500*1200*2081
Net(kg)	1430	353+2580	353*2+3800
Environment temperature	-30℃~55℃; (Derate by 1% for every 1℃ rise when above 45℃, 50℃ max)		
Relative humidity	0% ~ 95%, no condensation		
Protection level	IP21/IP54		
Noise(dB)	<70		
Altitude(m)	4000 max (Derate by 1% for every 100m increase when above 2000m)		
Standby power consumption	<0.5% of rated power		
Cooling	Forced fan cooling		
Display and Communication			
Display	LCD touch screen		
BMS communication	RS485, CAN		
Local communication	RS485, TCP/IP, CAN		