IPV-8K48U / IPV-12K48U

SINGLE PHASE DUAL OUTPUT HYBRID INVERTER • 48V SYSTEM

IP54 RATED

★ 3-Year Replacement & 5-Year Service Warranty | 8~12kW Power Range | 48V Battery System | Single Phase Dual Output | Max PV Input 16000W | 99.5% MPPT Efficiency | 2 MPPT Trackers | 16~24kVA Surge Power | IP54 Anti-Dust & Waterproof | Smart Grid Adaptation (90-280VAC) | Parallel Capable | Lead-Acid & Li-ion Compatible

2	27~30A	99.5%	16~24KVA	8~12KW
No. of MPPT Trackers	PV Input Current	MPP Tracking Efficiency	Surge Power	Power Range

Compatibility & Scalability
Supports Lead Acid / Li-ion batteries.
Parallel support up to 96kW (1P) / 144kW (3P).

Safety & Reliability
IP54 Protection Degree.
Stable operation at 45°C without derating.

Efficiency & Quiet Operation
16000W Max PV Input | 180-250A Charge/Discharge.
Quiet operation below 55 dB.

TECHNICAL SPECIFICATIONS

Parameter	IPV-8K48U	IPV-12K48U
EFFICIENCY		
MPPT Tracking Efficiency	99.5%	99.5%
Max. Battery Mode Conversion Efficiency	93%	95%
PV INPUT		
Max. PV Input Power	16000W	16000W
Max. PV Input Voltage / Start-Up Voltage	500V / 75V	500V / 75V
MPPT Voltage Range	85V~450V	85V~450V
Max. Input Current / MPP Trackers	30A+15A / 2	27A+27A / 2
AC INPUT & OUTPUT		
Max. Grid Input Voltage / Voltage Range	380Vrms / 90VAC-280VAC	380Vrms / 90VAC-280VAC
Nominal Voltage (Optional) / Frequency	220VAC/230VAC/240VAC / 50/60Hz	220VAC/230VAC/240VAC / 50/60Hz
Max. AC Input Current (Bypass Mode)	90A	36.4A
Nominal AC Output Power / Max. Apparent Power	8kW / 12kVA	12kW / 8kVA (per spec)
THDI / Total Voltage Harmonic Distortion	<3% / <3%	<3% / <3%
Switch Time	10mS (UPS); 20mS (Appliances)	10mS (UPS); 20mS (Appliances)
Surge Power	16kW@5S	24kW@5S
Overload Capacity	105%-150%@10S, 150%-200%@5S	
BATTERY		
Battery Type / Rated Voltage / Range	Lead-acid / Lithium-ion / User Defined | 48V (40-60V)	
Max. MPPT / Mains / Discharging Current	160A / 210A / 250A	160A / 210A / 180A
GENERAL		
Dimensions (D×W×H) / Net Weight	125×420×520mm / 20kg	125×525×630mm / 28.5kg
Operating Temp. / Max. Altitude	-10°C~55°C (45°C Power Derating) | 4000m (>2000m Derating)	
Communication	WIFI / RS485 / CAN / RS232 / Dry Contact	
Diesel Generator / Smart Load Support	Yes / Yes	
Number of Parallel	Single Phase: 6 | Three Phase: 12	Single Phase: 9 | Three Phase: 12
Cooling / Noise Level	Intelligent Fan | <55dB (PV) / <45dB (No PV)	Intelligent Fan | <60dB
Authentication Level	IEC62109-1, IEC62109-2, IEC61683	

After-Sales Support: CarlCare Service Pvt Ltd across 34 major cities in Pakistan (Lahore, Karachi, Islamabad, Rawalpindi, Faisalabad, Peshawar, etc.) **Contact: 0310298444**