

MF-SCS-60K-DC-UE

HYBRID INVERTER

60 KWH AIR-COOLING BATTERY



MasterPower®

MF-SCS-60K-DC-UE

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PRODUCT FUNCTION

- Stores 60kWh of electricity for future use, ensuring a stable energy reserve. It supports multiple energy inputs, including solar power, diesel generators, and the grid, providing flexible power integration.
- Optimizes energy usage by charging during off-peak hours and discharging during peak demand, helping balance the grid load. By leveraging time-of-use pricing, it effectively reduces electricity costs.
- Utilizes an advanced Energy Management System (EMS) to optimize charging and discharging strategies. Remote monitoring and management capabilities enhance operational efficiency and system performance.
- Acts as an emergency power source during grid failures, ensuring critical equipment remains operational. With uninterrupted power supply capabilities, it is ideal for data centers, hospitals, and other essential facilities.
- Provides a reliable power supply in areas without grid access, making it suitable for homes, businesses, and communities. As a core component of microgrids, it ensures stable and efficient energy distribution.
- Features a modular design that supports parallel system integration for expanded capacity. Its flexible configuration allows adjustments in power output and storage capacity to meet diverse energy needs.

PRODUCT FEATURES

- Built with high-energy-density 1P16S 100Ah batteries, this system features a compact design, making it ideal for space-constrained environments. Its lightweight structure enhances ease of installation and transportation.
- Designed for longevity, it supports over 8000 charge-discharge cycles with minimal degradation, ensuring stable long-term performance.
- With superior charge and discharge efficiency and a charge/discharge current of 95A, it minimizes energy loss while delivering millisecond-level response times to meet urgent power demands.
- Equipped with multiple protection mechanisms, including safeguards against overcharging, over-discharging, overheating, and short circuits. With an IP55 protection rating, fire-resistant materials, and a flame-retardant design, it further enhances operational safety.

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APPLICATION



MANUFACTURING



OFFICE SPACE



RETAIL

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PRODUCT PARAMETER

Battery Energy Storage	
Cell Chemistry	LiFePO ₄
Module Energy (kWh)	5.12
Module Nominal Voltage (V)	51.2
Module Capacity (Ah)	100
Battery Module Combination	12S1P
System Nominal Voltage (V)	614.4
System Operating Voltage (V)	562.5~681.6
System Energy (kWh)	61.44
Charge/discharge Current (A)	95

PV Input	
Max. Input Power (kW)	96
Max. Input Voltage (V)	1000
Start-up Voltage (V)	180
Rated Voltage (V)	600
MPPT Voltage Range (V)	150~850
Number of MPP Trackers	4
Number of String per MPPT	8
Max. Current per MPPT (A)	40
Max. Short Circuit Current per MPPT (A)	60

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PRODUCT SPECIFICATIONS

Charging System (Optional)	
Charging Type	Charging Mode 3 Case B & Case C
Outlet Options	AC Type 2 (IEC 62196-2)
Input/Output Current Rating (A)	32, three phase
Input/Output Power Rating (kW)	23@415Vac
Input/Ouput Voltage (Vac)	380~415
Input Frequency (Hz)	50/60
Cable Length	5.0 m, Optional: 7.5 m
Distribution Systems	TT, TN system
Connector Type	3P + N + PE
Certifications	IEC/EN 61851-1, IEC 61851-21-2 IEC 62196-1, IEC 62196-2, IEC62109

AC Output (Back Up)	
Rated Output Power (kW)	50
Max. Apparent Output Power	1.6 times / 2s
Rated Output Current (A)	76
Switch TimeRating (kW)	<10ms
Rated Voltage	3 / N / PE, 230V /
Rated Frequency (Hz)	50/60
THDv (@linear load)	<2%

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PRODUCT SPECIFICATIONS

AC Output (On-Grid)	
Rated Output Power (kW)	50
Max. Output Power (kVA)	50
Rated Output Current (A)	76
Max. Input Power from Grid (kW)	50
Max. Input Current from Grid (A)	76
Rated Grid Voltage	3 / N / PE, 230 V / 400
Rated Grid Frequency (Hz)	50 / 60
Max. AC Passthrough Current (A)	152
THDi (@Rated Power)	< 3%
Power Factor	0.8 leading ~ 0.8 lagging

General Parameters	
Dimension - W*D*H (mm/in)	750*950*2280/29.5*37.4*89.7
Weight (kg/lb)	~1050/~2314.8
Working Temperature	-30°C~50°C
Communication Interface	CAN, RS485, Wi-Fi, LTE
Humidity(RH)	5%~85%, non-condensation
Altitude	≤4000m/13122ft(2000m/6561ft derating)
IP Rating	IP55

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PRODUCT SPECIFICATIONS

General Parameters	
Storage Temperature (°C/°F)	-20~35/-4~95
Recommend Depth of Discharge	90%
Cycle Life	>8000 cycles
Warranty	3 years free, paid from the 4th to the 15th year
Certification	IEC/EN62619:2022, IEC/EN62477-1:2012+A11+A1+A12 IEC/EN61000-4-2:2019, IEC/EN61000-4-2:2019 EN301908-1 V15.2.1:2013, EN301908-13 V13.2.1:2022

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PRODUCT TOPOLOGY

