

MF-SCS-233K-DC-UE

HYBRID INVERTER

THREE PHASE 233 kWh CABINET



MasterPower®

MF-SCS-233K-DC-UE

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THREE PHASE 233 kWh CABINET

FEATURES

- 10 Years Performance Warranty
- Backup / Genset Input Integrated
- Fire Safety with Alarms, Valves, Smoke / CO sensors, UL 9540A Certified
- Off-grid Expandable up to 6 Parallel On-grid Expandable up to 20 Parallel
- 280 Ah large capacity cell, higher energy density
- Integrated self-developed BMS / EMS for flexibility
- Small size, small footprint Long-lasting battery cycle life
- Compact design saves space Cloud control with 24/7 monitoring



FUNCTIONS

- MF-SCS-233K-DC-UE system serves as a multiple energy source gateway.
- It efficiently controls and distributes power from various sources, including mains electricity, solar photovoltaics, and diesel generators. The system supports multiple grid-connected modes such as self-consumption, time-of-use, and peak shaving, tailored to diverse customer needs.
- In off-grid scenarios, it operates in complementary modes like PV-Battery or PV-Battery-Diesel Generator.
- In the event of a mains power outage, it seamlessly switches to backup mode in less than $< 10\text{ms}$, ensuring a continuous power supply for users.

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FUNCTIONS



AC capacity 125 kW

Battery capacity ranges from 70 kWh~233 kWh



On Grid:
Export Limit/Import Limit

Off Grid
On/Off Grid Switching



>150% of the
system capacity



Support Both DC coupling
and AC coupling PV-ESS
Solution



Factory Load is
supported

Motor load shall be not
more than 1/3 of the
system capacity



Support PV-ESS-EV
Charger smart control

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PRODUCT SPECIFICATIONS

Technical Parameters	
Battery Type	LFP
Manufacturer	CATL
Cell Type	280 Ah
Battery Module Capacity	17.92 kWh
Number of Modules	13
Total Battery Capacity	233 kWh
Nominal Voltage	832 V
Operating Voltage Range	741 ~ 936 V
Charge / Discharge Rate	Max. 0.5 C
DoD	90%

General Parameters	
Dimensions (W x H x D)	1300 x 2380 x 1442 mm
Weight	< 2.5 T
Installation Site	Outdoor
IP Protection	IP54
Anti Corrosion Level	C4
Operation Humidity	5% ~ 95% (No Condensing)
Operation Temperature	-30°C ~ +50°C
Max. Operation Altitude	≤ 3000 m

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PRODUCT SPECIFICATIONS

General Parameters

Communication Port	Ethernet; CAN
Communication Protocol	CAN; TCP
Cooling Method	Air Conditioner
Certificates	UN38.3; MSDS; IEC 62040; IEC 62477; IEC 62619; IEC 63056; IEC 61000-6-2/4

PV Side

Max. Input	1000 V
MPPT Voltage Range (Full Load)	700 ~ 800 V
Max. Current per MPPT	45 A
Number of MPPT	8
Number of Inputs per MPPT	2
Max. PV Power	250 kWp

Battery Side

Battery Voltage Range	250 ~ 900 V
Battery Rated Voltage Range	250 ~ 800 V
Max. DC Current	80 A x 2
Max. DC Input Power	125 kW
Number of DC Inputs	2

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PRODUCT SPECIFICATIONS

AC Side (On Grid)

Nominal AC Output Power	125 kW
Max. AC Output Power	125 kVA
Rated AC Current	181 A
Max. AC Current	250 A
AC Voltage Range	230 ~ 400 V
Nominal Grid Frequency / Frequency Range	50 Hz / 60 Hz
THDi	< 3% (100% Load)
Adjustable PF Range	-0.8 (Lagging) ~ 0.8 (Leading)

AC Side (Off Grid)

Nominal AC Voltage	230/400 V
THDv	< 3% (Linear Load)
Nominal Grid Frequency / Frequency Range	50 Hz / 60 Hz
Nominal AC Output Power	125 kW
Max. AC Output Power (Single-Phase)	50 kW

Efficiency

Max. Efficiency	98%
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PRODUCT SPECIFICATIONS

Protection

Reverse Connection Protection	Yes
DC Switch	Yes
Over-Temperature Protection	Yes
Grid Monitoring / Earthing Fault Detection	Yes
Insulation Monitoring	Yes
DC / AC Surge Protection	DC Type II; AC Type III

General Parameters

Dimensions (W x H x D)	635 x 1100 x 330 mm
Weight	95 kg
Topology	Transformerless
IP Protection	IP65
Operation Temperature Range	-25 ~ 60°C (> 45°C Derating)
Operation Humidity Range	0 ~ 100% (No Condensing)
Cooling Method	Intelligent Air Cooling
Max. Operation Altitude	3000 m
Communication Port	RS-485 / CAN
Certificates	EN IEC 62109-1/2; IEC EN 62477-1; EN IEC 61000-6-2/4; EN IEC 61000-3-11; EN 61000-3-12; IEC 60068-2-1/2/14/30/52; IEC 61683; IEC 61727; IEC 62116; IEC 60529; C10/11; CEI 0-21; EN 50549-1; DIN VDE 0126-1-1; VDE-AR-N 4105; UNE 217001

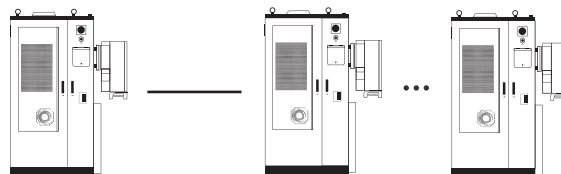
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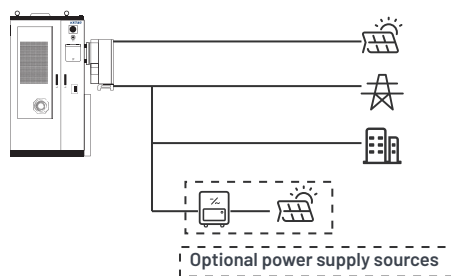
SYSTEM CONFIGURATION

The MF-SCS-233K-DC-UE system features a hybrid inverter and a series-connected battery cabinet, with the option to add an additional cabinet for expansion.

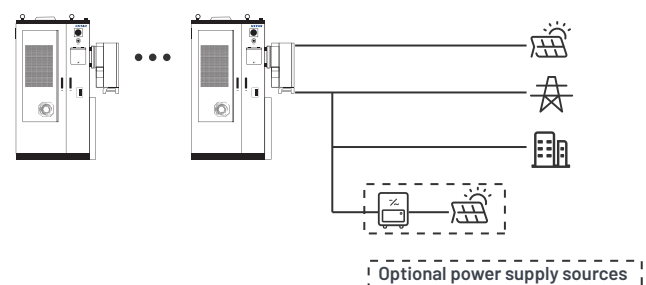


APPLICATIONS

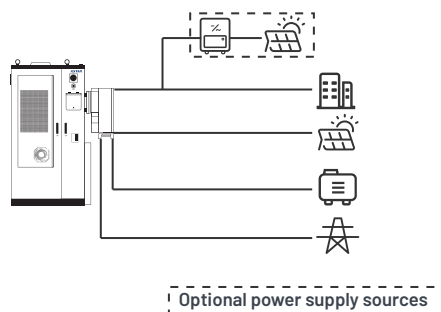
On-Grid Solution



Up to 20 Unit System in Parallel



On/off Grid Solution & Off Grid Solution



Up to 6 Unit System in Parallel

