

MF-SCS-70K-DC-UE

HYBRID INVERTER

THREE PHASE 70KWh CABINET



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MasterPower®

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-70K-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.

FUNCTIONS



AC capacity
80 kW

Battery
capacity
ranges
from 70
kWh~233
kWh



Support
PV-ESS-EV
Charger
smart control



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

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TECHNICAL PARAMETERS

Battery Type	LFP
Battery Module Capacity	17.92 kWh
Cell Type	280 Ah
Number of Modules	4
Total Battery Capacity	71.68 kWh
Nominal Voltage	256 V
Operating Voltage Range	228 ~ 288 V
Charge / Discharge Rate	Max. 0.5 C
DoD	90%

GENERAL PARAMETERS

Dimensions (W x H x D)	1050 x 2000 x 1366 mm
Weight	< 1.2 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
Communication Port	Ethernet; CAN
Communication Protocol	CAN; MODBUS TCP / IP
Cooling Method	Air Conditioner
Certification	UN38.3; MSDS; IEC 62040; IEC 62477; IEC 62619; IEC 63056; IEC 61000-6-2/4

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Hybrid Inverter Parameters

PRODUCT SPECIFICATION	
PV Side	
MPPT Voltage Range	250 ~ 950 Vdc (Max. 1000 Vdc)
MPPT Rated Voltage	720 Vdc
MPPT Rated Voltage (Full Load)	550 ~ 800 V
Max. PV Power	100 kWp
Number of MPPT / Strings per MPPT	4 / 2
Max. Current per MPPT	45 A
Battery Side	
Battery Voltage Range	250 ~ 900 Vdc
Battery Rated Voltage Range	250 ~ 800 Vdc
Max. DC Current	80 Adc x 2
Max. DC Power	55 kW
Number of DC Inputs	2
AC Side (On Grid)	
Nominal AC Output Power	50 kW
Max. AC Output Power	55 kVA
Max. AC Input Power (Single-phase)	37.5 kW
Rated AC Current	72 A
Max. AC Current	163 A
AC Rated Voltage / Voltage Range	230 / 400 Vac; 220 / 380 Vac; 3L+PE+N; -15% ~ +10%
Nominal Grid Frequency / Frequency	50 Hz / 60 Hz (±5 Hz)
THDi	< 3% (100% Load)
Adjustable PF Range	-0.8 (Lagging) ~ 0.8 (Leading)

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Backup Output

Nominal AC Voltage	230 / 400 V; 220 / 380 Vac; 3L+PE+N
THDv	< 3% (Rated Power)
Nominal Grid Frequency / Frequency	50 Hz / 60 Hz
Nominal AC Output Power	50 kW
Max. AC Output Power (Single-phase)	25 kW
Max. Output Current	110 A

Genset Input

Max. Input Current	110 A
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Efficiency

Max. Efficiency	97.5%
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Protection

Reverse DC Connection Protection	Yes
Anti-Islanding Protection	Yes
Over-Temperature Protection	Yes
Grid Monitoring / Earthing Fault Detection	Yes
Insulation Monitoring	Yes
DC / AC Surge Protection	DC Type II; AC Type II
AFCI	Optional

General Parameters

Dimensions (W x H x D)	635 x 950 x 315 mm
Weight	>80 kg
Topology	Transformerless
IP Protection	IP65
Operation Temperature Range	-25 ~ 60°C (> 45°C Derating)
Operation Humidity Range	0 ~ 100% (No
Cooling Method	Intelligent Air Cooling
Max. Operation Altitude	4000 m (> 3000 m Derating)
Communication Port	RS-485 / CAN

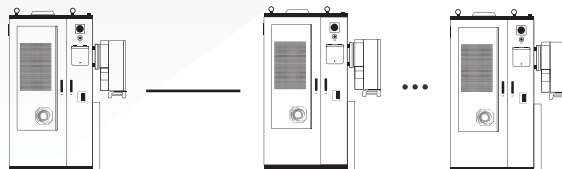
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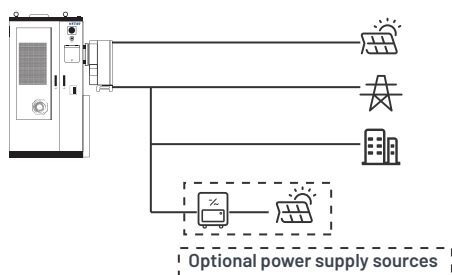
SYSTEM CONFIGURATION

The MF-SCS-70K-DC-UE system features a hybrid inverter and a series-connected battery cabinet, with the option to add an additional cabinet for expansion.

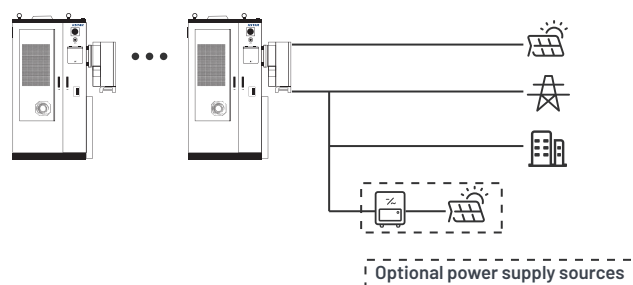


APPLICATIONS

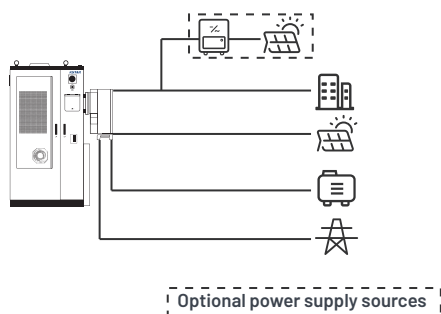
On-Grid Solution



Up to 20 Unit System in Parallel



On/off Grid Solution & Off Grid Solution



Up to 6 Unit System in Parallel

