

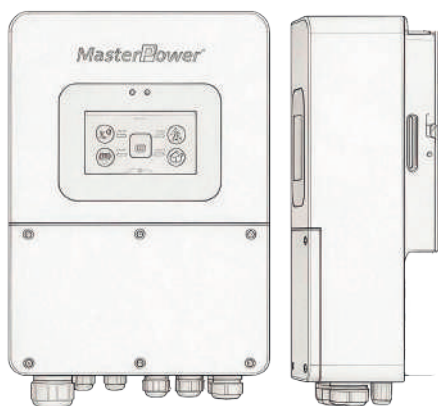
RHO SERIES

MF-RHO-10K-LV



Product overview

MF-RHO-10K-LV is a 10 kW single-phase hybrid inverter designed to optimize solar and low-voltage battery energy management. It supports up to 16 kW of PV input, 40–60 V batteries, charging/discharging currents of up to 180 A, and a transfer time of less than 10 ms, providing an efficient, flexible, and reliable solution for self-consumption and energy backup.



MF-RHO-10K-LV

MasterPower®

Features

- Equipped with GEN port, compatible with diesel generators, smart loads, and AC coupling.
- Color touch screen (4.3/7" optional).
- Integrated O-export function.
- Compatibility with lead-acid and Li-ion batteries, supports various brands of lithium batteries.
- Supports PV array input up to 160% of rated inverter power.
- Low startup voltage threshold, wide operating voltage range.

PRODUCT NAME

MF-RHO-10K-LV

INPUT DC (PV side)

Max. PV access power	20 kW
Max. PV input power	16 kW
Max. PV input voltage	550 V
Nominal input voltage	360 V
MPPT working voltage range	80-500 V
Number of independent MPPT / strings per MPPT	2/2
MPPT max. current	36A/36 A
Start-up voltage	120 V

OUTPUT/INPUT AC (Grid side)

Nominal power	10 kW
Max. apparent power	11 kVA
Nominal voltage	220V/230 V
Nominal frequency	50Hz/60 Hz
Rated current	45.4 A / 43.4 A
Max. current	50 A
Power factor	-0.8~+0.8 (adjustable)
THDi	<3% (Nominal Output)
Grid system pattern	L+N+PE
Max. AC current from utility grid	80 A

OUTPUT AC (Back-up)

Nominal output power	10 kW
Max. output apparent power	11 kVA
Nominal output voltage	220 V / 230 V
Nominal output frequency	50 Hz / 60 Hz
Output THDV	<3%
Automatic switch time	<10 ms

BATTERY

Battery type	Li-ion/Lead-acid
Battery voltage range	40V - 60V
Max. charging/discharging current	180A
Charging strategy for Li-ion battery	Self-adaption to BMS
Charging strategy for Lead-acid battery	Three-stage

PRODUCT NAME

MF-RHO-10K-LV

EFFICIENCY

Max. MPPT efficiency	99.9%
Europe efficiency	97.5%
Max. battery to load efficiency	94,5%

PROTECTION

Anti islanding protection	Yes
Insulation impedance protection	Yes
RCD detection	Yes
PV reverse polarity protection	Yes
Output over voltage protection	Yes
Output over current protection	Yes

GENERAL DATA

Dimensions(L/W/H)in mm	375/265/513
Weight	27 kg
Operation temperature range	-25°C ~ +60°C
Heat dissipation mode	Smart cooling
IP Class	IP66
Maximum altitude	4000 m
Self consumption (night)	<3 w
Topology	Transformerless

FEATURES

LCD display	Yes
Communication interface	WiFi/4G/USB/CAN/RS485
Standards	IEC/EN 62109, IEC/EN 62477, IEC/EN 61000, CEI 0-21, NTS-631, RD647, UNE 217001, UNE 217002, VDE 4105, IEC 61727, IEC 62116, IEC 61683, EN 50549, G98, G99, NRS 097, UTE C 15, VDE 0126

*The product specifications are subject to change without prior notice.