

# Mass Combi Ultra 48/3500-50 (230 V)



Product code: 38343500

The Mass Combi Ultra series comprises several models, varying from 3000 W to 3500 W. For higher capacities up to 35 kW the Combi Ultra can be used in parallel or 3-phase configurations.

The Mass Combi Ultra is equipped with the latest technologies. The new inverter technology ensures a uniquely low stand-by use, while an ultra-fast Digital Signal Processor guarantees seamless switching between all available energy sources. Power Assist prevents power dips and failures, even with a weak electricity connection or small generator. Moreover, all Mass Combi Ultra models are equipped with MasterBus.

### Quiet operation

The Mass Combi Ultra can provide up to 50 % of the charging current or inverter capacity without fan cooling. This is perfect for night-time operation; if little power is consumed, the fan stops turning and goes silent. When maximum capacity is required, or the ambient temperature is very high, the Active Optima Cooling concept regulates the fan speed in a linear way, ensuring that it never spins too fast or makes any unnecessary ticking noises.

### Parallel and 3-phase operation

The Mass Combi Ultra functionality goes beyond stand-alone operation, the design also allows parallel and 3-phase configurations for larger applications up to 35 kW. For larger systems, an external transfer system is required.

### Dual AC inputs and outputs

The Mass Combi Ultra has inputs for generator or mains supply, each optimized for the power source. A robust intelligent transfer system switches seamlessly between AC power, generator and inverter, and ensures a constant power supply. Flickering lights or failure of electronic equipment belong to the past. Separate AC outputs provide the ability to power heavy users via mains and/or generator.

### Features

- For professional and semi-professional use.
- Quiet, powerful inverter with 200 % peak power.
- Compact, lightweight and hum-free thanks to HF technology.
- Pure sine wave voltage prevents malfunctions and damage to sensitive equipment such as adapters.
- High yield and more power from your batteries.
- Intelligent 3-step+ battery charger with low DC ripple current for fast charging times and long battery life.
- Power Assist: prevents blown fuses.
- A dynamic battery voltage window allows you to enjoy AC power for longer without damaging your batteries.
- Active Optima Cooling concept prevents unnecessary fan noise.
- Charges two individual battery banks simultaneously.
- Quick installation and reliable professional connections.
- CE, ABYC and RMRS certified.

# Specifications

## Specifications sine wave inverter

Nominal DC voltage	48 V (38-62 V)
Output voltage	180-260 V, adjustable
Output frequency	50/60 Hz ( $\pm 0.005\%$ ), configurable
Output waveform	true sine
Continuous power at 40 °C / 104 °F, cos phi 1	3500 W
Max. peak load	7000 W
Max. efficiency	$\geq 93\%$
Max. ripple on DC (battery at full load)	$< 5\%$
No-load power consumption on DC (ON/inverter OFF/OFF)	26 W / 4 W / 0 W
Energy saving mode consumption	7 W
Parallel configuration	yes, up to 10 units (for larger systems, an external transfer system is required)
3-Phase configuration	yes, up to 3x3
Synchronise with mains/generator	yes

## Specifications battery charger

Input voltage range	184-275 V
Max. input current	16 A
Max. charge current at 40 °C / 104 °F	50 A at 57 V, adjustable
Secondary charger output voltage	12/24 V selectable
Secondary charger output current	10 A
Battery temperature sensor	yes, included
Battery voltage sense	through MasterShunt, otherwise automatic compensation

## Specifications transfer system

AC input (generator)	50 A (switched)
AC input	30 A (switched)
AC output 1	67 A
AC output 2	50 A (switched)
AC input fuse	no
Transfer speed	seamless ( $< 1$ ms)
Transfer voltage range	184-275 V, adjustable
Transfer frequency range	35-68 Hz, adjustable

## General specifications

Galvanic isolation	yes
Display/read-out	LED display
Dimensions, hwxwx	472 x 318 x 178 mm 18.6 x 12.5 x 7.0 inch
Weight	15.3 kg 33.7 lb
Compliance	CE, ABYC, RMRS

## Technical specifications

Charge characteristic	IUoUo, automatic / 3-step+ for Gel/AGM/MLI/ flooded/spiral/traction
Recommended battery capacity	$\sim 100$ -300 Ah (based on gel batteries, may differ for other types)
Ground relay	yes, configurable
Temperature range (ambient temp.)	-25 °C to 60 °C, derating $> 40$ °C -13 to 140 °F
Cooling	vario fan
Protection degree	IP23 (vertical mounting)
Safety class	IEC protection class I
Humidity protection	conformal coating, max. 95 % relative humidity, non condensing
Protections	over temperature, overload, short circuit, high/low battery voltage
Power Assist	yes

MasterBus compatible

yes