

Mass Sine Ultra and Mass Sine: For the toughest tasks



Even under the most extreme conditions the products from the Mass series operate faultlessly, giving you round-the-clock output when necessary. With an MTBF of 180,000 hours at full capacity and 24/7 use, the Mass products are ideal for the toughest tasks and any situation that requires a reliable power supply.

Optimal flexibility in system design

Choosing an independent sine wave inverter allows you complete freedom of choice of battery charging equipment. You can freely adapt the rating of these chargers, depending on the desired charge time. In case you want to use renewable energy sources, you may want to choose an MPPT solar charge regulator.



High Efficiency

The high efficiency and automatic economy mode are designed to allow digital clocks to work properly and ensure you many more hours of operation from your batteries. The application of high-frequency technology prevents any annoying humming and zooming sounds, while the high peak capacity ensures that the high inrush current required for electrical tools, for example, is seamlessly produced.



FEATURES

- For heavy duty work in professional and semi-professional applications.
- Full capacity at temperatures up to 40 °C.
- Pure sine wave output prevents failures and damage to connected sensitive equipment.
- High peak capacity for the seamless switching on of complex and heavy loads.
- Dynamic, battery-specific input current for an optimal use of every type of battery (Mass Sine Ultra).
- Parallel configuration of up to ten devices for a capacity up to 40 kW (Mass Sine Ultra).
- 3-Phase configuration for a capacity up to 36 kW (Mass Sine Ultra).
- Integrated MasterBus (Mass Sine Ultra) or MasterBus compatible (Mass Sine).
- Suitable for mobile applications.
- Professional connections.
- Automatic, reliable and safe operation.
- Optional: Masterswitch/Systemswitch for automatic selection of the desired energy source.



COMPACT

3-PHASE
OPERATIONPARALLEL
OPERATIONMASTERBUS
COMPATIBLE

POWERFUL

Mass Sine Ultra



With an AC capacity of 4000 W in one unit, the Mass Sine Ultra can satisfy even the greatest energy demands. As ten units can be switched in parallel or 3x3 in a three-stage configuration, the Mass Sine Ultra can supply a capacity of up to 40 kW. The inverter provides full power at 40 °C and works smoothly even in extreme conditions such as engine rooms and technical spaces. Like all Mass products, the inverter is supplied in a compact and robust casing. This inverter is the best choice if you are looking for autonomous AC capacity of over 3 kW.



Latest Technology

The extremely efficient power electronics save volume and weight with minimal sound levels and a very low ripple voltage which extends the lifespan of your batteries. At the same time, digital technology prevents any annoying flickering and voltage fluctuations.



Make the most of your batteries

The Mass Sine Ultra is equipped with a dynamic battery voltage window. Taking into account the type of battery and current, this function ensures the inverter can supply AC longer without overtaxing the batteries.

Mass Sine

Mastervolt's Mass Sine inverters have been proving their value in the most extreme conditions for over 25 years.

Clear Indicators

The Mass Sine features easy controls on the device itself. As inverters are often built in, we also supply an effective remote control panel, the C4-RI. In addition, the Mass Sine can be controlled via its intuitive display, the

EasyView 5, thanks to the integration of MasterBus communication using a MasterBus Inverter Interface or AC Power Analyser.



EASY INSTALL

Easy and safe connections

The Mass Sine inverters provide robust and professional connections for fast and safe installation.



Specifications

Mass Sine (Ultra) sine wave inverters



	Mass Sine 12/2000	Mass Sine 24/800	Mass Sine 24/1500	Mass Sine 24/2500
Product code 230 V	24012000	24020800	24021500	24022500
Product code 230 V 60 Hz	24112000	24120800	24121500	24122500
GENERAL SPECIFICATIONS				
Nominal battery voltage	12 V	24 V	24 V	24 V
Recommended battery capacity	> 200 Ah	> 50 Ah	> 150 Ah	> 200 Ah
Output voltage	230 V (± 5 %) – 50 Hz (± 0.01 Hz)	230 V (± 5 %) – 50 Hz (± 0.01 Hz)	230 V (± 5 %) – 50 Hz (± 0.01 Hz)	230 V (± 5 %) – 50 Hz (± 0.01 Hz)
P30 power at 40 °C, cos phi 1	2000 W	800 W	1500 W	2500 W
Continuous power at 40 °C, cos phi 1	1800 W	650 W	1200 W	2000 W
Peak load	4000 W	1600 W	2900 W	5000 W
Output waveform	true sine	true sine	true sine	true sine
AC connection	internal	internal	internal	internal
Efficiency	92 %	92 %	92 %	92 %
Display/read-out	LED	LED	LED	LED
Parallel configuration	no	no	no	no
3-Phase configuration	no	no	no	no
Dimensions, hxxwxd	420 x 318 x 130 mm 16.5 x 12.5 x 5.1 inch	325 x 220 x 111 mm 12.8 x 8.7 x 4.4 inch	340 x 261 x 130 mm 13.4 x 10.3 x 5.1 inch	420 x 318 x 130 mm 16.5 x 12.5 x 5.1 inch
Weight	14.6 kg / 32.2 lb	3.8 kg / 8.4 lb	6.2 kg / 13.7 lb	10.1 kg / 22.3 lb
Approvals	CE, E-mark, ABYC A-31, RRR	CE, E-mark, ABYC A-31	CE, E-mark, ABYC A-31	CE, E-mark, ABYC A-31
TECHNICAL SPECIFICATIONS				
Technology	HF switch mode	HF switch mode	HF switch mode	HF switch mode
Max. ripple on DC (battery)	5 % RMS	5 % RMS	5 % RMS	5 % RMS
Input current (nominal load)	183 A	36 A	68 A	115 A
No-load power consumption (ON mode)	480 mA – 6 W	240 mA – 5.6 W	200 mA – 5 W	250 mA – 6 W
No-load power consumption (energy saving mode)	50 mA – 0.6 W	35 mA – 0.8 W	25 mA – 0.6 W	25 mA – 0.6 W
Minimal DC fuse (slow blow) <i>DC fuse depends on the cable size</i>	250 A	63 A	100 A	160 A
Minimal cable size	70 mm ²	16 mm ²	25 mm ²	50 mm ²
Harmonic distortion typical	< 5 %	< 5 %	< 5 %	< 5 %
Power factor control	all power factors allowed	all power factors allowed	all power factors allowed	all power factors allowed
Transfer system	Masterswitch/Systemswitch compatible, see page 134 for more information			
Temperature range (ambient temp.)	-25 °C to 80 °C; > 40 °C derating / -13 °F to 176 °F; > 104 °F derating			
Cooling	natural/forced	natural/forced	natural/forced	natural/forced
Protection degree	IP23	IP23	IP23	IP23
Protections	over-temperature, overload, short circuit, high battery, low battery			
MasterBus compatible	yes, using a MasterBus Inverter Interface or AC Power Analyser			

ACCESSORIES		C4-Ri 70404110	option	option	option	option
		EasyView 5 77010310	option	option	option	option
		MasterBus USB Interface 77030100	option	option	option	option
		MasterBus Inverter Interface 77030700	option	option	option	option
		AC Power Analyser 77031200	option	option	option	option

option
Remote control on/off for the Mass Sine sine wave inverter.

option
In combination with MasterBus Inverter Interface. Waterproof system monitor with 'daylight readable' colour display and intuitive multi-language touchscreen to show the key system information at a glance. There is also a logbook feature for warnings and alarms, along with a buzzer and alarm notifications. The home button gives access to favorite pages.

option
In combination with MasterBus Inverter Interface. Communication port between MasterBus and the USB port of your PC; makes possible reading and configuration of your MasterBus system on the PC when combined with MasterAdjust software (free to download).

option
Integrates the Mass Sine inverter in a MasterBus network.

option
Integrates the Mass Sine inverter in a MasterBus network and visualizes the AC voltage, current and power.



**Mass Sine Ultra
24/4000**

26024000

n.a.



**Mass Sine
24/5000**

24095100

24195100

24 V	24 V
> 350 Ah	> 400 Ah
230 V (± 2 %) – 50/60 Hz selectable (± 0.005 %)	230 V (± 5 %) – 50 Hz (± 0.01 Hz)
--	5000 W
4000 W	4000 W
7000 W	9000 W
true sine	true sine
internal	internal
≥ 92 %	92 %
LED	LED
yes, up to 10 standard	no
yes, up to 3x3	no
472 x 318 x 178 mm 18.6 x 12.5 x 7 inch	470 x 315 x 254 mm 18.5 x 12.4 x 10 inch
15 kg / 33.1 lb	19 kg / 41.9 lb
CE, E-mark, ABYC A-31	CE, E-mark, ABYC A-31

HF switch mode	HF switch mode
5 % RMS	5 % RMS
200 A	230 A
660 mA – 16 W	250 mA – 6 W
300 mA – 7 W	50 mA – 1.2 W
250 A	1x 250 A of 2x 125 A
70 mm ²	2x 70 mm ²
< 1 %	< 5 %
all power factors allowed	all power factors allowed
Masterswitch/Systems switch compatible, see page 128 for more information	
-25 °C to 80 °C; > 40 °C derating -13 °F to 176 °F; > 104 °F derating	
natural/forced	natural/forced
IP23	IP23
over-temperature, overload, short circuit, high battery, low battery	
yes	yes, using a MasterBus Inverter Interface or AC Power Analyser

n.a.	option
option	option
option	option
n.a.	option
n.a.	option

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AND
EXTENDED TECHNICAL BACKGROUND
ON OUR PRODUCTS:
[MASTERVOLT.COM/TECHNICAL-
BACKGROUND](http://MASTERVOLT.COM/TECHNICAL-
BACKGROUND)



The following model is also available in Quick
Connect (OEM) version with a WAGO 770-103
connector and 25 cm cable:

- Mass Sine 12/2000 230 V, *product code 24021002*