

Mass series

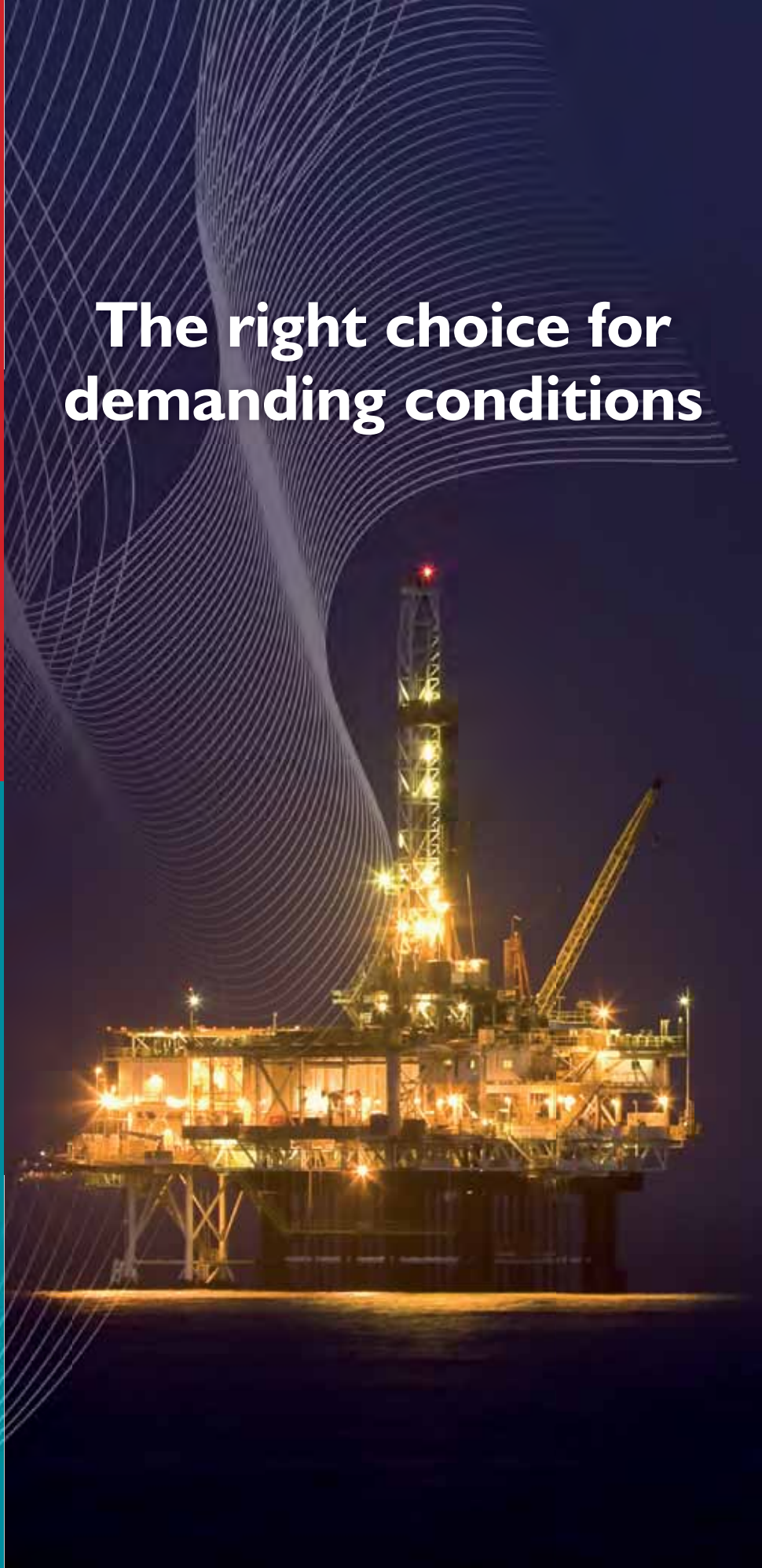


High-quality battery
chargers and inverters

Maximum operational
safety

Suitable for the most
extreme conditions

The right choice for
demanding conditions



MASTERVOLT
THE POWER TO BE INDEPENDENT

For the toughest tasks

Mass battery chargers, sine wave inverters and DC-DC converters are designed for the toughest conditions for professional, semi-professional and recreational purposes. Even under the most extreme conditions the products from the Mass series operate faultlessly, giving you round-the-clock output when necessary. The sustainability and technologies that underpin the Mass concept have long been proven in practice.

With an MTBF of 280,000 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. You can always rely on their proven and technically advanced components.

Making the best even better

The reliability and long lifespan of Mastervolt's battery chargers, sine wave inverters and DC-DC converters have been established beyond doubt over the past decade. While the Mass products have evolved with the latest technological developments, the dimensions and connections have remained the same. As a result it is exceptionally easy to replace one unit with another with only negligible downtime.

Mastervolt Green by Heart

As part of our constant search for eco-friendly and long-lasting solutions, Mastervolt has developed the Green by Heart programme. Its impact on the Mass battery chargers, Mass Sine inverters and Mac & Magic DC-DC converters include:

- An exceptionally effective use of the consumed input current ($\cos \phi > 0.98!$)
- Faster charging of batteries, even when the input current is limited.
- Use of top quality components with a long lifespan.
- Savings in weight and space.
- Fewer installation materials.





For professional use: GMDSS

Professional users will benefit from a front display with GMDSS alarm functions. GMDSS stands for Global Maritime Distress and Safety System, an internationally agreed-upon set of safety procedures, types of equipment, and communication protocols that is a requirement for the SOLAS (Safety Of Life At Sea) convention and uses DSC and satellite communication.



Made tough by smart design

The E-mark certified Mass battery chargers are very strong, designed to withstand heavy vibrations and shocks. Their premium quality components meet the highest possible specifications, while the smart and extra robust mounting adds to the professional end result.



MasterBus compatible

The Mass battery charger is fully MasterBus compatible. In combination with the MasterBus Inverter Interface or AC Power Analyser, you can easily connect every Mass Sine inverter within a MasterBus network. For the DC-DC converters you can use the MasterBus Serial Interface. All you need is a single cable with one connection. Your benefits: Fast and easy installation, plus centralised monitoring, configuration and operation of your system with a MasterView panel.

Easy and safe connection

Mass products are equipped with certified industrial connection technology. The larger inverter models have internal connections, the smaller models use a cable and plug & play socket.



Automatic switching

Easy to install within a mains voltage and/or generator power system, the Mass Sine inverter can switch between sources or combine the supply using the Masterswitch or Systemswitch system.

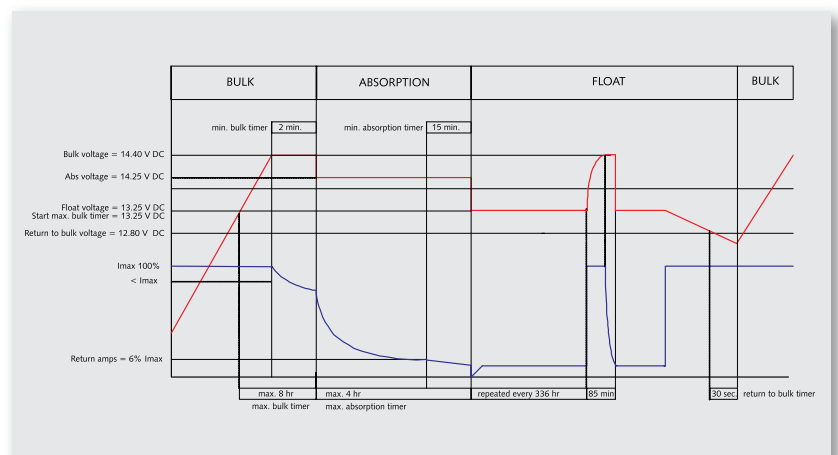




Powerful selling points

Mass battery chargers

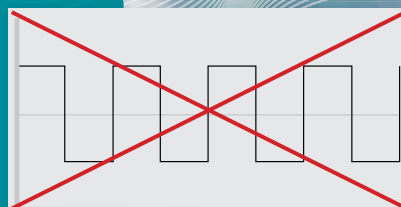
- Designed for the most difficult conditions.
- Lightweight, stainless steel, anodised aluminium casing.
- Coating of internal components prevents damage from damp or condensation to ensure a longer lifespan.
- Insensitive to electromagnetic effects from other devices.
- Suitable for every type of battery, also charges entirely empty batteries.
- Delivered as standard with temperature sensor.
- Full power at temperatures of up to 45 °C.
- Load capacities from 80 to 1000 Ah or more.
- Stable power supply of 24 and 48 V, even without batteries.
- Load sharing possible in case of limited power supply.
- Parallel switching possible using multiple battery chargers.
- Customised monitoring and controls at any location
- Fast and easy installation with MasterBus, Mastervolt's single cable system.
- Reliable charger/supply for GMDSS.
- Certified by Germanisch Lloyd, Lloyd, Bureau Veritas (24/75 & 24/100 models only) and RRR, RS; connections in accordance with CE, ABYC A-31 and IEC60945.
- Type approval for application in safety zones A, B and C.



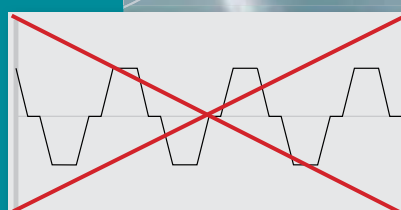
3-Step[®] charge method for fast and complete loading (IUoUo).

Mass Sine sine wave inverters

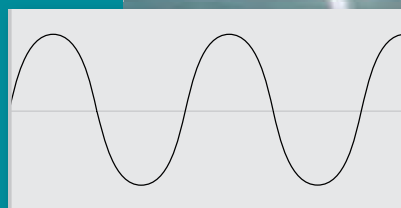
- Capacity between 800 W and 5 kW.
- Suitable for high starting/peak loads, even up to 200% at brief consumption .
- 230V/50Hz pure sine wave voltage; no faults or humming sounds from connected equipment, not even with sensitive communication and measuring equipment.
- Fully MasterBus compatible with AC Power Analyser or MasterBus Inverter Interface.
- All Mastervolt inverters provide pure sine wave voltage to ensure seamless operation of the connected equipment. Mastervolt inverters are the best choice available.



Square wave form.



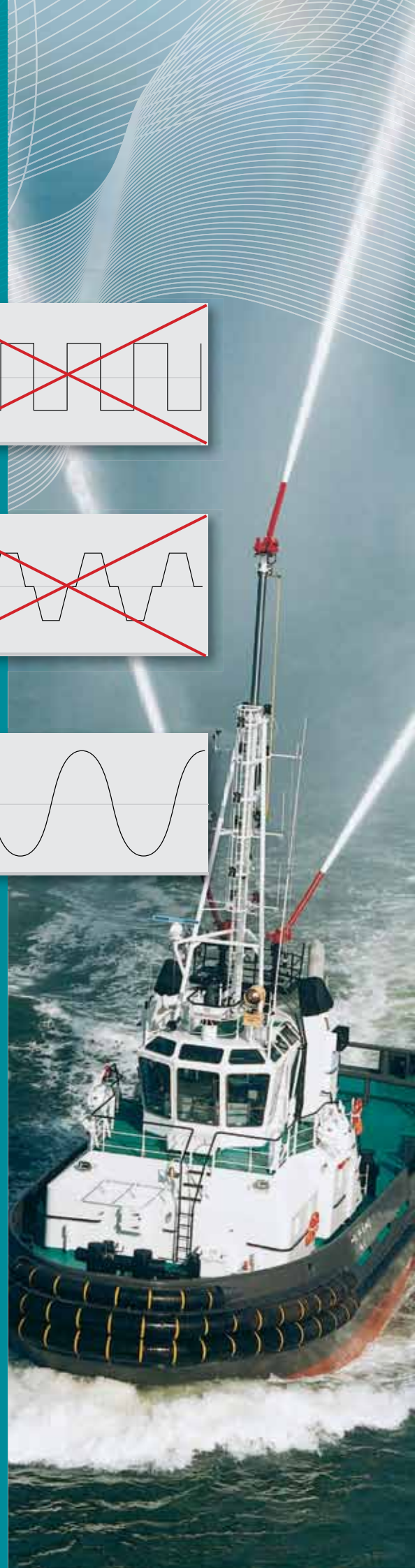
Modified sine wave output.



Sine voltage.

Mac & Magic DC-DC converters

- Reliable and very stable DC supply.
- For 12 and 24 V battery systems.
- Parallel switching of multiple units for capacities of 40, 60 or more Amps.
- Battery charger and dimmer function.
- Adjustable output voltage.
- Voltage stabilisation for a longer lifespan of halogen lights, etc.
- Corrosion-proof aluminium casing.
- Shock-proof.
- Temperature-powered fan for cooling.
- Generates limited heat, so installable almost anywhere.
- Fully MasterBus compatible with a MasterBus Serial Interface.



Specifications Mass battery chargers



Mass

24/15-2

40020156

Mass

24/25-2

40020256

Mass

24/25-2 DNV

40720266

Mass

24/50-2

40020506

Product code







GENERAL SPECIFICATIONS

Nominal output voltage	24 V	24 V	24 V	24 V
Total charge current	15 A at 28.5 V	25 A at 28.5 V	25 A at 28.5 V	50 A at 28.5 V
Number of battery outlets	2	2	2	2
Charge current second output	3 A	3 A	3 A	3 A
Recommended battery capacity	30-150 Ah	50-250 Ah	50-250 Ah	100-500 Ah
Nominal input voltage	230 V (180-265 V) – 50/60 Hz			
Supplies your system without battery	yes	yes	yes	yes
Display/read-out	LED display	LED display	LED display	LED display
Dimensions, hxwx	325x220x111 mm	325x220x111 mm	365x220x111 mm	340x261x130 mm
	12.8x8.7x4.4 inch	12.8x8.7x4.4 inch	14.4x8.7x4.4 inch	13.4x10.3x5.1 inch
Weight	3.3 kg / 7.3 lbs	3.3 kg / 7.3 lbs	3,5 kg / 7.7 lbs	4.6 kg / 10.1 lbs
Approvals*	CE, E-mark, ABYC A-31 / RRR, RS			

TECHNICAL SPECIFICATIONS

Charge characteristic**	IUoUo, automatic / 3-step+ for gel/AGM/wet/Lithium Ion			
Charge voltage Bulk (25 °C)***	28.5 V (8 hours)	28.5 V (8 hours)	28.5 V (8 hours)	28.5 V (8 hours)
Charge voltage Absorption (25 °C)***	28.5 V (4 hours)	28.5 V (4 hours)	28.5 V (4 hours)	28.5 V (4 hours)
Charge voltage Float - wet (25 °C)***	26.5 V	26.5 V	26.5 V	26.5 V
Charge voltage Float - gel/AGM (25 °C)***	27.6 V	27.6 V	27.6 V	27.6 V
Temperature compensation	-60 mV/°C	-60 mV/°C	-60 mV/°C	-60 mV/°C
Voltage compensation	voltage drop compensation in DC cables up to 3 Volt			
DC consumption	< 1 mA	< 1 mA	< 1 mA	< 1 mA
Full load consumption (230 V AC)	550 W	880 W	880 W	1800 W
Cos phi	> 0.95	> 0.95	> 0.95	> 0.95
Temperature range (ambient temp.)	-25 °C to 80 °C. > 45 °C derating power			
Cooling	vario fan	vario fan	vario fan	vario fan
Sound level	< 48 dBA at 1 mtr	< 48 dBA at 1 mtr	< 48 dBA at 1 mtr	< 48 dBA at 1 mtr
Protection degree	IP23	IP23	IP23	IP23
Protections	over temperature, over load, short circuit, high battery, low battery			
MasterBus compatible	yes	yes	yes	yes
CSI/DC alarm (Charger Status Interface)	integrated in the battery charger as standard			

OPTIONS

MasterView Read-out (product code 77010050)		Remote panel for reading the charge status of your battery charger, including error notifications		
MasterView Easy (product code 77010305)		Touch screen panel for reading charge status, current fold-back and/or Power Sharing setting		
MasterShunt (product code 77020100)		MasterBus integrated battery monitor, with detailed information on the status of your batteries for a optimised charging process, incl. voltage, current, remaining time and consumption capacity in percentage		
MasterBus USB Interface (product code 77030100)		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 MasterView System software.		
MasterVision panels	Model C3-RS (product code 70403040)		Masterlink MICC (product code 70403105)	

* Check our website for the certificates per model.

** The charge characteristic can be set to your requirements.

*** The battery charge current can sometimes be specified at 20 °C, so take temperature compensation into account.

**Mass****24/75**

40020756

Mass**24/100**

40021006

Mass**24/100-3ph**

40031006

Mass**48/25**

40040256

Mass**48/50**

40040506

24 V	24 V	24 V	48 V	48 V
75 A at 28.5 V	100 A at 28.5 V	100 A at 28.5 V	25 A at 57 V	50 A at 57 V
I	I	I	I	I
n.a.	n.a.	n.a.	n.a.	n.a.
150-750 Ah	200-1000 Ah	200-1000 Ah	100-500 Ah	100-500 Ah
230 V (180-265 V) – 50/60 Hz		3x400 V (360-485 V)	230 V (180-250 V) – 50/60 Hz	
yes	yes	yes	yes	yes
LED display	LED display	LED display	LED display	LED display
420x318x130 mm	420x318x130 mm	420x318x130 mm	420x318x130 mm	420x318x130 mm
16.5x12.5x5.1 inch	16.5x12.5x5.1 inch	16.5x12.5x5.1 inch	16.5x12.5x5.1 inch	16.5x12.5x5.1 inch
7.7 kg / 17 lbs	7.7 kg / 17 lbs	7.7 kg / 17 lbs	4.6 kg / 10.1 lbs	7.7 kg / 17 lbs
CE, E-mark, ABYC A-31, RRR, RS, Lloyds, DNV	CE, E-mark, ABYC A-31, RRR, RS, Lloyds, DNV	CE, E-mark, ABYC A-31, RRR, RS	CE, E-mark, ABYC A-31, RRR, RS	CE, E-mark, ABYC A-31, RRR, RS

I_{UoUo}, automatic / 3-step+ for gel/AGM/wet/Lithium Ion

28.5 V (8 hours)	28.5 V (8 hours)	28.5 V (8 hours)	57 V (8 hours)	57 V (8 hours)
28.5 V (4 hours)	28.5 V (4 hours)	28.5 V (4 hours)	57 V (4 hours)	57 V (4 hours)
26.5 V	26.5 V	26.5 V	53 V	53 V
27.6 V	27.6 V	27.6 V	55.2 V	55.2 V
-60 mV/°C	-60 mV/°C	-60 mV/°C	-120 mV/°C	-120 mV/°C
voltage drop compensation in DC cables up to 3 Volt				
< 1 mA	< 1 mA	< 1 mA	< 1 mA	< 1 mA
2600 W	3500 W	3500 W	1800 W	3500 W
> 0.95	> 0.95	> 0.95	> 0.95	> 0.95
-25 °C to 80 °C; > 45 °C derating power				
vario fan	vario fan	vario fan	vario fan	vario fan
< 48 dBA at 1 mtr	< 48 dBA at 1 mtr	< 48 dBA at 1 mtr	< 48 dBA at 1 mtr	< 48 dBA at 1 mtr
IP23	IP23	IP23	IP23	IP23
over temperature, over load, short circuit, high battery, low battery				
yes	yes	yes	yes	yes
integrated in the battery charger as standard				

Remote panel for reading the charge status of your battery charger, including error notifications.

Touch screen panel for reading charge status, current fold-back and/or Power Sharing setting.

MasterBus integrated battery monitor, with detailed information on the status of your batteries for a optimised charging process, incl. voltage, current, remaining time and consumption capacity in percentage.

Communication port between MasterBus and the USB port of your PC; enables reading and configuration of your MasterBus system on the PC when combined with MasterView System software (free to download).

Specifications Mass Sine sine wave inverters



**Mass Sine
12/800**

24010800



**Mass Sine
12/1200**

24011200



**Mass Sine
12/2000**

24012000

Product code 230 V





GENERAL SPECIFICATIONS

Nominal battery voltage	12 V	12 V	12 V
Recommended battery capacity	> 100 Ah	> 150 Ah	> 200 Ah
Output voltage ($\pm 5\%$)	230 V – 50 Hz (± 0.01 Hz)	230 V – 50 Hz (± 0.01 Hz)	230 V – 50 Hz (± 0.01 Hz)
P30 power at 40 °C, cos phi I	800 W	1200 W	2000 W
Continuous power at 40 °C, cos phi I	650 W	1000 W	1800 W
Peak load	1600 W	2400 W	4000 W
Output waveform	true sine	true sine	true sine
Efficiency	92%	92%	92%
Display/read-out	LED display	LED display	LED display
Dimensions, hxxwxd	325x220x111 mm 12.8x8.7x4.4 inch	340x261x130 mm 13.4x10.3x5.1 inch	420x318x136 mm 16.5x12.5x5.4 inch
Weight	3.9 kg / 8.6 lbs	8 kg / 17.4 lbs	14.6 kg / 32.2 lbs
Approvals	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
Low battery voltage, switches off at	10 V, ± 0.5 V	10 V, ± 0.5 V	10 V, ± 0.5 V
Low battery voltage, switches on at	11 V, ± 0.5 V	11 V, ± 0.5 V	11 V, ± 0.5 V
High battery voltage, switches off at	15,5 V, ± 0.5 V	15,5 V, ± 0.5 V	15,5 V, ± 0.5 V
High battery voltage, switches on at	14,5 V, ± 0.5 V	14,5 V, ± 0.5 V	14,5 V, ± 0.5 V
Max. ripple on DC (battery)	5% RMS	5% RMS	5% RMS
Input current (nominal load)	73 A	110 A	183 A
No load power consumption:			
• 'on' mode (230 V)	470 mA – 5.6 W	450 mA – 5 W	480 mA – 6 W
• stand-by (scan mode)	65 mA – 0.8 W	43 mA – 0.5 W	50 mA – 0.6 W
Minimal DC fuse (slow blow)**	100 A	150 A	250 A
Minimal cable size	25 mm ²	50 mm ²	70 mm ²
Harmonic distortion typical	< 5%	< 5%	< 5%
Cos Phi	all power factors allowed	all power factors allowed	all power factors allowed
Temperature range (ambient temp.)	_____	-25 °C to 80 °C; > 40 °C derating power	_____
Cooling	natural/forced	natural/forced	natural/forced
Sound level	48 dBA at 1 mtr	48 dBA at 1 mtr	48 dBA at 1 mtr
Protection degree	IP23	IP23	IP23
Protections	_____	over temperature, over load, short circuit, high battery, low battery	_____
MasterBus compatible	_____	yes, using a MasterBus Inverter Interface or AC Power Analyser	_____
AC connection	internal	internal	internal

OPTIONS

Model C4-RI (product code 70404110)		Remote control on/off for the Mass Sine sine wave inverter.
Masterlink/MICC (product code 70403105)		Battery consumption meter for 2 batteries, 12/24 V DC with LCD read-out, remote control for Mass Sine inverter and Mass battery charger or Mass Combi.
MasterBus Inverter Interface (product code 77030700)		Integrates the Mass Sine inverter in a MasterBus network.
AC Power Analyser (product code 77031200)		Integrates the Mass Sine inverter in a MasterBus network and visualizes the AC voltage, current and power.
Transfer system		The Masterswitch and Systemswitch can be connected to all inverters.

* Also available in 60 Hz; product code 1500 W model = 24121500 / product code 2500 W model = 24122500 / product code 5000 W model = 24195100.

** DC fuse depends on the cable size.



Mass Sine
24/800
24020800



Mass Sine
24/1500*
24021500



Mass Sine
24/2500*
24022500



Mass Sine
24/5000*
24095100

24 V	24 V	24 V	24 V
>50 Ah	>150 Ah	>200 Ah	>400 Ah
230 V – 50 Hz (± 0.01 Hz)	230 V – 50 Hz (± 0.01 Hz)	230 V – 50 Hz (± 0.01 Hz)	230 V – 50 Hz (± 0.01 Hz)
800 W	1500 W	2500 W	5000 W
650 W	1200 W	2000 W	4000 W
1600 W	2900 W	5000 W	9000 W
true sine	true sine	true sine	true sine
92%	92%	92%	92%
LED display	LED display	LED display	LED display
325x220x111 mm	340x261x130 mm	420x318x130 mm	470x315x254 mm
12.8x8.7x4.4 inch	13.4x10.3x5.1 inch	16.5x12.5x5.1 inch	18.5x12.4x10 inch
3.9 kg / 8.6 lbs	8 kg / 17.4 lbs	14.6 kg / 32.2 lbs	25 kg / 55.1 lbs
CE, E-mark, ABYC A-31	CE, E-mark, ABYC A-31	CE, E-mark, ABYC A-31	CE, E-mark, ABYC A-31

HF switch mode	HF switch mode	HF switch mode	HF switch mode
19 V, ± 0.5 V	19 V, ± 0.5 V	19 V, ± 0.5 V	19 V, ± 0.5 V
22 V, ± 0.5 V	22 V, ± 0.5 V	22 V, ± 0.5 V	22 V, ± 0.5 V
32 V, ± 0.5 V	32 V, ± 0.5 V	33 V, ± 0.5 V	32 V, ± 0.5 V
30 V, ± 0.5 V	30 V, ± 0.5 V	31 V, ± 0.5 V	30 V, ± 0.5 V
5% RMS	5% RMS	5% RMS	5% RMS
36 A	68 A	115 A	230 A

240 mA – 5.6 W	200 mA – 5 W	250 mA – 6 W	250 mA – 6 W
35 mA – 0.8 W	25 mA – 0.6 W	25 mA – 0.6 W	n.a.
63 A	100 A	160 A	1x 250 A of 2x 125 A
16 mm ²	25 mm ²	50 mm ²	2x 70 mm ²
< 5%	< 5%	< 5%	< 5%
all power factors allowed	all power factors allowed	all power factors allowed	all power factors allowed

-25 °C to 80 °C; > 40 °C derating power			
natural/forced	natural/forced	natural/forced	natural/forced
48 dBA at 1 mtr	48 dBA at 1 mtr	48 dBA at 1 mtr	48 dBA at 1 mtr
IP23	IP23	IP23	IP23
over temperature, over load, short circuit, high battery, low battery			
yes, using a MasterBus Inverter Interface or AC Power Analyser			
internal	internal	internal	internal

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

Battery consumption meter for 2 batteries, 12/24 V DC with LCD read-out, remote control for Mass Sine inverter and Mass battery charger or Mass Combi.

Integrates the Mass Sine inverter in a MasterBus network.

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

The Masterswitch and Systemswitch can be connected to all inverters.

The following models are also available with a WAGO 770-113 connector and 25 cm cable, 230V/50Hz:

- Mass Sine 12/1200
- Mass Sine 12/2000
- Mass Sine 24/2500

Specifications Mac & Magic converters



Mac 24/12-20
81200100



Magic 24/12-20
81300100



Magic 24/24-20
81300200

Product code

SPECIFICATIONS INPUT

Nominal input voltage	24 V	24 V	24 V
Input range	20-32 V DC	19-32 V DC	19-32 V DC
Input range, 3-step charge mode	_____	24-32 V DC	_____
Lower input set point	_____	20 V DC*	_____
Delay lower input set point	_____	30 sec.*	_____

SPECIFICATIONS OUTPUT

Factory setting	13.6 V DC*	13.6 V DC*	27.2 V DC*
Voltage adjustable*	10-15 V DC	10-15 V DC	20-28.5 V DC
Output voltage dimmer*	4-13 V DC	4-13 V DC	8-26 V DC
Stabilised	_____	2% at extremes of temperatures, load and input	_____
Ripple	max. 1% peak peak	max. 1% peak peak	max. 1% peak peak
Power (max./nominal)	300 / 270 W	300 / 300 W	580 / 580 W
Max. current	20 A	20 A	20 A
Charge current - 3-step mode	16 A	16 A	16 A




GENERAL SPECIFICATIONS

Galvanic isolation	no	yes	yes
Voltage limited	yes	yes	yes
Efficiency	_____	>90% (at nom. input voltage, full load); 92% peak	_____
Protected against over load	yes	yes	yes
Protected against over temperature	yes	yes	yes
Dimmer function	_____	yes, by external momentary switch via fast-on connection, to be activated by DIP-switch setting	_____
Alarm contact	no	yes (fast-on connector)	yes (fast-on connector)
Dimensions, hwxwx	190x130x61 mm 7.5x5.1x2.4 inch	227x154x81 mm 8.9x6.1x3.2 inch	227x154x81 mm 8.9x6.1x3.2 inch
Weight	1.0 kg / 2.2 lbs	1.8 kg / 4 lbs	1.8 kg / 4 lbs
Approvals	CE	CE	CE

TECHNICAL SPECIFICATIONS

3-Step charge option	_____	yes (DIP switch settings)	_____
DC consumption	< 30 mA	< 115 mA	< 115 mA
Connections input/output	_____	screw terminals, maximum wire size 16 mm ² / AWG5	_____
Temperature range (ambient temp.)	_____	-25 °C to 80 °C, > 40 °C derating power	_____
Cooling	natural cooling	maintenance free vario fans	maintenance free vario fans
Sound level	< 30 dBA at 1 mtr	< 48 dBA at 1 mtr	< 48 dBA at 1 mtr
Protection degree	IP21	IP21	IP21
MasterBus compatible	_____	yes, by means of MasterBus Serial Interface (product code 77030450)	_____

OPTIES

PC-Link (product code 21730100)		Interface between Magic converter and PC, in combination with the MasterAdjust software (free to download) The PC-Link can be directly connected to a computer serial port.
MasterView Easy (product code 77010305)		Touch screen panel for reading status and dimmer function settings
MasterBus Serial Interface (product code 77030450)		Integrates the Mac & Magic converters in a MasterBus network

* Adjustable with MasterAdjust software.



Magic 12/12-20
81300400



Magic 12/24-10
81300300

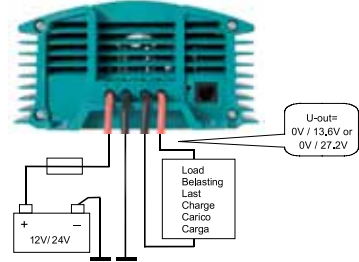
12 V		12 V
_____	11-16 V DC	_____
_____	12-16 V DC	_____
_____	10 V DC*	_____
_____	30 sec.*	_____

13.6 V DC*	27.2 V DC*
10-15 V DC	20-28.5 V DC
4-13 V DC	8-26 V DC
_____	2% at extremes of temperatures, load and input
max. 1% peak peak	max. 1% peak peak
300 / 300 W	300 / 300 W
20 A	10 A
16 A	8 A

yes	yes
yes	yes
> 90% (at nom. input voltage, full load); 92% peak	
yes	yes
yes	yes
yes, by external momentary switch via fast-on connection, to be activated by DIP-switch setting	
yes (fast-on connector)	yes (fast-on connector)
227x154x81 mm	227x154x81 mm
8.9x6.1x3.2 inch	8.9x6.1x3.2 inch
1.8 kg / 4 lbs	1.8 kg / 4 lbs
CE	CE

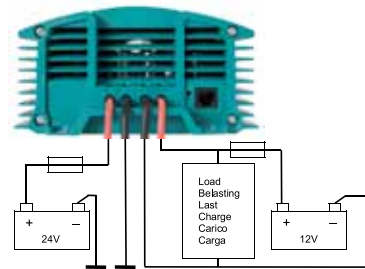
_____	yes (DIP switch settings)	_____
< 115 mA	< 115 mA	
screw terminals, maximum wire size 16 mm ² / AWG5		
-25 °C to 80 °C, > 40 °C derating power		
maintenance free vario fans		
< 48 dBA at 1 mtr		
IP21		
yes, by means of MasterBus Serial Interface (product code 77030450)		

Touch screen panel for reading status and dimmer function settings
Integrates the Mac & Magic converters in a MasterBus network



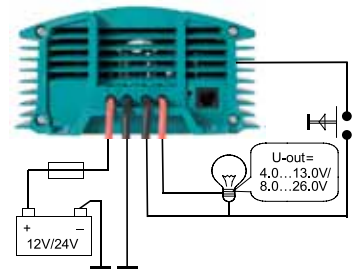
Magic as power supply

The Magic models can be fully used as a stabilised power supply: From 12 to 24 V, from 24 to 12 V or from 24 to 24 V. Inputs and outputs are galvanically isolated.



Mac & Magic as battery charger

12 V starter or emergency power batteries can be charged and monitored by a Mac or Magic converter. The charging method is identical to Mastervolt's Mass products (3-step technology), and voltage levels are adjustable using the MasterBus PC-Link/MasterAdjust software.

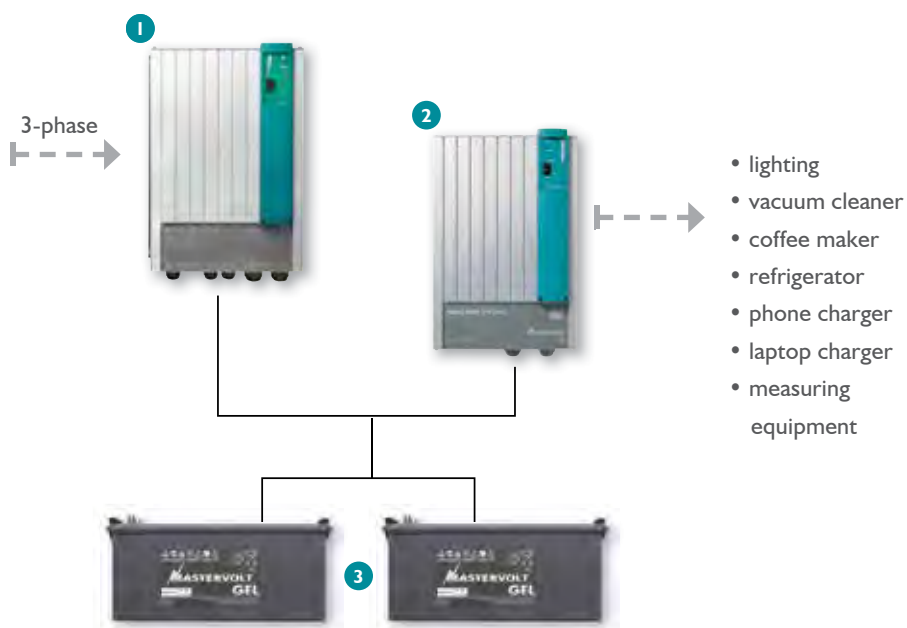


Mac or Magic as dimmer

Lights can be dimmed by means of a push button or pulse switch, with a maximum load of 250 Watt for the Mac. A second Mac can be installed when using multiple lamps.

Mastervolt products in a professional system

- Ideal as back-up system.
- 230 Volt without generator.
- Certified products for professional use in the most extreme conditions.



- 1 Mass 24/100-3ph battery charger.
- 2 Mass Sine 24/2500 sine wave inverter.
- 3 MVG 12/200 service battery.