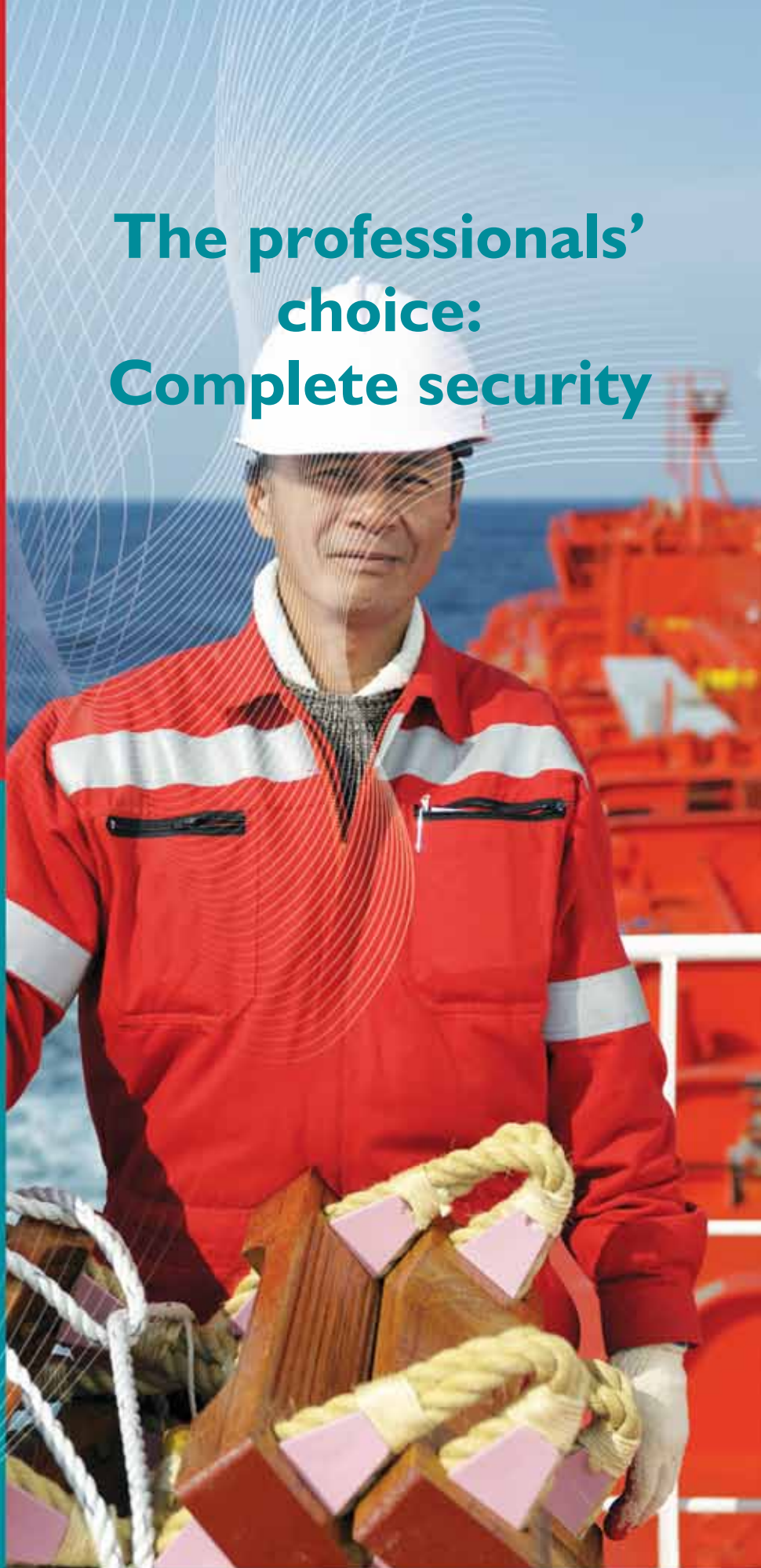


Mass Sine inverters
Mass battery chargers

The professionals'
choice:
Complete security



When full batteries matter
Robust technology
Built to last
Maximum safety



THE POWER TO BE INDEPENDENT



Heavy duty products

The Mastervolt Mass battery chargers and Mass Sine inverters have been designed for heavy use in professional and semi-professional environments. They continue to work reliably in the hottest engine rooms where the engines run on full power, and can be used around the clock where necessary. Even in the most extreme conditions the Mass battery chargers and inverters operate faultlessly and at full capacity.

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 battery chargers and inverters are ideal for commercial vessels, drilling platforms, the offshore industry and large cruise ships and superyachts. The Mastervolt Mass products serve as dependable high-tech components within any heavy duty power system.

Making the best even better

The reliability and long life-span of the Mass battery chargers and Mass Sine inverters has 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. With regards to the Mass battery chargers and inverters, this has resulted in:

- 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 life-span
- Savings in weight and space
- Fewer installation materials

More information

Contact your local sales point or see www.mastervolt.com



Easy installation, fast fitting

All Mass products are designed to easily fit within a system.



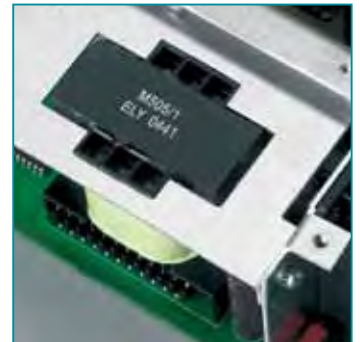
MasterBus compatible



The Mass battery charger is fully MasterBus compatible. In combination with the MasterBus Inverter Interface, it is simple to connect every Mass Sine inverter within a MasterBus network. All you need is a single cable with one connection. Your benefits: fast and easy installation, plus centralised monitoring, configuration and operating of your system with, for example, a MasterView panel.

Made tough by smart design

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



Easy and safe connection

The Mastervolt Mass battery chargers and Mass Sine inverters are equipped with certified industrial connection technology. The larger models have internal connections, the smaller models use a cable and external socket.

Automatic switching

Easy to fit within a shore and/or generator power system, the Mass battery chargers and Mass Sine inverters by Mastervolt can switch between sources or combine the supply using the Masterswitch or Systems switch system.



Mass Sine sine wave inverters



	Mass Sine 12/800	Mass Sine 12/1200	Mass Sine 12/2000	Mass Sine 24/800	Mass Sine 24/1500
Article no. 230 V	24010800	24011200	24012000	24020800	24021500
Article no. 120 V*	n.a.	n.a.	25012000*	n.a.	n.a.
Nominal battery voltage	12 V	12 V	12 V	24 V	24 V
P30 power Tamb= 25 °C, cos phi I	800 VA	1200 VA	2000 VA	800 VA	1500 VA
Nom. power Tamb= 40 °C, cos phi I	650 VA	1000 VA	1800 VA	650 VA	1200 VA
Peak load	1600 VA	2400 VA	4000 VA	1600 VA	2900 VA
Max. efficiency	92%	92%	92%	92%	92%
Dimensions, hxxwxd	313x187x82 mm 12.3x7.4x3.2 inch	340x261x144 mm 13.4x10.3x5.7 inch	420x318x130 mm 16.5x12.5x5.1 inch	325x220x111 mm 12.8x8.7x4.4 inch	340x261x144 mm 13.4x10.3x5.7 inch
Weight	3.9 kg / 8.6 lbs	6 kg / 13.2 lbs	9.4 kg / 20.7 lbs	3.9 kg / 8.6 lbs	6 kg / 13.2 lbs
Minimum battery capacity	> 100 Ah	> 150 Ah	> 200 Ah	> 50 Ah	> 150 Ah
Input current (nominal load)	68 A	130 A	200 A	34 A	70 A
No load power consumption 'stand-by'	65 mA/0.8 W	43 mA/0.5 W	50 mA/0.6 W	35 mA/0.8 W	25 mA/0.6 W
No load power consumption 'low energy' (208 V)	410 mA/4.9 W	420 mA/4.5 W	420 mA/5 W	200 mA/4.9 W	180 mA/4.5 W
No load power consumption 'high power' (230 V)	470 mA/5.6 W	450 mA/5 W	480 mA/6 W	240 mA/5.6 W	200 mA/5 W
Min. DC cable size	25 mm ²	50 mm ²	70 mm ²	16 mm ²	25 mm ²



	Mass Sine 24/2500	Mass Sine 24/5000	Mass Sine 24/10kVA	Mass Sine 24/15kVA
Article no. 230 V	24022500	24095100	24026000	24027000
Article no. 120 V*	25022500*	n.a.	n.a.	n.a.
Nominal battery voltage	24 V	24 V	24 V	24 V
P30 power Tamb= 25 °C, cos phi I	2500 VA	5000 VA	10 kVA	15 kVA
Nom. power Tamb= 40 °C, cos phi I	2000 VA	4000 VA	8 kVA	13 kVA
Peak load	5000 VA	10000 VA	20 kVA	30 kVA
Max. efficiency	92%	90%	92%	92%
Dimensions, hxxwxd	420x318x130 mm 16.5x12.5x5.1 inch	475.5x318x254 mm 18.7x10.3x10 inch	2xC4 + C5 kast C4= 460.5x318x143 mm / C5= 475.5x318x254 mm	3xC4 + C5 kast
Weight	9.7 kg / 21.4 lbs	19 kg / 41.9 lbs	44 kg / 97 lbs	55 kg / 121.3 lbs
Minimum battery capacity	> 200 Ah	> 400 Ah	> 500 Ah	> 800 Ah
Input current (nominal load)	120 A	240 A	4x 120 A	6x 120 A
No load power consumption 'stand-by'	25 mA/0.6 W	n.a.	< 10 W, 412 mA	< 10 W, 412 mA
No load power consumption 'low energy' (208 V)	225 mA/5.4 W	n.a.	n.a.	n.a.
No load power consumption 'high power' (230 V)	250 mA/6 W	250 mA/6 W	150 W	180 W
Min. DC cable size	50 mm ²	2x 50 mm ²	4x 50 mm ²	6x 50 mm ²

GENERAL SPECIFICATIONS

Output voltage (60 Hz available)	230 V/50 Hz, ±5%
Max. allowable ripple on DC	5% RMS
Harmonic distortion typical	3% / 2.5% for 10 kVA and 15 kVA models
AC connection (single phase, 3-wire)	internal

OPTIONS

Remote control panels	see www.mastervolt.com/inverters for an overview of the remote panels and the various read outs
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* 15% load reduction for the 120V/60Hz Mass Sine models.

Subject to change.

See www.mastervolt.com/inverters for more information.

Mass battery chargers



Article no.	Mass 12/60-2 40010600	Mass 12/80-2 40010800	Mass 24/15-2 40020150	Mass 24/25-2 40020250	Mass 24/50-2 40020500
Nominal input voltage	230 V (180-250 V)	230 V (180-250 V)	230 V (180-250 V)	230 V (180-250 V)	230 V (180-250 V)
Nominal output voltage	12 V	12 V	24 V	24 V	24 V
Total charge current + 2nd output	60 A / 3 A	80 A / 3 A	15 A / 3 A	25 A / 3 A	50 A / 3 A
Charge voltage Bulk (25 °C)	14.25 V	14.25 V	28.80 V	28.80 V	28.50 V
Charge voltage Absorption (25 °C)	14.25 V	14.25 V	28.50 V	28.50 V	28.50 V
Charge voltage Float - wet/gel+AGM (25 °C)	13.25/13.80 V	13.25/13.80 V	26.50/27.60 V	26.50/27.60 V	26.50/27.60 V
Dimensions, hxxwxd	340x261x130 mm 13.4x10.3x5.1 inch	340x261x130 mm 13.4x10.3x5.1 inch	325x220x111 mm 12.8x8.7x4.4 inch	325x220x111 mm 12.8x8.7x4.4 inch	340x261x130 mm 13.4x10.3x5.1 inch
Weight	4.6 kg / 10.1 lbs	4.6 kg / 10.1 lbs	3.3 kg / 7.3 lbs	3.3 kg / 7.3 lbs	4.6 kg / 10.1 lbs
Battery capacity (recommendation)	120-600 Ah	160-800 Ah	30-150 Ah	50-250 Ah	100-500 Ah
Full load consumption (230 V AC)	1100 W	1400 W	550 W	880 W	1800 W



Article no.	Mass 24/75-C 40020755	Mass 24/100-C 40021005	Mass 24/100-3ph 40031000	Mass 48/25 40040250	Mass 48/50 40040500
Nominal input voltage	230 V (180-250 V)	230 V (180-250 V)	3x400 V (360-485 V)	230 V (180-250 V)	230 V (180-250 V)
Nominal output voltage	24 V	24 V	24 V	48 V	48 V
Total charge current + 2nd output	75 A / optional	100 A / optional	100 A / optional	25 A / n.a.	50 A / n.a.
Charge voltage Bulk (25 °C)	28.50 V	28.50 V	28.50 V	57 V	57 V
Charge voltage Absorption (25 °C)	28.50 V	28.50 V	28.50 V	57 V	57 V
Charge voltage Float - wet/gel+AGM (25 °C)	26.50/27.60 V	26.50/27.60 V	26.50/27.60 V	53/55.2 V	53/55.2 V
Dimensions, hxxwxd	420x318x130 mm 16.5x12.5x5.1 inch	420x318x130 mm 16.5x12.5x5.1 inch	420x318x130 mm 16.5x12.5x5.1 inch	420x318x130 mm 16.5x12.5x5.1 inch	420x318x130 mm 16.5x12.5x5.1 inch
Weight	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
Battery capacity (recommendation)	150-750 Ah	200-1000 Ah	200-1000 Ah	100-500 Ah	100-500 Ah
Full load consumption (230 V AC)	2600 W	3500 W	3500 W	1800 W	3500 W

GENERAL SPECIFICATIONS

Charge characteristic	IUoUo, automatic / 3-step ^o
Absorption time (adjustable 15 min-6 hrs)	4 hours
Power factor regulation (cos phi)	>0,95
Temperature range	0 °C to +60 °C, fully safeguarded against overheating and short circuiting
Cooling	vario fan
Protection degree	IP23

Approvals: generic emission and disturbances standard: EN 55014-1:1993, generic harmonic current emissions: EN61000-3-3:1995, generic & safety accreditations immunity standard: EN 55014-2:1997, electrostatic discharge: EN 61000-4-2:1995, electrical fast transients: EN 61000-4-4:1995, surge transient: EN61000-4-5:1995, conducted radio frequency disturbances: EN61000-4-6:1996, voltage dips: EN 61000-4-11:1994

OPTIONS

Remote control panels	see www.mastervolt.com/batterychargers for an overview of the remote panels and the various read outs
Communication connection	QRS232 for all models + RS485 for 24/75, 24/100 and 48/50
GMDSS function	available for all models

Subject to change.

See www.mastervolt.com/batterychargers for more information.



MASTERVOLT

THE POWER TO BE INDEPENDENT

Powerful selling points

Mass battery chargers

- Developed for use within fully approved maritime power systems.
- Designed to withstand the most difficult conditions (full output by compensating cable losses up to 30 V).
- Lightweight, stainless steel, anodised aluminium casing.
- Coating of internal components prevents damage from damp or condensation.
- Insensitive to electromagnetic effects of other devices.
- Suitable for every type of battery, including Lithium Ion; delivered as standard with temperature sensor.
- 3-step[®] charging process for fast and complete loading.
- Full power at temperatures of up to 45 °C.
- Models from 15 to 100 A.
- Load capacities from 80 to 1000 Ah or more.
- Stable power supply 12/24/48 V, even without batteries.
- Also charges entirely empty batteries.
- Load sharing on models 24/75 and 24/100.
- Parallel switching and distribution possible using multiple battery chargers.
- Bespoke monitoring and controls at any location.
- Fast and easy installation with MasterBus.
- Cost-saving in combination with other MasterBus components.
- Reliable charger/supply for GMDSS.
- Certified by DNV, Germanische Lloyd, Lloyd, Bureau Veritas, RRR, RS; Connections in accordance with CE, ABYC and IEC60945.
- Type approval for use in zones A, B and C.

Mass Sine inverters

- Capacity of between 800 W and 15 kW.
- Fully integratable in existing systems with shore and/or generator power.
- Switch or combine sources with Masterswitch or Systemswitch.
- Suitable for high starting/peak loads, even up to 200% for short demands.
- 230 V/50 Hz pure sine wave voltage; no faults or humming sounds and no lines on the screen.
- Fully MasterBus compatible with AC Sense and MasterBus Inverter Interface.

