

Smart solutions for energy storage

Mastervolt provides autonomous energy supply for vehicles, boats and homes which are sometimes disconnected from the grid for long periods. Powerful and reliable batteries are the solution: Mastervolt provides several battery technologies designed for optimal performance, reliability and a long service life even in harsh environments.

MASTERVOLT



LITHIUM ION

Lithium Ion batteries ensure fast, safe and efficient use, an extremely long lifespan and 70 % savings on volume and weight. All Mastervolt Lithium Ion batteries use the extremely safe LiFePO4 chemical process.

64 MLI

Top quality Lithium Ion batteries. High capacity and specifically developed for extremely short charging cycles. Equipped with various functions such as an integrated Battery Management System and MasterBus/CAN communication.

RECOMMENDED FOR:



GEL

In these batteries, the electrolyte is absorbed by a gel. Gel batteries are entirely maintenance-free and because they do not produce gas when used in a normal way, can be placed anywhere.

68 MVG

Ideal as service battery and for cyclic use. For medium to large 12 and 24 V systems with a high number of charging and discharging cycles. Charges very quickly.

RECOMMENDED FOR:



68 MVSV 2 V

Robust Gel batteries designed for large systems and intensive use. Charge quickly and are extremely durable. Suitable for horizontal and vertical placement and problem-free deep discharge.

RECOMMENDED FOR:



Store



AGM

AGM batteries or glass fibre batteries can be discharged quickly with very high currents, making them ideal for starter applications.



BATTERY ISOLATORS

Mastervolt offers various smart solutions for managing multiple batteries.

70 AGM

The excellent starter current makes this battery an ideal replacement for traditional open batteries. Also suitable for light cyclic use.

70 AGM SLIMLINE

Universal and very slim battery with an exceptionally small footprint. Saves up to 15 % in volume and weight.

70 AGM 6 V

Alternative solution regarding placement and size for composing high capacity 12/24/48 V battery sets.

73 BI BATTERY MATE

Battery isolators with minimal energy loss.

75 CHARGE MATE

For connecting and/or disconnecting two batteries with optional current limiter and current priority.

75 BATTERY WATCH

Battery switch with protection against overcurrent and excessively deep discharge of your batteries.

RECOMMENDED FOR:



RECOMMENDED FOR:



RECOMMENDED FOR:



RECOMMENDED FOR:



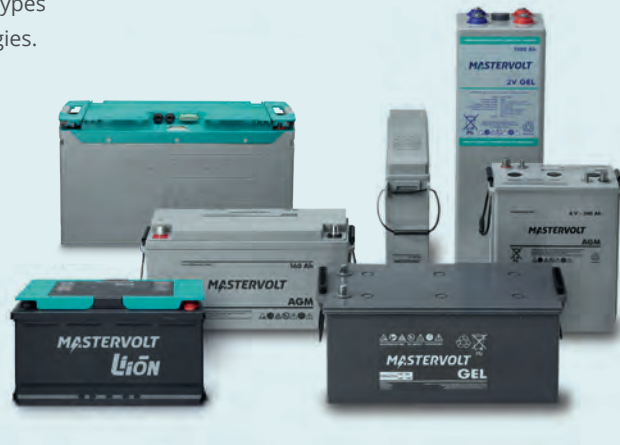
Mastervolt Batteries: The right choice for power storage

Mastervolt makes selecting the right battery simple. Whether you choose a low priced battery such as AGM or an innovative and advanced Lithium Ion battery, Mastervolt has the right battery for every application.

Mastervolt has divided its entire battery range of 36 types into seven series and four different battery technologies. Each series has its specific features.

All Mastervolt batteries offer you these advantages:

- Maintenance-free.
- Safe - no gassing.
- Easy to install.
- Designed for cyclic use (charge/discharge).
- Minimum self-discharge.
- Two year warranty.



Issues to take into account:

- Determining the correct battery capacity for your new battery/batteries is very important. For support and more information see ■ mastervolt.com/batteries.
- Choosing the right battery charger guarantees the maximum lifespan for your batteries. Mastervolt's modern 3-step+ charge technology charges your batteries safely and quickly. For more information see ■ mastervolt.com/chargers.
- A battery monitor is the best way to make the most of your batteries. Go to ■ mastervolt.com/batterymonitor for more information.



QUOTE

"As I designed and built most of my Mercedes camper myself, I did lots of research into the electrical system on the internet and during visits to exhibitions. I was looking for a better and more robust system than anything readily available on the market. This is how I came across Mastervolt, and eventually had my system setup designed by Mastervolt's engineers and their service partner Amrit Watersport in Arnhem."

**TIM SELDERS, THE NETHERLANDS
OWNER OF MERCEDES SPRINTER 4X4 MOTORHOME**



Which battery is best for your application?

		1	2	3	4
	Traditional open batteries	MLI Lithium Ion	MVG gel semi-traction	MVSV 2V gel traction	AGM semi-traction
Maintenance-free	—	★★★★★	★★★★★	★★★★★	★★★★★
No gas formation during charging	★	★★★★★	★★★★	★★★★	★★★★
Low self discharge while inactive	—	★★★★	★★★★★	★★★★★	★★★★★
Lifespan with complete discharge	★	★★★★★	★★★★	★★★★★	★★★
Lifespan with limited discharge	★★	★★★★★	★★★★★	★★★★★	★★★★
Resilience to excessive charge current	★★	★★★★★	★★★★	★★★★★	★★★
Suitable for prolonged high discharge current	★★★	★★★★★	★★★★	★★★★	★★★★
Suitable for selection of battery bank with high capacity	★★	★★★★★	★★★★	★★★★★	★★★
Suitable for E-propulsion	★	★★★★★	★★★★	★★★★★	★★★★★
Suitable for starting motors	★★	★★★★	★★★★	★★★	★★★★★
Shock-resistance	★	★★★★	★★★★★	★★★★★	★★★★★
Number of charge/discharge cycles	★	★★★★★	★★★★	★★★★★	★★★
Temperature-resistance	★	★★★★★	★★★★★	★★★★★	★★★
Installation angle/angle of inclination	—	★★★★	★★★★★	★★★★★	★★★★★
Return on investment with limited use	★	★★★★	★★★★	★★★★★	★★★★
Return on investment with intensive use	★	★★★★★	★★★★	★★★★★	★★★
Product warranty	± 1 year	2 year	2 year	7 year pro rata	2 year
Worldwide service	★	★★★★★	★★★★★	★★★★★	★★★★★

★★★★★ excellent

★★★★ very good

★★★ good

★★ adequate

★ inadequate

— poor

1 Lithium Ion Batteries



Lithium Ion batteries have a high energy density, offering savings of up to 70 % in volume and weight compared to traditional lead-acid batteries. They are perfect for cyclic applications, making over 2000 cycles with very deep (80 %) discharges, effectively storing 5 times as much energy over its lifespan compared to lead-acid.

The Mastervolt MLI range is top of the line. It offers large capacity batteries designed for extreme duty cycling, with all possible features such as integrated Battery Management System (BMS) and MasterBus/CAN communication.

2 Gel Batteries



In Gel batteries, the electrolyte is absorbed by a gel. This type of battery is entirely maintenance-free and has no gas formation with normal use. As no extra ventilation is required, Gel batteries can be installed anywhere. They are ideal as service battery and for cyclical use, and can be charged very quickly.

3 Traction Batteries



This robust Gel battery is designed for regular and deep discharging (> 1000 full cycles), and is ideal for large systems that require intensive use and a very long lifespan.

4 AGM Batteries



In AGM batteries, the electrolyte (mixture of water and sulphuric acid) is largely absorbed in glass fibre. This type of battery is entirely maintenance-free and there is no gas formation with normal use. Not requiring any ventilation, these batteries can be installed almost anywhere.

Their construction gives a very fast discharge at very high currents so AGM batteries are ideal for systems that require high currents (for instance when starting an engine). The battery poles can be unscrewed and this type of battery can be combined with every standard battery terminal.

Lithium Ion Batteries



A few of its outstanding features

- Space and weight savings up to 70 %.
- Three times the lifespan of traditional batteries.
- Extremely fast charging and discharging.
- High efficiency: not wasting energy.
- Safe operation.
- CZone / NMEA 2000 or MasterBus / CAN communication.

Mastervolt brings Lithium Ion technology in two product ranges:

■ MLI Series

Large capacity series, fully equipped for extreme cycling, like running air conditioning, pumps or electric motors for long periods of time with short intermittent charging.

■ MLI-E Series

The MLI-E is ideal for applications where long lifespan, light weight, fast charging and compactness are key. Its practical form factor makes the MLI-E perfectly suitable for mobile applications.

MASTER TIP



The term Lithium Ion encompasses multiple chemistries, having slightly different compositions of materials. These differences result in variations of energy and power density, lifespan, cost and safety. As safety is our primary concern, Mastervolt chooses to use only the safest available Lithium Ion chemistry, Lithium-iron phosphate (LiFePO4).

Lithium Ion is the battery technology of today. Do you want to be the fastest or best performing? Do you want to save energy or burn less fuel? Do you want your investment to last longest? Do you want to be 'out there' longest without getting anxious about your energy? Then Lithium Ion is your choice of batteries.



■ MLI Series

The MLI series is designed to be able to enjoy all the best properties of Lithium Ion technology in the harshest conditions (high charge/discharge currents, flooded environment, mechanical shock or vibrations). To do this, the MLI batteries bring two things on top of Lithium-iron phosphate cells: a sturdy, waterproof housing and the best Battery Management System (BMS). The BMS ensures optimal use of each individual cell, even during fast charge and discharge, and has integrated battery monitoring to always have the best information on the state of your battery. Last but not least, it has MasterBus / CAN and CZone / NMEA 2000 communication to the Mastervolt battery charger or to any CZone / NMEA 2000 based product to ensure the best possible recharging and lifetime of the battery.

■ MLI-E Series

The MLI-E saves up to 70 % in space and weight, recharges in less than an hour, and deep cycles 5.000 times easily, which is up to 10 times longer than lead-acid batteries. No external safety relay is needed. The MLI-E is protected against overcharging, deep discharging and overheating and comes with an integrated electronic safety switch. With its waterproof plastic case, the MLI-E is a straight-forward replacement for most lead-acid batteries. LED indicators inform you about the actual status of your battery. Of course, the MLI-E is provided with integrated battery monitoring, including information about state of charge and time remaining. For optimal integration NMEA 2000 / CZone and CANopen protocols are supported. Needless to say, the MLI-E fits perfectly into a MasterBus system, when combined with our system monitor EasyView 5. And last but not least: hands-on monitoring is available, using Bluetooth and a mobile app.





Suitable for large battery banks

The MLI series is ideal for electric and hybrid applications, and can be connected in parallel unlimited. The built-in common-rail technology offers an easy series connection of multiple MLI Ultra batteries.



Safe Operation



The Mastervolt MLI series is equipped with an integrated Battery Management System (BMS) and communication through MasterBus / CAN and CZone / NMEA 2000 (MLI 5500 models only). Even in the harshest cycling conditions this guarantees efficient and safe operation of the battery.



Superior Performance

Mastervolt Lithium Ion batteries have a realistic lifespan of over 2000 cycles at a depth of discharge (DOD) of 80 %. This means five times more energy storage than lead acid batteries thanks to features such as extremely high efficiency, the almost complete absence of self discharge and the minimal build-up of the infamous 'memory effect'.



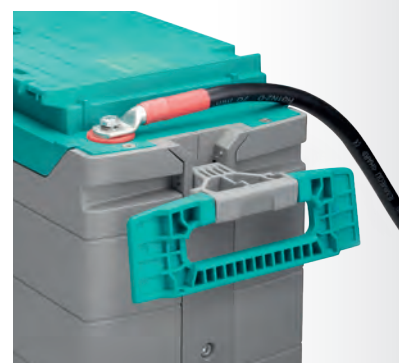
Weight Reduction



As speed and performance are crucial aspects, a Lithium Ion battery with 70 % less weight offers considerable benefits. A vessel or vehicle with a storage capacity of 20 kWh on board, can easily save up to 500 kg and achieve a substantially better performance.



Easy Installation



The MLI series includes two integrated handles with a recess for the correct and practical installation of the cables. The battery poles are easily accessible and completely protected, so no extra isolation covers are needed. The MLI batteries make a great 'drop-in replacement' for a system with lead-acid batteries, because no system changes or additional components are required.





MLI Lithium Ion series

CZone / MasterBus compatible

Specifications MLI Series

Specifications

MLI Series

		 NEW MODEL	 NEW MODEL	 NEW MODEL
	MLI-E 12/1200*	MLI Ultra 12/2750	MLI Ultra 12/5500	MLI Ultra 24/5500
Product code	66011200	66012750	66015500	66025500
GENERAL SPECIFICATIONS				
Nominal battery voltage	13.2 V	13.2 V	13.2 V	26.4 V
Nominal battery capacity	90 Ah	200 Ah	400 Ah	200 Ah
Nominal battery energy capacity	1200 Wh	2750 Wh	5500 Wh	5500 Wh
Max. charge current	90 A (1 C)	500 A (2.8 C)	500 A (1.4 C)	500 A (2.5 C)
Continuous charge current	n.a.	n.a.	200 A (1 C)	200 A (1 C)
Continuous discharge current	200 A (2.2 C)	500 A (2.8 C)	500 A (1.4 C)	500 A (2.5 C)
Peak discharge current	350 A (3.8 C) for 30 s	2000 A (10 C) for 10 s	2000 A (5 C) for 10 s	2000 A (10 C) for 10 s
Cycle life	3500 cycles at 80 % DOD at 25 °C, max. C3 charge and C2 discharge			
Battery monitoring	integrated	integrated	integrated	integrated
Communication	LED indicators, CANopen, CZone/ NMEA 2000 (through MLI-E drop cable), MasterBus (through EasyView 5, max. two MLI-E batteries), Bluetooth (via mobile app)	MasterBus, CZone, NMEA 2000 <i>delivered as standard with 1 mtr Mastervolt-CZone drop cable</i>		
Battery terminals	automotive or M8 hexagon	M8	M8	M8
Mounting position	mountable in multiple orientations, suitable for LNS fastening brackets	upright (recommended) or either long side		
Max. outer dimensions, lwxhxh (incl. terminals/grip handles)	353 x 175 x 190 mm 13.9 x 6.9 x 7.5 inch	341 x 197 x 355 mm 13.3 x 7.8 x 14 inch	622 x 197 x 355 mm 24.5 x 7.8 x 14 inch	622 x 197 x 355 mm 24.5 x 7.8 x 14 inch
Product weight	12.5 kg / 27.6 lb	31 kg / 68.3 lb	57 kg / 125.7 lb	57 kg / 125.7 lb
Approvals	n.a.	CE, E-Mark and DNV-GL (pending)		
TECHNICAL SPECIFICATIONS				
Battery chemistry	Lithium Iron Phosphate	Lithium Iron Phosphate	Lithium Iron Phosphate	Lithium Iron Phosphate
Protection degree	IP51	IP65 (electronics cabinet)	IP65 (electronics cabinet)	IP65 (electronics cabinet)
Parallel connection	yes, unlimited	yes, unlimited	yes, unlimited	yes, unlimited
Series connection	no	yes, up to 10 batteries. Systems over 48 V require a separate battery box to prevent access to high voltage parts.		
Protections	over voltage, under voltage, over-temperature			
Safety relay	n.a.	to be added mandatorily		
Safety relay controls	automatic,integrated	integrated	integrated	integrated

* Delivered with 2x automotive battery pole, 2x M8 bolt, hexagon tool, USB stick (with manual).

FEATURES

- Top performance, heavy duty Lithium Ion batteries.
- Ideal for running heavy loads for long periods and short charge times.
- Saves up to 70 % in space and weight.
- Three times the lifespan of traditional batteries.
- High cycle efficiency.
- Fast charging up to half an hour.
- High discharge rate up to 2.5C.
- CZone / NMEA 2000 or MasterBus / CAN communication.
- Integrated Battery Management System (BMS).
- Integrated battery monitoring (Ah consumed, state of charge).
- Series connection up to 10 batteries possible.
- Waterproof electronics cabinet.
- Extremely safe LiFePO4 chemistry.
- Tested and certified according to UN38.3.

CHECK THE MASTERVOLT SITE FOR
INTERESTING REAL-LIFE SYSTEMS:
MASTERVOLT.COM/REFERENCES
AND
EXTENDED TECHNICAL BACKGROUND
ON OUR PRODUCTS:
MASTERVOLT.COM/TECHNICAL-BACKGROUND

MANDATORY



Safety relay 12 volt
7700B-BSS



Safety relay 24 volt
7702B-BSS

The installation of an external safety relay is required and ensures the security of your battery installation.

CAUTION!

For additional safety, Mastervolt prescribes the use of a safety relay for the MLI Ultra series as mandatory part of the battery installation. Mastervolt provides 12- and 24-volt models, so you can always opt the correct voltage.

ACCESSORIES



EasyView 5
77010310

Waterproof system monitor with 'daylight readable' colour display and intuitive multi-language touchscreen to show the key system information at a glance.



Touch 5
80-911-0124-00

5 Inch touchscreen with built-in WiFi connectivity and IPx7 water ingress protection. Comes with super bright widescreen display and the latest capacitive touchscreen technology.



Touch 10
80-911-0100-00

10" LED-backlit projected capacitive touchscreen display with IPS technology. Offers full control of circuits plus important onboard system information (for AC and DC supplies).



MLI-E drop cable
for CZone
1 m: 77046000

Adapter cable to connect NMEA 2000 compatible devices, equipped with an RJ45 connector, to the NMEA 2000 or CZone network.



Mastervolt-CZone
drop cable
(MLI Ultra models)
0.5 m: 77060050
1 m: 77060100 (delivered as standard)
2 m: 77060200
5 m: 77060500

Adapter cable for connecting Mastervolt devices with CZone support to the CZone or NMEA 2000 network.



MVG Gel Series

FEATURES

- Perfect service battery for medium sized and large 12 V and 24 V systems.
- Extremely long lifespan.
- No gas formation with normal use.
- Fast recharge, high charge current possible.
- For intensive cycle use with a high number of charge/discharge cycles.
- Very low self-discharge.
- High return on investment.
- Two year warranty.

Specifications MVG Gel Series



MVG 12/25

Product code	64000250
Nominal battery voltage	12 V
Nominal battery capacity C20*	25 Ah
Max. charge current	12.5 A
CCA to DIN	110 A
CCA to SAE	175 A
Battery terminal	A-type
Max. outer dimensions, l x w x h (incl. terminals/grip handles)	167 x 176 x 126 mm 6.6 x 6.9 x 5 inch
Weight	9.6 kg / 21.2 lb

MVSV 2 V Gel Series

FEATURES

- Ideal for large systems that require intensive use and a very long lifespan.
- For intensive cycle use with a high number of charge/discharge cycles.
- Charges quickly.
- Highly sustainable battery for large installations.
- Robust build for longer lifespan.
- Deep discharging without problems.
- Can be installed horizontally or vertically.
- Seven year warranty (pro rata).

Specifications MVSV 2 V Gel Series



MVSV 280

Product code	68000280
Nominal battery voltage	2 V
Nominal battery capacity C10*	280 Ah
Max. charge current	140 A
Battery terminal	F-M8
Max. outer dimensions, l x w x h (incl. terminals/grip handles)	126 x 208 x 399 mm 5 x 8.2 x 15.7 inch
Weight	23 kg / 50.7 lb



MVSV 1500

Product code	68001500
Nominal battery voltage	2 V
Nominal battery capacity C10*	1500 Ah
Max. charge current	750 A
Battery terminal	F-M8
Max. outer dimensions, l x w x h (incl. terminals/grip handles)	212 x 277 x 690 mm 8.3 x 10.9 x 27.2 inch
Weight	95 kg / 209.4 lb

RELATED PRODUCTS



Battery terminals & isolation covers, page 77.



Battery Monitoring, page 117.



MVG 12/55

64000550

12 V

55 Ah

27.5 A

230 A

380 A

A-type

261 x 136 x 230 mm
 10.3 x 5.4 x 9.1 inch

19 kg / 41.9 lb



MVG 12/85

64000850

12 V

85 Ah

42.5 A

270 A

450 A

A-type

330 x 171 x 236 mm
 13 x 6.7 x 9.3 inch

32.6 kg / 71.9 lb



MVG 12/120

64001200

12 V

120 Ah

60 A

450 A

760 A

A-type

513 x 189 x 223 mm
 20.2 x 7.4 x 8.8 inch

41 kg / 90.4 lb



MVG 12/140

64001400

12 V

140 Ah

70 A

540 A

920 A

A-type

513 x 223 x 223 mm
 20.2 x 8.8 x 8.8 inch

49 kg / 108 lb



MVG 12/200

64002000

12 V

200 Ah

100 A

630 A

1100 A

A-type

518 x 274 x 238 mm
 20.4 x 10.8 x 9.4 inch

70 kg / 154.3 lb



MVSV 420

68000420

2 V

420 Ah

210 A

F-M8

126 x 208 x 515 mm
 5 x 8.2 x 20.3 inch

30 kg / 66.1 lb



MVSV 500

68000500

2 V

500 Ah

250 A

F-M8

147 x 208 x 515 mm
 5.8 x 8.2 x 20.3 inch

35 kg / 77.2 lb



MVSV 580

68000580

2 V

580 Ah

290 A

F-M8

168 x 208 x 515 mm
 6.6 x 8.2 x 20.3 inch

39 kg / 86 lb



MVSV 750

68000750

2 V

750 Ah

375 A

F-M8

147 x 208 x 690 mm
 5.8 x 8.2 x 27.2 inch

49 kg / 108 lb



MVSV 1000

68001000

2 V

1000 Ah

500 A

F-M8

212 x 193 x 690 mm
 8.3 x 7.6 x 27.2 inch

66 kg / 145.5 lb



MVSV 1250

68001250

2 V

1250 Ah

625 A

F-M8

212 x 235 x 690 mm
 8.3 x 9.3 x 27.2 inch

80 kg / 176.4 lb



MVSV 1650

68001651

2 V

1650 Ah

825 A

F-M8

212 x 277 x 759 mm
 8.3 x 10.9 x 29.9 inch

115 kg / 253.5 lb



MVSV 2200

68002200

2 V

2200 Ah

1100 A

F-M8

216 x 400 x 816 mm
 8.5 x 15.7 x 32.1 inch

160 kg / 352.7 lb



MVSV 2700

68002700

2 V

2700 Ah

1350 A

F-M8

214 x 489 x 816 mm
 8.4 x 19.3 x 32.1 inch

198 kg / 436.5 lb



* C10 = battery capacity at a discharge time of 10 hours, till 1.80 V per cell.
 C20 = battery capacity at a discharge time of 20 hours, till 10.5 V per battery.

AGM Series

FEATURES

- Excellent starter function.
- Perfect upgrade for flooded lead acid batteries.
- Same initial power surge in an AGM 12/90 Ah as 180 Ah flooded lead-acid battery.
- Glass-fibre technology ensures low internal resistance.
- Use of thicker plates extends lifespan.
- Can be combined with every standard battery terminal.
- Also for medium cyclical use.
- Two year warranty.

Specifications AGM Series



**AGM 12/55
(group 24)**

Product code	62000550
Nominal battery voltage	12 V
Nominal battery capacity C20*	55 Ah
Max. charge current	15.3 A
CCA to DIN	250 A
CCA to SAE	400 A
Battery terminal	M6 / A-type
Outside dimensions, l x w x h (incl. handles, without automotive terminal post)	257 x 132 x 200 mm 10.1 x 5.2 x 7.9 inch
Weight	17 kg / 37.5 lb

AGM SlimLine Series

FEATURES

- Ideal universal and very slim battery; suitable for starter functions.
- Compressed AGM technology.
- Saves up to 15 % in volume.
- Saves up to 15 % in weight.
- Miniscule footprint; 2x 185 Ah for a 200 Ah battery footprint.
- Convenient M6 connections.
- Two year warranty.

Specifications AGM SlimLine Series



AGM-SL 12/150

Product code	63001500
Nominal battery voltage	12 V
Nominal battery capacity C20*	150 Ah
Max. charge current	43 A
CCA to DIN	490 A
CCA to SAE	790 A
Battery terminal	M6
Max. outer dimensions, l x w x h (incl. terminals/grip handles)	560 x 110 x 280 mm 22 x 4.3 x 11 inch
Weight	40.5 kg / 89.3 lb

AGM 6-volt Series

FEATURES

- Offers an alternative solution in placement and dimensioning.
- Easy configuration of 12/24/48 V battery banks, with high capacity.
- Double pole for easy installation.
- No gas formation with normal use.
- Can be combined with every standard battery terminal.
- Two year warranty.

Specifications AGM 6-volt Series



AGM 6/260 Ah

Product code	61002600
Nominal battery voltage	6 V
Nominal battery capacity C20*	260 Ah
Max. charge current	72 A
CCA to DIN	590 A
CCA to SAE	1040 A
Battery terminal	A-type + stud M10
Max. outer dimensions, l x w x h (incl. terminals/grip handles)	295 x 180 x 298 mm 11.6 x 7.1 x 11.7 inch
Weight	35.5 kg / 78.3 lb

* C20 = battery capacity at a discharge time of 20 hours, till 10.5 V per battery.



**AGM 12/70
(group 27)**

62000700

12 V
70 Ah
19.5 A
290 A
460 A
M8 / A-type
348 x 167 x 178 mm
13.7 x 6.6 x 7 inch
21 kg / 46.3 lb



**AGM 12/90
(group 31)**

62000900

12 V
90 Ah
25.5 A
360 A
570 A
M8 / A-type
330 x 173 x 220 mm
13 x 6.8 x 8.7 inch
28 kg / 61.7 lb



AGM 12/130

62001300

12 V
130 Ah
36 A
590 A
940 A
M8 / A-type
408 x 176 x 228 mm
16.1 x 6.9 x 8.9 inch
37.6 kg / 82.9 lb



**AGM 12/160
(group 4D)**

62001600

12 V
160 Ah
45 A
550 A
870 A
M8 / A-type
485 x 170 x 242 mm
19.1 x 6.7 x 9.5 inch
42.3 kg / 93.3 lb



**AGM 12/225
(group 8D)**

62002250

12 V
225 Ah
63 A
680 A
1080 A
M8 / A-type
522 x 240 x 224
20.6 x 9.5 x 8.8 inch
63.5 kg / 140 lb



**AGM 12/270
(group Super 8D)**

62002700

12 V
270 Ah
76.5 A
750 A
1200 A
M8 / A-type
522 x 268 x 226 mm
20.6 x 10.6 x 8.9 inch
73 kg / 161 lb



AGM-SL 12/185

63001850

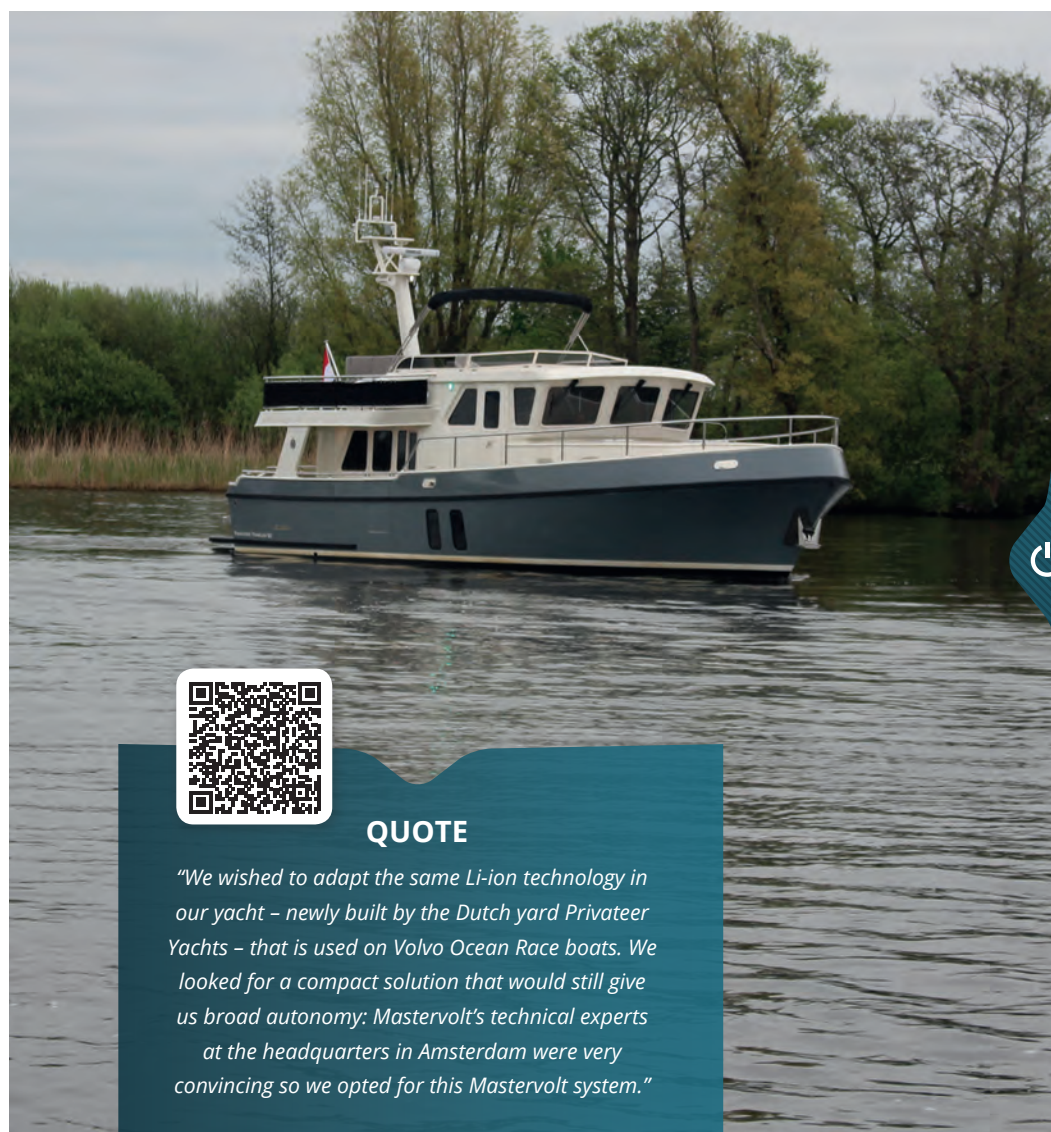
12 V
185 Ah
53 A
580 A
930 A
M6
560 x 126 x 280 mm
22 x 5 x 11 inch
51.2 kg / 112.9 lb



AGM 6/400 Ah

61004000

6 V
400 Ah
110 A
620 A
1100 A
A-type + stud M10
295 x 180 x 428 mm
11.6 x 7.1 x 16.9 inch
53 kg / 116.8 lb



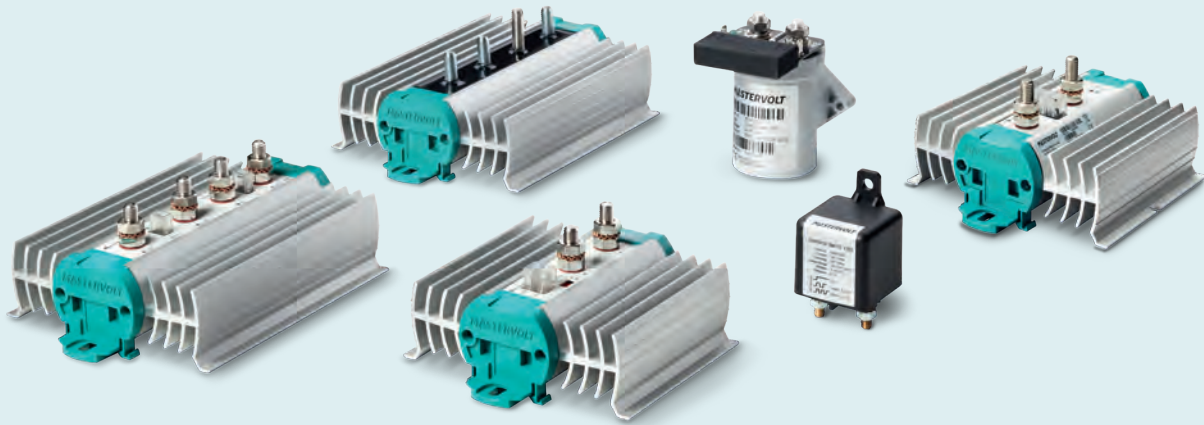
QUOTE

"We wished to adapt the same Li-ion technology in our yacht – newly built by the Dutch yard Privateer Yachts – that is used on Volvo Ocean Race boats. We looked for a compact solution that would still give us broad autonomy: Mastervolt's technical experts at the headquarters in Amsterdam were very convincing so we opted for this Mastervolt system."

**MR BOL, PROUD OWNER OF THE PRIVATEER
TRAWLER 50 BOLWERK, THE NETHERLANDS**

Optimal division of charge current over multiple batteries

Onboard systems usually consist of two or more batteries that function independently when powering the 12 or 24 V consumers. These batteries require independent charging with reliable battery isolators or battery combiners.



Mastervolt offers several intelligent solutions:

- Battery isolators that divide your charge current with a minimum energy loss.
- The Charge Mate for connecting and/or disconnecting two batteries.
- Battery Watch for monitoring the condition of your batteries (also usable as main switch).

Complete range for every system

- **BI series** battery isolators for conventional systems with an alternator or battery charger and two or three batteries.
- **Battery Mate** battery isolators with a negligible voltage drop; most suitable for charging multiple batteries, possibly with various brands of alternators, even if their charge voltage cannot be adjusted. Ensures high efficiency and negligible energy loss.
- **Charge Mate** for switching two batteries in parallel while charging.
- **Battery Watch** battery switch with protection against overvoltage and depletion of the battery.

Charging two or three batteries at high capacity

The Battery Mate is ideal for alternators with a maximum charge current of 160 A or 250 A. It can charge two or three batteries with a very high yield and without voltage drop.

Robust and Durable

Completely corrosion-proof material with aluminium heat sinks. The electronic components are encased in synthetic materials, the BI models have molded diode splitters.

Clear Monitoring

Safety guaranteed: The Battery Mate LED display indicates whether the power input is active.

Fast Installation

The synthetic end plates feature connection lugs, the solid bolt connections with nuts and locking rings ensure easy installation.





Compact and Lightweight

The Mastervolt BI battery isolators are compact and fully solid state, preventing wear. The weight varies from 580 to 1300 grams.

BI Battery Isolators

Mastervolt's BI battery isolators are based on conventional diode technology. The diode voltage drop (ca. 0.6 V) can be compensated for by adapting the output voltage of the connected charger or alternator. Mastervolt Mass battery chargers and Alpha Pro charge regulators are standardly equipped with automatic voltage drop compensation.




Specifications BI battery isolators

				
	BI 702-S	BI 703	BI 1202-S	BI 1203-S
Product code	83007021	83007030	83012021	83012031
Number of battery banks	2	3	2	3
Max. output charger	50 A	50 A	80 A	80 A
Max. output alternator	70 A	70 A	120 A	120 A
Compensation diode	yes	no	yes	yes
Dimensions, hxxxd	157 x 140 x 80 mm 6.2 x 5.5 x 3.1 inch	207 x 140 x 80 mm 8.1 x 5.5 x 3.1 inch	207 x 140 x 80 mm 8.1 x 5.5 x 3.1 inch	207 x 140 x 80 mm 8.1 x 5.5 x 3.1 inch
Weight	0.58 kg / 1.3 lb	1.1 kg / 2.4 lb	1.2 kg / 2.6 lb	1.3 kg / 2.9 lb

Battery Mate

While BI battery isolators are conventional diode splitters, the Battery Mate's technology is electronic and includes mosfets (transistors). Its components compensate for the voltage drop and ensure that charging continues at the right voltage level, even with several battery banks. The Battery Mate is compatible with any type of alternator/battery charger, in both existing and new systems. As the voltage loss between the alternator and battery is negligible, the Battery Mate performs far better than conventional battery isolators. This ensures fast and complete charging of your batteries without having to make additional adjustments to the alternator.

Specifications Battery Mate

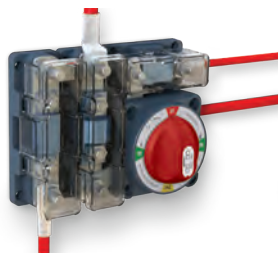
			
	Battery Mate 1602 IG	Battery Mate 1603 IG	Battery Mate 2503 IG
Product code	83116025	83116035	83125035
Number of battery outlets	2	3	3
Max. output charger	120 A	120 A	200 A
Max. output alternator	160 A	160 A	250 A
Dimensions, hxxxd	207 x 140 x 80 mm 8.1 x 5.5 x 3.1 inch	207 x 140 x 80 mm 8.1 x 5.5 x 3.1 inch	207 x 140 x 80 mm 8.1 x 5.5 x 3.1 inch
Weight	1 kg / 2.2 lb	1 kg / 2.2 lb	1 kg / 2.2 lb



Mastervolt also offers ProMariner battery isolators, the ProIsoCharge series.

For more information, please consult the ProMariner product catalogue and website.

ProMariner™
PROMARINER.COM



Mastervolt offers a comprehensive range of battery switches, bus bars, fuses and fuse holders for safe and reliable operation: the Pro Installer series.

See also the BEP product catalogue and website where we offer the most extended product portfolio worldwide, including the EZ-Mount switches.

Mastervolt also offers a Digital Voltage Sensing Relay from BEP, the DVR.

BEP

BEPMARINE.COM

Check out how
Pro Installer compares to
a conventional system:



QUOTE





"Our demanding technicians had been looking for a simple way to make serial DC distribution boards for some time. Pro Installer products offered the perfect solution, allowing us to easily connect and switch various components. This involves both Mastervolt power electronics and the products by Pro Installer, BEP and Blue Sea. It saves our mechanics a great deal of installation time, helps save space and results in clear, well-organised DC distribution boards."

**SANDER JETTEN, TECHNICAL DIRECTOR
JETTEN SHIPYARD, THE NETHERLANDS**

Charge Mate

A secondary battery is becoming increasingly common. As a second battery can prevent the main battery from depleting and being unable to start, this seems like a safe and reliable solution. The second battery, however, also has to be charged regularly. The Charge Mate series connects both batteries during charging and keeps them isolated when discharging. The Charge Mate 1202 and 2502 are especially practical for small systems, the Charge Mate Pro provides additional functionality by limiting the charge current to the second battery to 40 A or 90 A. The main battery is therefore charged with priority. The return current is automatically blocked and power dips of the onboard network are reduced. An emergency start function is possible by connecting an optional bypass switch.


Specifications Charge Mate

				
	Charge Mate 1202	Charge Mate 2502	Charge Mate Pro 40	Charge Mate Pro 90
Product code	83301202	83302502	83304002	83309002
GENERAL SPECIFICATIONS				
Monitoring	n.a.	n.a.	LED (warnings and status indication)	
Number of battery outlets	n.a.	n.a.	2	
Input voltage range	n.a.	n.a.	9-32 V	
Parallel configuration	n.a.	n.a.	yes	
Battery voltage	12/24 V	12/24 V	automatic 12/24 V detection	
Output current	120 A	500 A	limited to 40 A	limited to 90 A; > 25 °C derating power
Remote switch functions	n.a.	on, off, auto, start assist	on, off, auto, start assist	on, off, auto, start assist
Dimensions, hxxwxd	76 x 46 x 46 mm 3 x 1.8 x 1.8 inch	90 x 80 x 85 mm 3.5 x 3.1 x 3.3 inch	157 x 140 x 80 mm 6.2 x 5.5 x 3.2 inch	157 x 140 x 80 mm 6.2 x 5.5 x 3.2 inch
Weight	0.125 kg / 0.3 lb	0.65 kg / 1.4 lb	0.88 kg / 1.94 lb	0.88 kg / 1.94 lb
Approvals	CE	CE	CE	CE
TECHNICAL SPECIFICATIONS				
Connection possibilities	n.a.	n.a.	3 x fast-on connectors (switch, ground and status) • switch: for an optional single pole ON-OFF-ON switch for remote operation • status: for an optional LED indicator	
Power consumption	switch open: < 1 mA at 12/24 V DC		switch open: < 1 mA at 12/24 V DC	
Battery types	n.a.	n.a.	all types (Lithium Ion protection via Multi purpose contact, product code 77030500)	
Inrush current (250 ms)	2000 A	2000 A	n.a.	n.a.
Switch on voltage	13-15 V (12 V) 26-30 V (24 V)	13-15 V (12 V) 26-30 V (24 V)	13.5 V (12 V) 27 V (24 V)	13.5 V (12 V) 27 V (24 V)
Switch on delay	5 seconds	30 seconds	5 seconds	5 seconds
Switch off voltage	< 12.75 V (12 V) < 25.5 V (24 V)	< 12.25... > 15 V (12 V) < 25.5... > 30 V (24 V)	12.75 V (12 V) 25.5 V (24 V)	12.75 V (12 V) 25.5 V (24 V)
Switch off delay	no	3 minutes	2.5 seconds	2.5 seconds
Relay	electro-mechanical	electro-mechanical	electronically (mosfets with low voltage drop of max. 0.2 V)	
Ambient temperature	-40 to 65 °C	-40 to 60 °C / -40 °F to 140 °F		
Protection degree	IP21	IP21	IP65	IP65

Battery Watch

The Battery Watch is an essential element of any well-equipped battery system, offering you an electronic watchdog that ensures a much longer lifespan for your batteries. The unit monitors the optimum condition of your batteries and can also be used as a main battery isolation switch. LED lights provide a clear read-out and the undervoltage limit can be set using DIP switches.

Specifications Battery Watch

	
	Battery Watch
Product code	83200150
Input voltage	8-32 V
Max. DC load	150 A
Switch off under voltage 12 V	9-12 V
Switch off under voltage 24 V	18-24 V
Dimensions, hxxwxd	157 x 140 x 80 mm 6.2 x 5.5 x 3.2 inch
Weight	0.6 kg / 1.3 lb

Battery accessories for convenience, safety and comfort

Capacity and the right type of battery are important, but so too are safety, comfort and ease of installation; three aspects of your battery for which Mastervolt has numerous intelligent accessories. We will help you get the most out of your 12 V, 24 V or 48 V system, and ensure a maximum lifespan for your batteries.

Strong Connections for maximum safety

Your battery set is not complete without a proper and safe connection with the electrical system. Mastervolt recommends connections with corrosion-proof links and heavy-duty screw bolts. A proper cover and isolation of the battery poles prevents sparks or short circuiting.

Secure Fuses

The MasterShunt (page 84) can be fitted with a Class T fuse or ANL fuse. The Class T fuse is suitable for the high short-circuit current of Lithium Ion batteries.

For the DC distribution, Mastervolt offers an extensive range of ATM, ATO/ATC and MAXI fuses and fuse holders in addition to ANL fuses. A comprehensive portfolio is featured in the BEP and Blue Sea System product catalogues and on their websites.



Battery Switches

Mastervolt offers a comprehensive range of battery switches that allow you to isolate your on board power or starter system from its supply voltage.



The full product portfolio is available in the product catalogues and on the websites of BEP and Blue Sea Systems.

CHECK THE MASTERVOLT SITE FOR
INTERESTING REAL-LIFE SYSTEMS:
MASTERVOLT.COM/REFERENCES
AND
EXTENDED TECHNICAL BACKGROUND
ON OUR PRODUCTS:
[MASTERVOLT.COM/TECHNICAL-
BACKGROUND](http://MASTERVOLT.COM/TECHNICAL-BACKGROUND)

Specifications

Description	Product code
BATTERY TERMINALS	
Battery terminal with M10 thread plus	68061100
Battery terminal with M10 thread min	68061200
Battery terminal with M12 thread plus	68061300
Battery terminal with M12 thread min	68061400
ISOLATION COVERS	
Cover 457N3V02 red, for product code 68061100 & 68061300	68457302
Cover 457N3V14 black, for product code 68061200 & 68061400	68457314
MASTERSHUNT & DC DISTRIBUTION FUSES	
Class T fuse 500 A / 160 V DC, current limiting capability 20 kA	77049000
Bus bar	77020150
ANL fuses	
20 A	77049020
40 A	77049040
50 A	77049050
63 A	77049063
80 A	77049080
100 A	77049100
125 A	77049125
160 A	77049160
175 A	77049175
200 A	77049200
250 A	77049250
300 A	77049300
355 A	77049355
400 A	77049400
425 A	77049425
500 A	77049500
EARTH LEAKAGE SWITCHES	
DPN VIGI 16 A/B/30 mA, 1P+N	6385401610
Shore Fix 16 A/30 mA; basic fuse between AC plug and onboard system.	124001000

MASTER TIP



A discharge deeper than the battery capacity will greatly shorten the life of your battery. Mastervolt delivers very accurate battery monitors, which help you keep track on the charge status of your battery.



RELATED PRODUCTS



Battery Monitoring,
page 117.