

# MASTERVOLT

## Product description and application

The Mastervolt Battery Mate is an electronic battery isolator which is designed to distribute the charge current with a low voltage drop between several (sets of) batteries with the same nominal voltage. The Battery Mate prevents the current from flowing from one battery to another. The Battery Mate can only be installed in the positive lead between the supplying source (for instance a charger or an alternator) and the batteries. The Battery Mate cannot be used in combination with a combined charger / inverter (Combi).

## Installation

Be sure that the output of the supplying source is switched off during installation. Disconnect all electrical connections to the charger/ alternator and the batteries. Also be sure that no consumers are connected to the batteries during installation, to prevent hazardous situations. Install the Battery Mate not only as close as possible to the supplying source, but to the batteries as well, but do not install The Battery Mate straight above the batteries because of possible corrosive sulphur fumes. The Battery Mate must be installed in a well-ventilated environment, as high currents will heat up the Battery Mate. Preferably, the battery isolator should be mounted on a flat metal surface (never directly to the main engine), with the fins vertical. For correct connection - see drawing "connections". Connect the negative poles of the battery sets, the negative pole of the supplying source and the "Ground" post on the Battery Mate to a common ground. The Battery Mate automatically detects the nominal charge voltage (12V or 24V). Unlike conventional battery isolators, the Battery Mate is almost free of voltage drops. Therefore, when the Battery Mate is applied, the output voltage of the supplying source should NOT be increased for diode compensation. Option: only if an alternator is used which requires external excitation and external voltage sensing, the "ig" post of the Battery Mate must be connected to an ignition switched source such that power is applied in the ignition/run position.

## LED indicator

When DC-power is available from the Battery charger / Alternator, the green LED on top of the Battery Mate illuminates

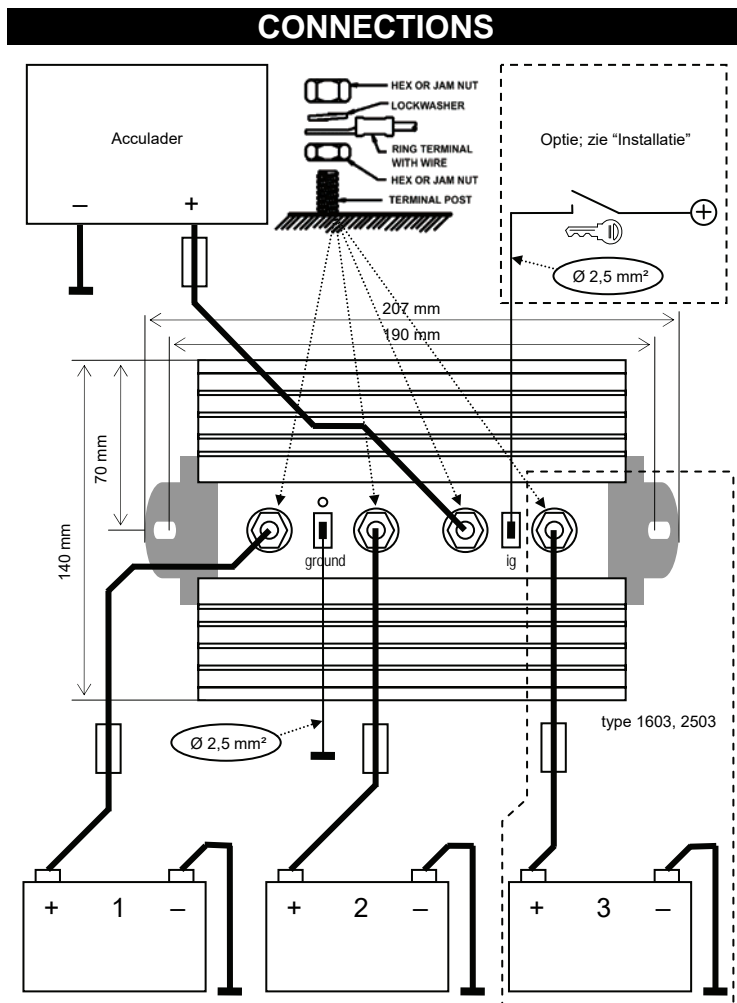
## Safety regulations and measures

1. Install the Battery Mate according to the stated instructions.
2. Never use the Battery Mate at a location where there is danger of gas or dust explosions.
3. Connections and safety features must be executed according to the locally applicable regulations.
4. Use cables with appropriate size wire and keep the cable connections as short as possible. Use reliable terminals and fasten the bolts tightly, but do not over torque.

## Liability

Mastervolt cannot be held liable for:

- Damage resulting from the use of the Battery Mate.
- Possible errors in the included manual and the consequences of these.
- Use that is inconsistent with the purpose of the product.



### BATTERY MATE

SPECIFICATIONS			
Type	1602	1603	2503
Article number	83116025	83116035	83125035
Number of outputs	2	3	3
Weight	1000 gr.	1000 gr.	1000 gr.
Max. current charger	120A (continuous)	120A (continuous)	200A (continuous)
Max. current alternator	160A (intermittent)	160A (intermittent)	250A (intermittent)
Input voltage	8-30 VDC	8-30 VDC	8-30 VDC
Insulation to ground	>500V @ 60Hz	>500V @ 60Hz	>500V @ 60Hz
Operation temperature	-40 to +120°C	-40 to +120°C	-40 to +120°C
Voltage drop	< 0.4V (0.2V@100A)	< 0.4V (0.2V@100A)	< 0.3V (0.1V@100A)
Dimensions (l x h x d)	207 x 140 x 80 mm	207 x 140 x 80 mm	207 x 140 x 80 mm
COMPLIANCE			
CE	yes		
RECOMMENDED WIRE SIZES (DIN 47750)			
75 – 100 Amp DC	25 mm <sup>2</sup> (3 AWG)		
100 – 140 Amp DC	35 mm <sup>2</sup> (1-2 AWG)		
140 – 200 Amp DC	50 mm <sup>2</sup> (0 AWG)		
200 – 300 Amp DC	70 mm <sup>2</sup> (000-00 AWG)		