

## The sun as an additional source of energy

Solar cells provide power from daylight. This renewable energy source boosts your independence and also helps keep your battery in peak condition. Mastervolt's solar know-how plays a key role.

## Versatile and flexible

Mastervolt solar charge regulators can be used flexibly to complement your energy system, or in places where no electricity is available, such as remote holiday cottages or chalets. In addition, the solar charge regulators are a perfect mobile solution for campers, measuring vehicles, yachts and traffic & information signs. They are also ideal for professional applications at remote petrol stations, telecom relay stations or offshore units.



## Features of the Solar ChargeMaster range

- High efficiency: your batteries are charged quickly.
- Capacity for solar panel configurations of up to 3600 Wp.
- Suitable for AGM, gel, wet and Mastervolt Lithium Ion batteries.
- Fast and flexible setting of battery type.
- Battery temperature sensor for long lifespan.
- Automatic 12 V/24 V/48 V detection.
- Switchable output.
- Noiseless operation.
- LCD display.
- Fully protected against overtemperature, overload, high/low battery voltage, high/low PV voltage, short circuit and reverse polarity.

## Additional features of the MPPT models

- Charges up to 30% faster with the same number of solar panels.
- Fewer cables, quick installation and lower losses.
- Suitable for all solar panels, including the inexpensive 60-cell panels.
- Suitable for humid environments (IP23).
- Large, clear LCD display.
- Audible signal (SCM25 MPPT).
- Monitoring and control via MasterBus (SCM60 MPPT-MB).

	SCM20	SCM40	SCM25 MPPT	SCM60 MPPT-MB
<b>FEATURES</b>				
Buzzer	yes	yes	yes	no
Communication	PC-Link (optional)	PC-Link (optional)	n.a.	MasterBus
LCD display features	battery state of charge, status output, battery setting		backlit LCD with PV power, load power, battery voltage, charge current, warnings, battery state of charge, battery setting	
Protections	over temperature, over load, high/low battery voltage, high/low PV voltage, short circuit, reverse polarity & HV transients			
<b>PV (SOLAR) INPUT</b>				
Nom. PV current	20 A (at 25 °C)	20 A (at 25 °C)	18 A (at 40 °C)	50 A (at 40 °C)
PV start voltage (12/24 V)	12.8 V/25.6 V	12.8 V/25.6 V	15 V/27 V	n.a.
PV start voltage (12/24/48 V)	n.a.	n.a.	n.a.	15 V/27 V/51 V
Nom. PV voltage (12 V)	n.a.	n.a.	15 - 66 V	13.2 - 115 V
Nom. PV voltage (24 V)	n.a.	n.a.	27 - 66 V	26.4 - 115 V
Nom. PV voltage (48 V)	n.a.	n.a.	n.a.	52.8 - 115 V
Max. PV voltage @ Tmin	50 V	50 V	75 V	145 V
Max. PV power (12 V)	360 Wp	720 Wp	350 Wp	900 Wp
Max. PV power (24 V)	720 Wp	1440 Wp	700 Wp	1800 Wp
Max. PV power (48 V)	n.a.	n.a.	n.a.	3600 Wp
Max. efficiency	n.a.	n.a.	> 98%	> 98%
Static MPP efficiency	n.a.	n.a.	99.9%	99.9%
<b>DC OUTPUT</b>				
System voltage 12 V	12 V/24 V auto select	12 V/24 V auto select	12 V/24 V auto select	12 V/24 V/48 V auto select
Battery type	AGM, gel, wet, Lithium Ion (MLI series)			
Battery temp. sensor	yes	yes	yes	yes
Lithium Ion protection	yes, via DC relay & Multipurpose Contact Output, art.no 77030500	yes, via DC relay & Multipurpose Contact Output, art.no 77030500	yes, via Multipurpose Contact Output, art.no 77030500	yes, via MasterBus connection
Max. charging current	20 A (at 25 °C)	40 A (at 25 °C)	25 A (at 40 °C)	60 A (at 40 °C)
Switchable output (max. current)	20 A	40 A	25 A	N/A
Energy consumption (night)	4 mA	4 mA	5 mA	< 1 mA
<b>GENERAL</b>				
Technology	PWM	PWM	MPPT	MPPT
Max. cable size	16 mm <sup>2</sup> Litz wire	16 mm <sup>2</sup> Litz wire	10 mm <sup>2</sup> Litz wire	35 mm <sup>2</sup> Litz wire
Dimensions, hwxwd	98 x 140 x 41 mm	98 x 140 x 41 mm	135 x 190 x 75 mm	398 x 168 x 104 mm
Weight	222 g	232 g	1.3 kg	5.5 kg
Temperature range	-25 to 50 °C	-25 to 50 °C	-20 to 55 °C	-20 to 55 °C
Humidity	95% non-condensing	95% non-condensing	95% non-condensing	95% non-condensing
Protection degree	IP20	IP20	IP23	IP23
Cooling	passive	passive	passive	passive
Grounding	(-) terminal	(-) terminal	(-) terminal	(-) terminal