Mastervolt Solar ChargeMaster range



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).

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Second S		SCM20	SCM40	SCM25 MPPT	SCM60 MPPT-MB	
Description PC-Link (optional) Daddit LCD with PV power, load power, battlery voltage, charge current, warnings, bathey date of charge, status output, battery voltage, highly low PV voltage, short circuit, reverse polarity & HV transients	FEATURES					
battery state of charge, status output, battery setting current, warrings, battery setting over temperature, over load, high/low battery voltage, high/low PV voltage, short circuit, reverse polarity & HV transients	Buzzer	yes	yes	yes	no	
Contract	Communication	PC-Link (optional)	PC-Link (optional)	n.a.	MasterBus	
PV (SOLAR) INPUT	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		
Nom. PV current 20 A (at 25 °C) 20 A (at 25 °C) 18 A (at 40 °C) 50 A (at 40 °C)	Protections	over temperature, over load, high/low battery voltage, high/low PV voltage, short circuit, reverse polarity & HV transients			reverse polarity & HV transients	
PV start voltage (12/24 V) PV start voltage (12 V) PV start voltage (24 V) PV start vol	PV (SOLAR) INPUT					
PV start voltage (12/24/48 V) n.a. n.a. n.a. n.a. 15 V27 V/51 V Nom. PV voltage (12 V) n.a. n.a. n.a. 15 - 66 V 13 2 - 115 V Nom. PV voltage (24 V) n.a. n.a. n.a. 15 - 66 V 26 4 - 115 V Nom. PV voltage (24 V) n.a. n.a. n.a. 15 - 66 V 26 4 - 115 V Nom. PV voltage (28 V) n.a. n.a. n.a. 52 8 - 115 V Nom. PV voltage (28 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. 3800 Wp Nom. PV power (48 V) n.a. n.a. n.a. 98.9% 99.9% DO OUTPUT 12 V/24 V auto select 12 V/24 V auto select 38tery type AGM, gel, wet, Lithium Ion (MLI series) 38tery temp. sensor yes yes, via DC relay & yes, via MasterBus connection viax. charging current 20 A (4125 °C) 20 A (40 C5 °C) 25 A (4140 °C) 60 A (4140 °	Nom. PV current	20 A (at 25 °C)	20 A (at 25 °C)	18 A (at 40 °C)	50 A (at 40 °C)	
Nom. PV voltage (12 V) Nom. PV voltage (24 V) Nom. PV voltage (24 V) Nom. PV voltage (24 V) Nom. PV voltage (48 V) Nom. PV power (12 V) Nom. PV voltage (48 V) Nom. PV power (12 V) Nom. PV voltage (48 V) Nom. Nom. Nom. Nom. Nom. Nom. Nom. Nom.	PV start voltage (12/24 V)	12.8 V/25.6 V	12.8 V/25.6 V	15 V/27 V	n.a.	
Nom. PV voltage (24 V) n.a. n.a. 27 - 66 V 26.4 - 115 V	PV start voltage (12/24/48 V)	n.a.	n.a.	n.a.	15 V/27 V/51 V	
Nom. PV voltage (48 V) n.a. n.a. n.a. n.a. n.a. 52.8-115 V Max. PV voltage (8) Tmin 50 V 50 V 75 V 145 V 145 V Max. PV power (12 V) 360 Wp 720 Wp 350 Wp 500 Wp 1800 Wp 1800 Wp Max. PV power (48 V) n.a. n.a. n.a. 1.a. 3600 Wp Max. efficiency n.a. n.a. n.a. 99.9% 96.9% COUTPUT System voltage 12 V 12 V/24 V auto select AGM, gel, wet, Lithium lon (MLI series) 38 attery type 38 attery type 38 Authium lon protection 40 August 25 °C) 40 A (at 25 °C) 40 A (at 25 °C) 25 A (at 40 °C) 80 A (at 4	Nom. PV voltage (12 V)	n.a.	n.a.	15 - 66 V	13.2 - 115 V	
Max. PV voltage @ Tmin	Nom. PV voltage (24 V)	n.a.	n.a.	27 - 66 V	26.4 - 115 V	
Max. PV power (12 V) 380 Wp 720 Wp 350 Wp 900 Wp	Nom. PV voltage (48 V)	n.a.	n.a.	n.a.	52.8 - 115 V	
Max. PV power (24 V) 720 Wp 1440 Wp 700 Wp 1800 Wp Max. PV power (48 V) n.a. n.a. n.a. n.a. 3600 Wp Max. efficiency n.a. n.a. n.a. 99.9% 99.9% Static MPP efficiency n.a. n.a. 99.9% 99.9% DC CUTPUT System voltage 12 V 212 V/24 V auto select auto select auto select auto select auto select auto select Battery type AGM, gel, wet, Lithium lon (MLI series) Sattery type yes yes yes yes yes yes yes. Ithium lon protection Multipurpose Contact Output, art. no 77030500 4art. no 77030500 4art. no 77030500 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 SENERAL Fechnology PVM PVM MPPT MPPT Max. cable size 16 mm² Litz wire 16 mm² Litz wire 10 mm² Litz wire 35 mm² Litz wire Dimensions, hxxxxd 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 Femperature range -25 to 50 °C -25 to 50 °C -20 to 55 °C -20 to 55 °C Humidlity 95% non-condensing 95% non-conde	Max. PV voltage @ Tmin	50 V	50 V	75 V	145 V	
Max. PV power (48 V) n.a. n.a. n.a. n.a. n.a. 3600 Wp	Max. PV power (12 V)	360 Wp	720 Wp	350 Wp	900 Wp	
Nax. efficiency Nax. effic	Max. PV power (24 V)	720 Wp	1440 Wp	700 Wp	1800 Wp	
Static MPP efficiency n.a. n.a. 99.9% 99.9%	Max. PV power (48 V)	n.a.	n.a.	n.a.	3600 Wp	
12 V/24 V 12 V/24 V 12 V/24 V 2 V/24 V 3 2 V/24	Max. efficiency	n.a.	n.a.	> 98%	> 98%	
12 V/24 V auto select 12 V/24 V auto select 2 V/24 V auto sele	Static MPP efficiency	n.a.	n.a.	99.9%	99.9%	
AgM, gel, wet, Lithium Ion (MLI series) Battery type AGM, gel, wet, Lithium Ion (MLI series) yes yes yes, via DC relay & yes, via Multipurpose Contact Output, art.no 77030500 Max. charging current 20 A (at 25 °C) 40 A (at 25 °C) 25 A (at 40 °C) 60 A (at 40 °C)	DC OUTPUT					
AGM, gel, wet, Lithium Ion (MLI series) yes	System voltage 12 V					
Sattery temp. sensor yes yes, via DC relay & yes, via DC relay & yes, via DC relay & Multipurpose Contact Output, art.no 77030500 yes, via MusterBus connection art.no 77030500 yes, via MusterBus connection output, art.no 77030500 yes, via Multipurpose Contact Output, art.no 77030500 yes, via MusterBus connection outp	Battery type					
yes, via DC relay & Wes, via Multipurpose Contact Output, art.no 77030500 Max. charging current 20 A (at 25 °C) 40 A (at 25 °C) 25 A (at 40 °C) 60 A (at 40 °C)	Battery temp. sensor	ves	<u> </u>		ves	
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	<td>Lithium Ion protection</td> <td>yes, via DC relay & Multipurpose Contact Output,</td> <td>yes, via DC relay & Multipurpose Contact Output,</td> <td>yes, via Multipurpose Contact</td> <td><u> </u></td>	Lithium Ion protection	yes, via DC relay & Multipurpose Contact Output,	yes, via DC relay & Multipurpose Contact Output,	yes, via Multipurpose Contact	<u> </u>
Max. currenty 20 A	Max. charging current			25 A (at 40 °C)	60 A (at 40 °C)	
Energy consumption (night) 4 mA 4 mA 5 mA < 1 mA GENERAL Fechnology PWM PWM PWM MPPT MPPT Max. cable size 16 mm² Litz wire 16 mm² Litz wire 10 mm² Litz wire 35 mm² Litz wire Dimensions, hxwxd 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	Switchable output (max. current)	20 A	40 A	25 A	N/A	
PWM PWM MPPT MPPT MPPT MPPT Max. cable size 16 mm² Litz wire 16 mm² Litz wire 10 mm² Litz wire 35 mm² Litz wire 25 mm² Litz wire 35 mm² Litz wire 25 mm² Litz wire 27 mm² Litz wire 28 x 140 x 41 mm 135 x 190 x 75 mm 398 x 168 x 104 mm 222 g 232 g 1.3 kg 5.5 kg 25 mm² Litz wire 25 to 50 °C 25 to 50 °C 20 to 55 °C 20 to 55 °C 20 to 55 °C 20 to 55 °C 27 mm² Litz wire 27 mm² Litz wire 28 x 104 mm 28 x 140 x 41 mm 28 x 140 x 41 mm 28 x 140 x 41 mm 28 x 168 x 104 mm 27 mm² Litz wire 27 mm²	Energy consumption (night)	4 mA	4 mA	5 mA	< 1 mA	
Max. cable size 16 mm² Litz wire 16 mm² Litz wire 10 mm² Litz wire 35 mm² Litz wire Dimensions, hxwxd 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 Humidity 95% non-condensing 95% non-condensing 95% non-condensing Protection degree IP20 IP23 IP23 Cooling passive passive passive passive	GENERAL					
Dimensions, hxwxd 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 Humidity 95% non-condensing 95% non-condensing 95% non-condensing Protection degree IP20 IP20 IP23 Cooling passive passive passive	Technology	PWM	PWM	MPPT	MPPT	
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	Max. cable size	16 mm² Litz wire	16 mm² Litz wire	10 mm² Litz wire	35 mm² Litz wire	
Temperature range -25 to 50 °C -25 to 50 °C -20 to 55 °C	Dimensions, hxwxd	98 x 140 x 41 mm	98 x 140 x 41 mm	135 x 190 x 75 mm	398 x 168 x 104 mm	
Humidity 95% non-condensing 95%	Weight	222 g	232 g	1.3 kg	5.5 kg	
Protection degree IP20 IP20 IP23 IP23 Cooling passive passive passive passive	Temperature range	-25 to 50 °C	-25 to 50 °C	-20 to 55 °C	-20 to 55 °C	
Cooling passive passive passive passive	Humidity	95% non-condensing	95% non-condensing	95% non-condensing	95% non-condensing	
	Protection degree	IP20	IP20	IP23	IP23	
Grounding (-) terminal (-) terminal (-) terminal (-) terminal	Cooling	passive	passive	passive	passive	
	Grounding	(-) terminal	(-) terminal	(-) terminal	(-) terminal	