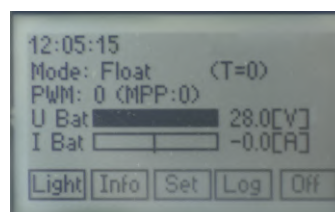




SOLAR/WIND CHARGE CONTROLLER WITH MPPT
(MAXIMUM POWER POINT TRACKING)

greenController 140/30

The highly developed **GreenController** Charge Control Unit by ECS is equipped with Maximum Power Point Tracking so that the maximum performance level of the solar module is constantly being determined. By voltage sensor connections and a temperature sensor the charging parameters are precisely identified in order to allow the highest possible duration of the battery. It is optimal for off-grid-systems with up to 1400 W module power. With its water and dust proof case and its excellent protection functions it is suitable to be used in all areas.



Product features and advantages

By our MPPT-Technology you achieve:

- Fast and precise tracking of the maximum performance level
- Excellent performance even with little insolation or sunset
- Cost savings with same performance due to less and smaller solar modules needed

Network- and communication features

- RS-485: allows communication between several devices on a bus
- Communication With BMS possible (for lithium battery systems)
- USB and Ethernet via optional converter

Display

- Graphic LCD display
- Six LEDs to show operating status
- Wide range of display options (e.g. battery voltage, state of charge, battery current, watt-hour-meter for power input and output, etc.)

Further features

- Support for Lithium (LiFeP04, LiFehQ04, LTO), NiCd and lead-acid batteries
- Battery voltage up to 64 volt
- Water- and dustproof
- Support for cable size up to 35 mm²
- Data logging on SD-Card
- Low internal consumption
- Operating With full performance without losses up to 60°C
- Comprehensive setting of battery charge parameter
- Four-phase charge with equalize feature (all parameter adjustable)
- Four user defined input and output ports each (e.g. for deviating management)
- Alarm sound in critical operating conditions

Made in Germany

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Mechanical data	
Dimensions	310 mm x 270 mm x 110 mm
Weight	3 kg
Max. cable size	Power terminal up to 35 mm ² Control terminal up to 1.5 mm ²
Cable glands	6 x M20 and 3 x M12
Protection class	IP54
Electrical data	
Maximum battery current	30 A
Maximum module current	30 A
Maximum module output	360 W at 12 V battery system 720 W at 24 V battery system 1440 W at 48 V battery system
Maximum PV-generator power	500 W at 12 V battery system 1000 W at 24 V battery system 2000 W at 48 V battery system
Maximum efficiency	96-99 % (depending on configuration)
System nominal voltage	12 V to 48 V (e.g. 6 - 24 cells Pb or 4 - 16 Cells LiFeP04)
Maximum solar off-load voltage	140 V
Battery operating voltage range	10 V to 64 V
Maximum own consumption	0.65 W
Transient overvoltage protection (Output + Battery + Input)	1500 W
Charging the battery	
Charging algorithm	Four-phase charge
Phases of battery charging	Bulk, Absorption, Float, Equalize
Temperature equalization	Coefficient (adjustable): Default: -5 mV/°Ccell (25 °C reference) Range: -55 °C to +125 °C
Nominal value (adjustable)	Absorption, Float, Equalize, HVD, LVD, LVD reconnect
Environmental data	
Ambient temperature	-20 °C to +60 °C
Storage temperature	-55 °C to +85 °C
Air humidity	100% non-condensing

Electronic protection devices

- Excessive temperature
- Overload charge output
 - Overload solar input
- Reverse current during night
- Deep discharge protection, overcharge protection
- Lightning surges and impulse voltage

Communication ports

- RS485
- USB (optional with converter)
- Ethernet (optionally with converter)

Inputs and outputs

- PV module, battery, load, RS485
 - Temp. sensor
 - Voltage sensor
 - 4 x analog / digital inputs
- 4 x OC transistor switching outputs (50 V / 0.5 A)

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