

## PRODUCT INFORMATION

# GREENCONTROLLER 140/30 OF GSM

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

ECS

*...because we enjoy to  
accomplishing the impossible*

*Find prices and further information  
on our website  
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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 a deductible mountable display it is especially for installing in control cabinets.



## 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 with optional converter
- ◆ GSM wireless remote maintenance

### Display

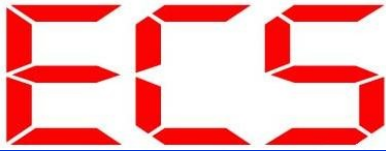
- ◆ Graphic LCD display
- ◆ Six LEDs to show operating status
- ◆ Wide range of display options (e.g. battery voltage, state of charge, battery current, watt-hour-meter for power input and output, etc.)

### Anti-theft-protection

- ◆ GPS-position transmission
- ◆ Transmission of sabotage signals

### Further Features

- ◆ Support for Lithium (LiFePO<sub>4</sub>, LiFeYPO<sub>4</sub>, LTO), NiCd and lead-acid batteries
- ◆ 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



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#### Mechanical Data

- ◆ Dimensions 260 mm x 210 mm x 80 mm
- ◆ Weight 2 kg
- ◆ Maximum cable size Power terminal up to 35 mm<sup>2</sup>  
Control terminal up to 1,5 mm<sup>2</sup>
- ◆ Protection class IP00

#### Electrical Data

- ◆ Maximum battery current 30 A
- ◆ Maximum module current 30 A
- ◆ Maximum module output 360 W at 12 V and 720 W at 24 V  
1400 W at 48 V
- ◆ Maximum efficiency 96 % to 99 %
- ◆ System nominal voltage 12 V to 48 V  
(e.g. 6 - 24 Pb cells, 4 - 16 LiFePo4 cells)
- ◆ Maximum solar off-load voltage 140 V
- ◆ Operating voltage range of battery 10 V to 64 V
- ◆ Maximum own consumption 0,75 W
- ◆ Transient overvoltage protection (output + battery + input) 1.500 W

#### Charging the battery

- ◆ Charging algorithm Four-phase charge
- ◆ Phases of battery charging Bulk, Absorption, Float, Equalize
- ◆ Temperature equalization  
**Coefficient (adjustable):**  
Default: -5mV/°C (25°C reference)  
**Range:**  
-55 °C to + 125 °C
- ◆ Nominal value (adjustable) Absorption, Float, Equalize, HVD,  
LVD, LVD-Reconnect

#### Operating conditions

- ◆ Ambient temperature - 20 °C to + 60 °C
- ◆ Storage temperature - 55 °C to + 100 °C
- ◆ Air humidity 100 %, non-condensing

#### Equipped with protection against

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

#### Communication Accesses

- ◆ RS-485
- ◆ USB (optional with converter)
- ◆ Ethernet (optional with converter)
- ◆ GSM remote transmission

#### Inputs and outputs

- ◆ PV-Module, battery, load, RS485, temp. sensor
- ◆ Voltage Sensor
- ◆ Four analog or digital input ports
- ◆ 4x OC transistor switching output (50 V / 0,5 A)

#### GSM / GPRS-Modem

- ◆ Tri-band 900 / 1.800 / 1.900 MHz
- ◆ TCP-IP-data link
- ◆ Works with any SIM card
- ◆ Low cost due to small data packages
- ◆ Logging-interval adjustable

#### GPS-Module

- ◆ 20 channels
- ◆ A-GPS-modus possible
- ◆ D-GPS-accuracy from 1 m to 5 m possible
- ◆ Transmission of location via GSM or RS485