



- Easy operation
- Display of solar module parameters
- Display of battery parameters
- Integrated real time clock
- Display of date
- Remote control of the solar regulator
- SD card function for PC evaluation
- Plug & Play function

Dear Customer,
Thank you for buying our product. You have bought one of the most powerful, compact and reliable units of its class. Please read the operating instructions carefully before use.

ATTENTION!!! Important Notice!!!

The device supports the SD card format up to 2GB only. Adaptation of other formats such as Mini-SD is not possible.

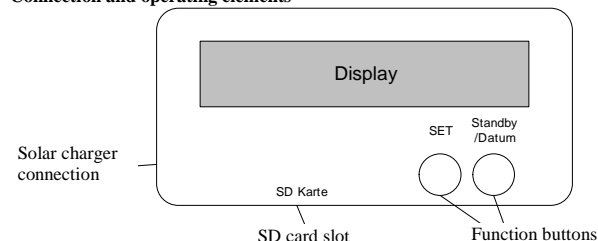
WARNING!!! Safety Instructions!!!

- Do not use the unit:
In places, which are dusty, damp, in a high-humidity area (over 80% rel. humidity), at temperatures above 50°C, in areas containing inflammable materials (liquids/solvents, gas). Do not immerse in water.
- Use only in closed, dry areas.
- Should the unit fail to operate, or show signs of not operating properly unplug immediately and make sure that the unit is not put into further operation. Do not use the unit when visible signs of damage - due to transport or inadequate storage are noticeable. Make sure that no foreign bodies or contamination can get into the SD card slot.

Description of operation

The solar remote control with comfort display for the MPPT solar charge controller range provides visual control of the charge parameters during operation and handles the remote control of the MPPT solar charge controller. The built-in real-time parameter logging stored in an SD memory card make it possible to perform a PC-based evaluation of the system parameters at any time (such as generated power in kWh, etc.)

Connection and operating elements



Connection and start-up procedure

The remote control must be connected to the MPPT solar charge controller using the supplied cable. As soon as both parts are connected, the remote control is ready for use. The device is powered over the MPPT solar charge controller. Make sure that the MPPT solar charge controller is ready for use and that the lead battery is available for main supply. During initial operation the internal clock of the remote control must be set. Afterwards it is no more necessary, as the remote control contains a storage battery to supply the timer with current.

Setting date and time

1. Navigate in the menu by pressing the "SET" button until the actual date is displayed.
Date: 2007.08.25
2. Press the "Standby/Date" button → Now you can change the year.
3. Set the year by pressing the "SET" button.
4. Proceed analogously with the setting of month and day.
5. Finish setting the date by pushing the "Standby/Date" button once more
6. Now navigate in the menu by pressing the "SET" button until the actual time is displayed.
Time: 13:30:50

Proceed analogously to the setting of the date in order to set the time.

Standby operation

In order to be more efficient and energy-saving, the MPPT solar regulator goes into sleep mode if the solar module does not provide at least that much energy which is required for the operation of the solar charger itself. The standby mode is only activated when the dc load output is not active (no DC load is connected or it is disconnected). The LED indication lights on the solar charger and the display of the remote control are also switched off during standby operation. A "wakeup" is generated, if the PV input power exceeds the power required for the operation of the solar charger OR the button for the DC LOAD connection has been pushed OR the "standby" button has optionally been pushed on the remote control.

Display of operating parameters for solar module

Us: 11.3 Is: 01.2

The display indicates the voltage of the solar module input (Us) in volts and the related solar current (Is) in amperes. The example above shows a voltage of 11.3 V and the current of 1.2 A. This corresponds to a current solar capacity of 13.56 Watt.

Display of operating parameters for battery

U1: 12.3 I1: 01.2

The display indicates the voltage of the battery terminals (U1) in volts and the related charge current (I1) in amperes. The example above shows a voltage of 12.3 V and the current of 1.2 A for battery 1. The 3A solar charge controller provides the connection of two independent batteries. Thus, the display also indicates the parameters of battery 2 (U2 and I2).

Attention! If a load is switched on, the displayed current value does not indicate the charging current only, it shows all output current (battery charging current plus DC output current). We recommend to switch off the DC load for at least 30-40 seconds to determine the correct battery charging current parameters.

Battery status display

| MPPT solar charge controller | Remote control | Meaning |
|------------------------------|------------------------|--|
| Red LED | BATT1: < █ > | The battery deep-discharge voltage has been reached. DC load output has been disconnected. |
| Yellow LED | BATT1: < █ █ █ █ > | Battery is being charged. |
| Green LED | BATT1: < █ █ █ █ █ █ > | Battery is fully charged. Desulphating mode is activated if DC load is disconnected. |

SD card

If required, the data can be written in real time on an SD card. This creates a TXT-file (SOLARLOG.TXT), which can be imported into a spreadsheet routine (Excel) and be evaluated from there. The commercial Flash memory cards in SD format (no Mini-SD or similar) up to 2GB are supported. If a card is recognized after plugging it in, the display indicates the following message:

SD CARD IN SOCKET

If no SD card has been plugged or if a card has not been recognized, the display shows the following message:

SOCKET IS EMPTY

The SD card must be formatted with FAT16.

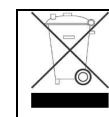
Replacement and disposal of storage battery CR 2032

A storage battery is used to supply the timer. Proceed as follows to replace it: A suitable tool, e.g. slotted screwdriver must be installed between the lower part of the body and the lower edge of the cable socket to the main module. The lower and upper part of the body can now be separated by slightly rotating the screwdriver. The body had only been clicked in place and not glued or screwed. After having opened the

Technical specifications

| | |
|-------------------------------------|-------------------------------|
| Typ. voltage: | 10 Vdc |
| Typ. current consumption - active: | 15mA |
| Typ. current consumption - standby: | < 1mA |
| Updating of display: | in approx. 3 second intervals |
| Internal battery type: | CR2032 |
| Connection cable length: | 3 m |
| Dimensions: | 100 x 60 x 28 mm |
| Weight: | 100 g |

body, remove the printed board carefully from the body and replace the storage battery. Observe the correct polarity when inserting the battery. Do not dispose of empty batteries together with normal household waste. Drop the batteries off at a collection centre or your public utilities.



Environmental protection notice

At the end of its useful life, this product must not be disposed of together with normal household waste, but has to be dropped off at a collection centre for the recycling of electrical and electronic devices. This is indicated by the symbol on the product, on the instruction manual or on the packaging. The materials of which this product is made are recyclable pursuant to their labelling. With the reuse, the recycling of the materials or other forms of scrap usage you are making an important contribution to the protection of the environment. Please ask your local administration office for the appropriate disposal center.