VE.Net GMDSS Panel

INSTALLATION AND USER MANUAL

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1 Contents of the box

1x VE.Net GMDSS Panel
4x Black screw to mount the panel
1x Panel cutout
1x Installation and user manual

2 Introduction

Victron Energy has established an international reputation as a leading designer and manufacturer of energy systems. Our R&D department is the driving force behind this reputation. It is continually seeking new ways of incorporating the latest technology in our products. Each step forward results in value-added technical and economical features.

3 Definitions

GMDSS charger in this manual a GMDSS charger refers to a Victron Energy Skylla-TG GMDSS charger, which can be remotely monitored by the VE.Net GMDSS panel.

Battery Whenever battery is used in this manual it can equally well refer to a battery bank, depending on your setup.

Panel refers to the VE.Net GMDSS panel

4 VE.Net GMDSS panel

Since the GMDSS charger is in general located at a different location than the ships control, the GMDSS charger of Victron Energy can be remotely monitored and alarms are available where they should. The VE.Net GMDSS panel does not only monitor the state of the charger, but provides information about the connected battery as well.

5 Prerequisites

- This manual assumes that the GMDSS charger is already installed. (If this is not the case refer to the appropriate manual of the GMDSS charger)

6 Installation and configurations instructions

1. Mount the panel
2. If required connect the alarm relay. Refer to figure 1 for the locations of the connectors.
3. Connect the panel to the GMDSS charger with a standard straight UTP cable. (The VE.Net GMDSS Panel will also be powered from this cable)
4. The panel will start automatically and establish a connection with the GMDSS charger
5. The panel displays the current state of the battery.

Figure 1. VE.Net GMDSS Panel Connections
7 The VE.Net GMDSS Panel

7.1 Using the Panel

Press cancel to leave a device, menu or value. Press ‘Enter’ to enter a device, menu or to change a value.

Press the up and down switch to change a value or navigate through a menu.

Reset the panel

To reset the panel, press and hold "Cancel" for three seconds

Navigating through the menu’s

Press 'Enter' to enter a device, menu or to change a value.
Press cancel to leave a device, menu or value.

Press the up and down switch to change a value or navigate through a menu.

How to change a value with a VE.Net GMDSS panel

When a value is changeable you will see a little arrow in the lower left corner of the display.

If a value in the setup menu must be changed press enter. And the value will start to blink. If the value is blinking press up and down to change it. Press enter again and the new value will be stored. If the cancel button is pressed before the new value is stored it will return to its original value.

Devices
The GMDSS system contains two devices.

- The GMDSS monitor, which shows the state of the battery connected to the GMDSS charger.
- Panel Setup, which allows control over the panel itself.
7.2 Where to find "Panel Setup" menu

Step 1.) Press “▼” to scroll through the menu until you see “Panel Setup”.

Step 2.) Press “Enter” to enter the “Panel Setup” menu.

7.3 The “Panel Setup” menu

The properties of the panel are clarified in the table below. All values except the software version can be changed. In paragraph 7.1 it is explained how values can be adjusted.

<table>
<thead>
<tr>
<th>Panel Setup</th>
<th>Default</th>
<th>Range</th>
<th>Step size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contrast</td>
<td>100</td>
<td>0-100%</td>
<td>5%</td>
</tr>
<tr>
<td>Backlight</td>
<td>30</td>
<td>0-100%</td>
<td>5%</td>
</tr>
<tr>
<td>Backlight off</td>
<td>10s</td>
<td>10s, 30s, 1 min, Never</td>
<td></td>
</tr>
<tr>
<td>Access level</td>
<td>User and install</td>
<td>User, User and Install</td>
<td></td>
</tr>
<tr>
<td>Restrict Access</td>
<td>No</td>
<td>Yes, No</td>
<td></td>
</tr>
<tr>
<td>Restart panel</td>
<td>No</td>
<td>No-Yes</td>
<td></td>
</tr>
<tr>
<td>Software version</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

7.4 Access level

Many device options only need to be changed during installation, and should not be adjusted during normal use. The panel has an access level setting to prevent accidental changes to the panel during normal use. Setting the panel access level to “user and install” mode allows access to all menu items. Setting the access level to “user” mode will hide all installation options. To view the hidden items again, simply set the access level setting back to “user and install” mode.

OEM installers can use the restrict access option to password protect the access level of the panel, in order to prevent users from changing the installation settings. The password is available on request from Victron Energy.
7.5 Alarms

Whenever an alarm is active on the GMDSS charger, the VE.Net GMDSS panel will draw attention from the user while showing relevant information on the screen. The relay will also indicate the presence of an alarm. The relay is closed during normal operation. It is open for as long as one or more alarm conditions are present. The behavior of the panel with respect to alarms is described in more detail below.

If a new alarm condition is present
- The audible alarm becomes active
- The relay is open
- The screen blinks
- Information about the alarm is shown on the screen, mentioning:
  - Mentioning that an alarm is active and on which device
  - Continuously alternated with a description of the alarm and relevant information.

Confirming the alarm
Press enter to confirm that the alarm has been noticed.
- The audible alarm silences
- The relay remains open
- The screen continues to blink as long as the alarm condition is present
- A reminder of the alarm will periodically be shown

The alarm condition is removed
- The relay is closed
- If the alarm condition was confirmed on the panel, it will resume normal operation.
- If the alarm condition was not yet confirmed the audible alarm will silence and information about the alarm will remain visible on the screen to indicate that an alarm has occurred. By pressing enter normal operation is resumed.

If multiple alarms are present at the same time, all of them must be confirmed once and all alarms will be repeated. The relay will close after all alarm conditions are removed.
8 GMDSS Monitor

8.1 Quick status line
The GMDSS monitor is designed to give quick access to all relevant information, without having to scroll through abundant information. The 'quick status' simultaneously displays the most important parameters: the battery voltage, the battery current and the state-of-charge (SOC). In the root menu of the VE.Net GMDSS Panel you will see this screen

![GMDSS Monitor]

Battery voltage State of charge Battery amps

Notes:
1) You can always return to this position by pressing “Cancel” repeatedly.
2) If you can’t see the state of charge, the GMDSS monitor isn’t synchronized with the battery yet. It can take some time before the GMDSS charger completely charges the battery.

<table>
<thead>
<tr>
<th>Quick status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC Voltage</td>
<td>Displays the actual voltage of the battery.</td>
</tr>
<tr>
<td>DC Current</td>
<td>Displays the DC current that flows in or out of the batteries.</td>
</tr>
<tr>
<td>State of charge</td>
<td>The state of charge is a representation of the energy left in the battery 100% is full and 0% is empty. This is the best way to see when the batteries need to be recharged. Note that most battery types will be damaged if they are discharged below 50%.</td>
</tr>
</tbody>
</table>

8.2 Read out menu
To go to the read out menu, press “Enter” when you are looking at the quick status line. In this menu you will find the following read outs. Notice: these read out only have a meaning in case of a charger or mains failure.

<table>
<thead>
<tr>
<th>Read out menu</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumed Ah</td>
<td>Displays the used ampere hours since the battery was fully charged.</td>
</tr>
<tr>
<td>Time to go</td>
<td>Displays time left before the batteries need to be recharged at the current load.</td>
</tr>
</tbody>
</table>
8.3 Settings of the GMDSS Monitor

In order to prevent accidental change of the settings of the GMDSS monitor, access to setup values during operation should in general be prevented. If the setup values are not visible, make sure the panel is in “User and Install” mode. For details about the access level, refer to paragraph 7.4. If the OEM installer has locked the panel at the user level, it is not possible to change the access level!

8.4 Where to find the “Setup Alarms” menu

Step 1.) Press “Enter” to enter the GMDSS Monitor menu.

Step 2.) Press ”▼” to scroll through the menu until you see “Setup Alarms”.

Note: If you can’t find the Setup Alarms” menu, make sure that your panel is in “User and Install” mode.

Step 3.) Press “Enter” to enter the “Setup Controller” menu.

8.5 The “Setup Alarms” menu

Several alarms can be adjusted to suit the needs of a particular setup. The High Voltage and Low Voltage alarms are however always enabled and can not be turned off. The “charger failure” alarm is also always enabled and indicates the failure of the GMDSS charger to charge the battery.

<table>
<thead>
<tr>
<th>Setup Alarms</th>
<th>Default</th>
<th>Range</th>
<th>Step size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Voltage</td>
<td>20</td>
<td>8 - 33</td>
<td>0.1</td>
</tr>
<tr>
<td>Low Voltage Clr</td>
<td>22</td>
<td>8 - 33</td>
<td>0.1</td>
</tr>
<tr>
<td>High Voltage</td>
<td>32</td>
<td>8 - 33</td>
<td>0.1</td>
</tr>
<tr>
<td>High Voltage Clr</td>
<td>31</td>
<td>8 - 33</td>
<td>0.1</td>
</tr>
<tr>
<td>Low SOC</td>
<td>60%</td>
<td>0 - 100</td>
<td>1</td>
</tr>
<tr>
<td>Low SOC Clr</td>
<td>60%</td>
<td>0 - 100</td>
<td>1</td>
</tr>
<tr>
<td>Low SOC Alarm</td>
<td>off</td>
<td>on - off</td>
<td></td>
</tr>
<tr>
<td>Low Current</td>
<td>-100</td>
<td>-100 - 100</td>
<td>0.5</td>
</tr>
<tr>
<td>Low Current Clr</td>
<td>-98</td>
<td>-100 - 100</td>
<td>0.5</td>
</tr>
<tr>
<td>Low Current Alarm</td>
<td>off</td>
<td>on - off</td>
<td></td>
</tr>
<tr>
<td>High Current</td>
<td>35</td>
<td>-100 - 100</td>
<td>0.5</td>
</tr>
<tr>
<td>High Current Clr</td>
<td>32</td>
<td>-100 - 100</td>
<td>0.5</td>
</tr>
<tr>
<td>High Current</td>
<td>off</td>
<td>on - off</td>
<td></td>
</tr>
</tbody>
</table>
8.6 Where to find the “Setup Controller” menu

Step 1.) Press “Enter” to enter the GMDSS Monitor menu.

Step 2.) Press “▼” to scroll through the menu until you see “Setup Controller”.

Step 3.) Press “Enter” to enter the Setup Controller menu.

8.7 The “Setup Controller” menu

<table>
<thead>
<tr>
<th>Setup Controller</th>
<th>Default</th>
<th>Range</th>
<th>Step size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery Capacity</td>
<td></td>
<td>200Ah</td>
<td>20-65535</td>
</tr>
<tr>
<td>Volt charged par</td>
<td></td>
<td>26.4V</td>
<td>8-33</td>
</tr>
<tr>
<td>Curr charged par</td>
<td></td>
<td>4%</td>
<td>1-10</td>
</tr>
<tr>
<td>Charged time par</td>
<td></td>
<td>4 min</td>
<td>1-4</td>
</tr>
<tr>
<td>Charge eff. Factor</td>
<td></td>
<td>0.9</td>
<td>0.5-1</td>
</tr>
<tr>
<td>Resynchronize?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9 Technical specifications

<table>
<thead>
<tr>
<th>VE.Net</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum cable length</td>
<td>25 meter</td>
</tr>
<tr>
<td>VE.Net GMDSS Panel</td>
<td>VPN</td>
</tr>
<tr>
<td>Power supply voltage range</td>
<td>9 – 35 V DC</td>
</tr>
<tr>
<td>Operating temp. range</td>
<td>-20 – +50°C (0 - 120°F)</td>
</tr>
<tr>
<td>Potential free contact</td>
<td>3A / 30 V DC / 250 V AC / (Normally closed)</td>
</tr>
</tbody>
</table>

ENCLOSURE

Measurements front panel (w x h) | 12 x 6,5 cm (Standard PROS3 Panel)
Measurements body (w x h)       | 10 x 4,5 cm
Weight                           | 0,1 Kg

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