Introduction

This document describes how to view and set grid protection values via SetApp, via the inverter display and via the Monitoring Platform.

WARNING!

Setting the grid protection values is prohibited unless explicitly approved by the grid operator. This feature is offered to you as a convenience, and SolarEdge disclaims all responsibility for any implications of modifying the grid values of the inverter. SolarEdge will in no event be liable to you, any customer or any third party in connection with these changes.

Viewing and Modifying Grid Protection Settings via SetApp

You can use SetApp to view or modify grid protection values, or restore defaults.

→ To access the grid protection settings:

1. From the SetApp main menu, select Maintenance -> Grid Protection. A pop-up message box requires you to enter a password in order to modify the grid protection settings. Contact SolarEdge Support to obtain this password.

2. Enter the password and tap on the Agree button. The Grid Protection page appears as shown in the figure below:
3. Select one of the following settings for viewing and modification:

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
</tr>
</thead>
</table>
| Vgrid Max.       | Maximum acceptable grid voltage for the installed inverters.  
|                  | - V - maximum voltage [V]  
|                  | - ms - trip time, in milliseconds. The trip time indicates the time after which the inverter should disconnect from the grid if the grid voltage is out of range.  
|                  | Tap on the **Edit** button to modify the thresholds.                                                                                       |
| Vgrid Min.       | Minimum acceptable grid voltage for the installed inverters.  
|                  | - V - minimum voltage [V]  
|                  | - ms - trip time, in milliseconds. The trip time indicates the time after which the inverter should disconnect from the grid if the grid voltage is out of range.  
|                  | Tap on the **Edit** button to modify the thresholds.                                                                                       |
| Fgrid Max.       | Maximum acceptable grid frequency for the installed inverters.  
|                  | - F - maximum frequency [Hz]  
|                  | - ms - trip time, in milliseconds. The trip time indicates the time after which the inverter should disconnect from the grid if the grid frequency is out of range.  
|                  | Tap on the **Edit** button to modify the thresholds.                                                                                       |
| Fgrid Min.       | Minimum acceptable grid frequency for the installed inverters.  
|                  | - F - minimum frequency [Hz]  
|                  | - ms - trip time, in milliseconds. The trip time indicates the time after which the inverter should disconnect from the grid if the grid frequency is out of range.  
|                  | Tap on the **Edit** button to modify the thresholds.                                                                                       |
| Grid Monitoring Time (GRM) | The required number of milliseconds during which the voltage and frequency must be within the threshold range before the inverter can reconnect to the grid. |

4. Tap on the **Done** button to save the modified settings.
Viewing and Modifying Grid Protection Settings via the Inverter Display

You can use the inverter display to view and set grid protection values.

NOTE

It is highly recommended to ensure that all the inverters at the site have CPU version 3.22xx or 3.24xx and above (but not version 4.x.xxx). For inverters with CPU version 4.x.xxx, refer to the Via SetApp chapter. If required, upgrade the CPU software. To check the CPU version, see Checking an Inverter Communication Board Firmware (CPU) Version.

Checking an Inverter Communication Board Firmware (CPU) Version

To check a communication board firmware (CPU) version:

1. Short - press the LCD light button until the following screen is displayed:

2. Check the CPU version number. If required, upgrade the inverter software as described in upgrading_an_inverter_using_micro_sd_card.pdf

Viewing and Modifying Grid Protection Settings

To view grid protection values via the inverter display:

1. Enter Setup mode: Press and hold down the LCD light button located at the bottom of the inverter, and release after 5 seconds; the various inverter menu screens are displayed.

2. Short-press the LCD light button to toggle between the menu screens.

3. Long press to select Maintenance ➔ Grid Protection

The Grid Protection menu is displayed:

View
Set

4. Select View. A list showing grid protection values is displayed. Each press on the external LCD light button moves to the next screen of parameters of that inverter. For example:

ID: 5000FF01-50
VgMax1: 261.5V, 150 ms
VgMax2: 250.0V, 580.0 s
VgMin1: 187.0V, 150 ms

ID: 5000FF01-50
VgMin2: 103.0 V, 580.0 s
FgMax1: 50.5 Hz, 145 ms
FgMax2: 52.5 Hz, 600.0 s

ID: 5000FF01-50
FgMin1: 47.5 Hz, 145 ms
FgMin2: 47.5 Hz, 600.0 s
GRM Time: 60.0 s

ID: The inverter serial number, appears as a header in the sequential screens.
Vg<min, max>: <1, 2>: The minimum and maximum grid voltage thresholds (Volts) and the trip time in milliseconds or seconds. The trip time indicates the time after which the inverter should disconnect from the grid if the grid voltage is out of range.
Fg<min, max>: <1, 2>: The minimum and maximum grid frequency thresholds (Hz) and the trip time in milliseconds or seconds. The trip time indicates the time after which the inverter should disconnect from the grid if the grid frequency is out of range.
To set grid protection values via the SolarEdge inverter display:

Setting the values requires entering a password, using the internal user buttons. This procedure involves opening the inverter cover.

1. Contact SolarEdge Support to obtain this password.
2. Open the inverter cover as described in the SolarEdge Installation Guide.

WARNING!
ELECTRICAL SHOCK HAZARD. Do not touch uninsulated wires when the inverter cover is removed.

3. Enter Setup mode as described in the SolarEdge Installation Guide.
4. Select Maintenance ➔ Grid Protection ➔ Set. A screen requiring a password is displayed:

5. Enter the password provided by SolarEdge Support. The grid protection value setting menu is displayed:

6. Select one of the entries, for example VgMax1. A screen showing the grid protection value and the Hold Time (trip time) displayed:

7. Set the required values. For example: VgMax1: 372.45V and Hold Time: 1.1 seconds
Viewing and Modifying Grid Protection Settings via the Monitoring Platform

You can set grid protection values, or restore defaults.
This feature is available via the Monitoring Platform for the supported inverter CPU versions listed below, when the inverter country setting is set to one of the supported countries. To enable this feature for your account, contact SolarEdge support.

- For inverters with LED display: 3.22xx or 3.24xx and above.
- For inverters with SetApp: 4.45.xxx and above.

If all inverters at the site do not have the required CPU version, the feature will be disabled. If at least one of the inverters at the site has the required CPU version, the feature will be enabled and grid settings will be saved in the supported inverters.

Accessing Grid Protection Settings

To access the grid protection settings:
1. Log in to the monitoring platform (monitoring.solaredge.com) using your user name and password.
2. In the main window in the Site Name column click the required site name.

3. Click , then Grid Settings. The Dashboard view appears.

Setting Grid Protection Values

To set grid protection values:
1. Access grid protection settings.
2. Select Apply custom grid settings. The Grid Protection Values table appears. The values displayed in the table are the current grid protection values that were retrieved from all inverters on site.

3. Set required grid protection values then click Save:
   Enter values in required fields:
Voltage - between 0-400 Volt, 0.1V accuracy
Frequency - 40-70Hz, 0.01Hz accuracy
Time - 10-600000 milliseconds

NOTE
If required, click Cancel to return to the previously set grid protection values.

4. A confirmation message appears. Click Yes. The Setting status table appears.

5. Check the Status column in the Inverter Settings Status table to ensure the change was successful for all inverters at the site. Other status are:
   - **No communication** - no communication between the inverter and the Monitoring Platform.
   - **Pending** - grid settings update is in process.
   - **Success** - grid settings were successfully applied.
   - **Not Supported** - the inverter CPU version is 3.23xx or lower than 3.22xx, to enable this feature for this inverter upgrade its CPU version.
     For more information see [Checking an Inverter Communication Board Firmware (CPU) Version](#).
   - **Failed** - grid settings were not applied. If it failed click Retry and if fails again contact support.

**Restoring Default Grid Protection Values**

To restore default grid protection values:

1. **Access grid protection settings**.
2. If no changes were made (locally or remotely), the default country settings are used.
   If changes were made, you can restore country default grid settings by selecting Apply country default grid settings and clicking Save.
**Viewing Event Logs**

In the event log you can view whether grid protection values are default or custom and the grid protection value status.

→ **To view an event log**

In the Grid Settings tab, in the Settings status table click the Log icon of the inverter which settings log you want to view. The Settings log appears.
Support and Contact Information

If you have technical problems concerning SolarEdge products, please contact us:
Support Center: https://www.solaredge.com/service/support

<table>
<thead>
<tr>
<th>Country</th>
<th>Phone</th>
<th>E-Mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia (+61)</td>
<td>1800 465 567</td>
<td><a href="mailto:support@solaredge.net.au">support@solaredge.net.au</a></td>
</tr>
<tr>
<td>APAC (Asia Pacific) (+972)</td>
<td>073 240 3118</td>
<td><a href="mailto:support-asia@solaredge.com">support-asia@solaredge.com</a></td>
</tr>
<tr>
<td>Belgium (+32)</td>
<td>0800-76633</td>
<td><a href="mailto:support@solaredge.be">support@solaredge.be</a></td>
</tr>
<tr>
<td>China (+86)</td>
<td>21 6212 5536</td>
<td><a href="mailto:support_china@solaredge.com">support_china@solaredge.com</a></td>
</tr>
<tr>
<td>DACH &amp; Rest of Europe (+49)</td>
<td>089 454 59730</td>
<td><a href="mailto:support@solaredge.de">support@solaredge.de</a></td>
</tr>
<tr>
<td>France (+33)</td>
<td>0800 917410</td>
<td><a href="mailto:support@solaredge.fr">support@solaredge.fr</a></td>
</tr>
<tr>
<td>Italy (+39)</td>
<td>0422 053700</td>
<td><a href="mailto:support@solaredge.it">support@solaredge.it</a></td>
</tr>
<tr>
<td>Japan (+81)</td>
<td>03 6262 1223</td>
<td><a href="mailto:support@solaredge.jp">support@solaredge.jp</a></td>
</tr>
<tr>
<td>Netherlands (+31)</td>
<td>0800-7105</td>
<td><a href="mailto:support@solaredge.nl">support@solaredge.nl</a></td>
</tr>
<tr>
<td>New Zealand (+64)</td>
<td>0800 144 875</td>
<td><a href="mailto:support@solaredge.net.au">support@solaredge.net.au</a></td>
</tr>
<tr>
<td>US &amp; Canada (+1)</td>
<td>510 498 3200</td>
<td><a href="mailto:ussupport@solaredge.com">ussupport@solaredge.com</a></td>
</tr>
<tr>
<td>United Kingdom (+44)</td>
<td>0800 028 1183</td>
<td><a href="mailto:support-uk@solaredge.com">support-uk@solaredge.com</a></td>
</tr>
<tr>
<td>Republic of Ireland (+353)</td>
<td>1-800-901-575</td>
<td><a href="mailto:support-uk@solaredge.com">support-uk@solaredge.com</a></td>
</tr>
<tr>
<td>Greece (+49)</td>
<td>89 454 59730</td>
<td></td>
</tr>
<tr>
<td>Israel (+972)</td>
<td>073 240 3122</td>
<td><a href="mailto:support@solaredge.com">support@solaredge.com</a></td>
</tr>
<tr>
<td>Middle East &amp; Africa (+972)</td>
<td>073 240 3118</td>
<td></td>
</tr>
<tr>
<td>South Africa (+27)</td>
<td>0800 982 659</td>
<td></td>
</tr>
<tr>
<td>Turkey (+90)</td>
<td>216 706 1929</td>
<td></td>
</tr>
<tr>
<td>Worldwide (+972)</td>
<td>073 240 3118</td>
<td></td>
</tr>
</tbody>
</table>

Before contact, make sure to have the following information at hand:

- Model and serial number of the product in question.
- The error indicated on the Inverter SetApp mobile application or on the monitoring platform or by the LEDs, if there is such an indication.
- System configuration information, including the type and number of modules connected and the number and length of strings.
- The communication method to the SolarEdge server, if the site is connected.
- The inverter software version as appears in the status screen.