

Application Note - Viewing and Setting Grid Protection Values

The inverter grid protection values can be viewed and set on the SolarEdge inverter display.

This feature is available from CPU version 3.14xx when the inverter country setting is set to one of the following: Australia, Austria, Cyprus, Germany, Italy, Mexico, Northern Ireland, Philippines, South Africa, UK, US (when the inverter is set to New York, Hawaii, Kauai) .

To enable this feature for other country settings, contact SolarEdge support: support@solaredge.com.

This document describes how to view and set the grid protection values.

► To view grid protection values:

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**.

```
Date and Time
Reset Counters
Factory Reset
SW Upgrade SD-Card
AFCI <En>
Manual AFCI Test
Diagnostics
Optimizer Conf.
Grid Protection
Exit
```

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, 150ms
VgMax2: 250.0V, 580.0s
VgMin1: 187.0V, 150ms
```

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

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

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.

GRM Time: Grid monitoring time - the duration (seconds) that the grid voltage and frequency have to be within the range (min. and max. thresholds) before the inverter can reconnect to the grid. For example, if the GRM time is set to 60 seconds, the inverter checks that the grid is within the voltage and frequency ranges for 60 seconds before reconnecting to the grid.

► **To set grid protection values:**

NOTE!



Adjusting the grid protection parameters 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 parameters of the inverter. SolarEdge will in no event be liable to you, any customer or any third party in connection with these changes.

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

1. Contact SolarEdge Support for obtaining 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:

```

Please enter
Password
*****

```

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

```

VgMax1 < 261V, 150ms >
VgMax2 < 250V, 580s >
VgMin1 < 187V, 150ms >
VgMin1 < 103V, 580s >
FgMax1 < 50Hz, 145ms >
FgMax2 < 100Hz, 600s >
FgMin1 < 47Hz, 145ms >
FgMin2 < 0Hz, 600s >
GRM Time < 60.0s >

```

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

```

VgMax1 < 261.5V >
Hold Time < 150ms >

```

7. Set the required values. For example: VgMax1: 372.45V and Hold Time : 1.1 seconds

```

VgMax1
[V]
372.45

```

```

VgMax1
[ms]
1120

```