

Error 014 and Volt-Watt Response Mode

Disclaimer

The new **Crystal G2 Series** (SG2K-S, SG2K5-S, SG3K-S, SG3K-D, and SG5K-D) is compliance with the standard AS/NZS 4777 related to grid protection requirements. If the line voltage or frequency goes outside pre-determined parameters, the inverter must shut down for safety purposes, which means it is not a faulty inverter in these instances.

Introduction

The standard introduces limits for sustained operation (refer to AS/NZS 4777.2:2015, 7.5.2 sustained operation for voltage variations). The average voltage for a 10 min period is set to 255 V by default as required by the standard. **This means that when the average voltage for a 10 min period exceeds 255 V, the inverters will be automatically tripped and the corresponding status on inverter screen is “Error 014”.** The customer may increase the voltage threshold up to **258 V** (the upper limit required by the standard). However, **if the problem persists after increasing the voltage threshold, we recommend that the customer may contact the local network operator to inspect the line voltage.**

To reduce the probability of tripping off the inverter (error 014), the volt-watt response mode has been developed according to the standard to restrict the power output of the inverter in response to the AC voltage. The volt-watt response mode can restrict the power output of the inverter in response to the voltage at its terminals (refer to AS/NZS 4777.2:2015, 6.3.2 Volt response modes). The grid voltage at which the inverter output starts to drop/de-rate is set to 250 V by default as required by the standard. **This means that when the grid voltage exceeds 250 V, the maximum output of the inverters will be restricted (as required by the standard).** The customer may increase the voltage threshold up to 255 V (the upper limit required by the standard).

Volt-Watt Response Mode Setting

To modify the volt-watt response mode setting, navigate to the **Main Menu** → Select **Settings** → Enter Password **111** → Select **Grid Prot. Param** → Select **Volt-Watt** → Select **ON** → Adjust the **V3 Ref.** value to 255.0 V → Save the settings afterwards.

(While entering password, touch **ESC** to add the value and Touch **ENT** to move the cursor)

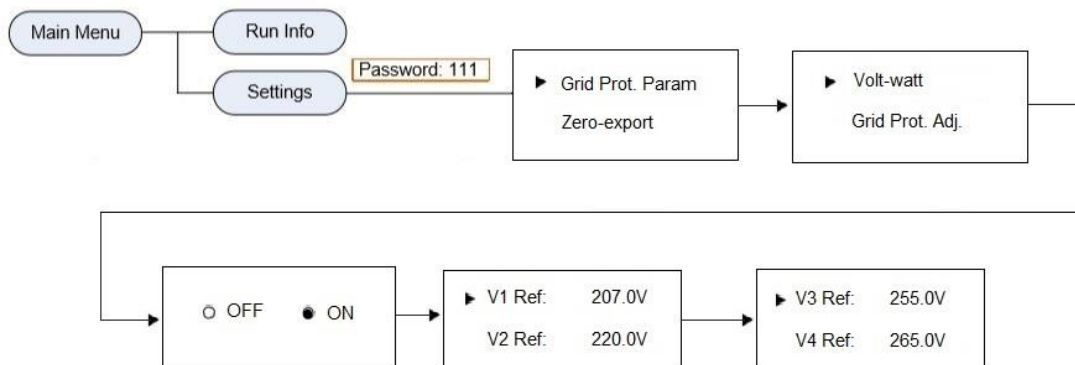


Figure 1: Menu tree for Volt-watt response setting

10 Min Overvoltage Setting

To modify the sustained operation for voltage variations setting, navigate to **Main Menu** → Select **Settings** → Enter Password **111** → Select **Grid Prot. Param** → Select **10 Min Over Vtg En.** → Select **ON** → Adjust the **10 Min Over Vtg** to **258.0 V** → Save the settings afterwards.

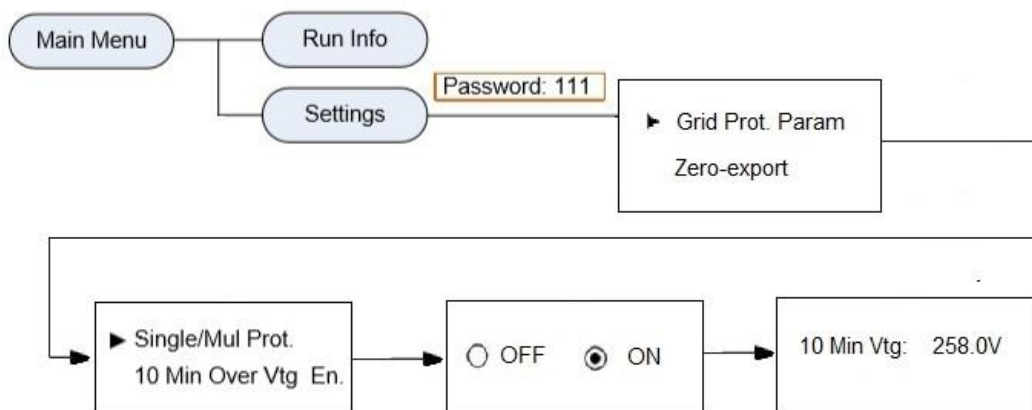


Figure 2: Menu tree for 10 Min overvoltage setting

Please click [here](#) to watch this tutorial video.