Sungrow Australia Group Pty. Ltd. | 1800 SUNGROW (786 476)
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Derating & Error 014 Settings

Disclaimer

The new Crystal Series (SG2KTL-S, SG3KTL-S, SG3KTL-D and SG5KTL-D) in conjunction with eShow V21 complies with the standard AS/NZS 4777.2:2015 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 this instance.

Introduction

The standard introduces 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 trip and the corresponding status on the eShow (LCD module) will display "Fault 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 (DNSP) 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) and the corresponding status on eShow (LCD module) is "Derating".** The customer may increase the voltage threshold **up to 255 V** (the upper limit required by the standard).

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10 Minutes Overvoltage Setting

To modify the sustained operation for voltage variations setting. Navigate to **Set-param** (Figure 1) → Enter **111** → Navigate to **Grid Prot. Param** → Select **ON** → Adjust the **10 min ovtg** to **258.0 V** (Figure 2) → Shall see **Setting completed** (Figure 3).

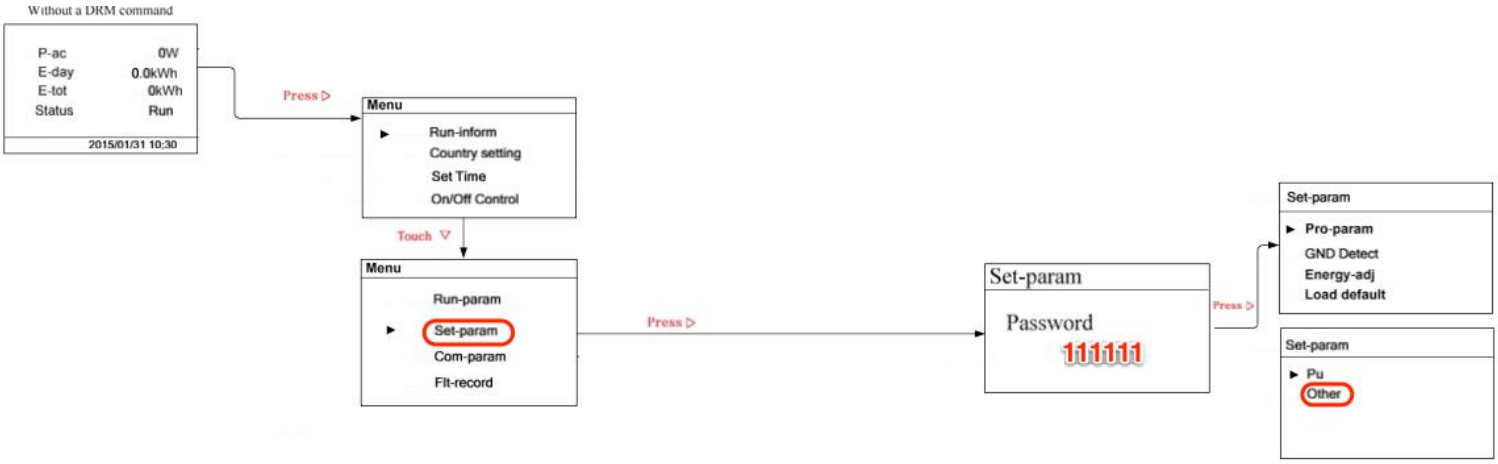

Figure 1 Menu Tree

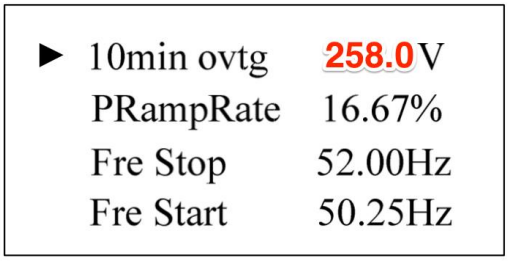

Figure 2 10-minute overvoltage protective value

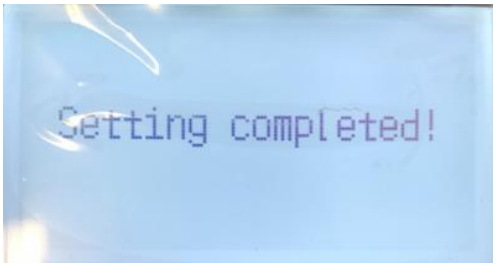

Figure 3 Setting completed

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Volt-Watt Response Setting

To modify the volt-watt response setting, navigate to **Run-param** (Figure 4) → Select **P-Q param** → Select **Qu** → Adjust **U2 Limit** value to **255.0 V** (Figure 5) → Leave **Lower Q/Sn** and **Upper Q/Sn** as **default** (Figure 6) → Shall see **Setting completed** (Figure 7)

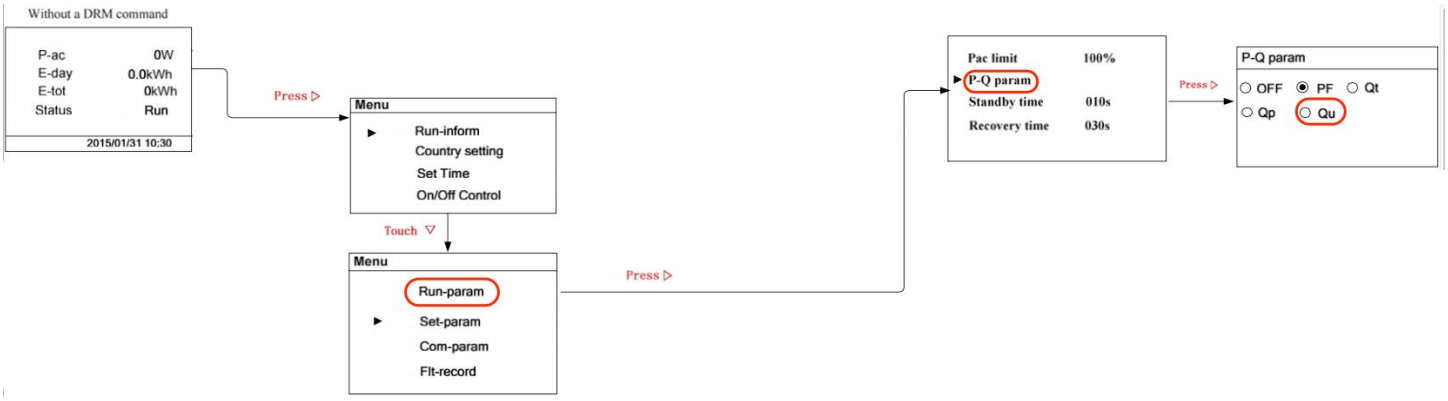

Figure 4 Menu Tree

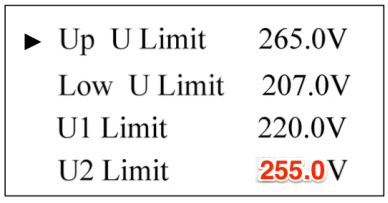

Figure 5 Pmax Parameters

Figure 6 Q/Sn Parameters

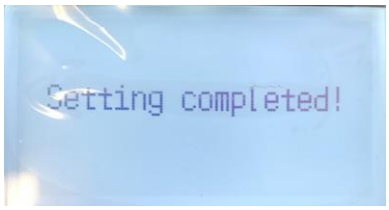

Figure 7 Setting completed

Please watch this tutorial video by clicking Modify the volt-watt response setting and 10 minute average overvoltage setting