

## Pmax and 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 specified 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 Eshow (LCD screen) is “Fault 014”.** The customer may increase the voltage threshold up to 258 V (the upper limit specified 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) and the corresponding status on the Eshow (LCD screen) is “Pmax”.** The customer may increase the voltage threshold up to 255 V (the upper limit specified by the Standard).

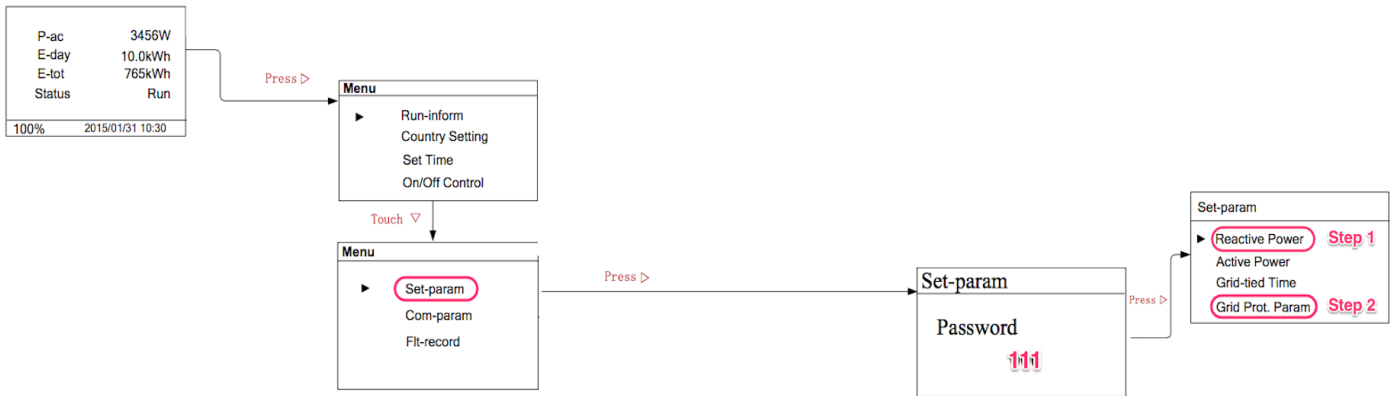


Figure 1 Menu Tree

**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 Vtg** to **258.0 V** (Figure 2) → **Setting completed** will then be displayed on the screen (Figure 3).



Figure 2 10-minute overvoltage limit

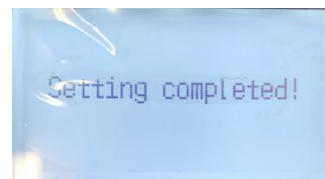


Figure 3 Setting completed

**Volt-Watt Response Setting:** To modify the volt-watt response setting, navigate to **Set-param** (Figure 1) → Enter **111** → Select **Reactive Power** → Select **Qu** → Adjust **V3 Ref.** value to **255.0 V** (Figure 4) → Leave **Lower Q/Sn** and **Upper Q/Sn** as **default** (Figure 5) → **Setting completed** will then be displayed on the screen (Figure 6).

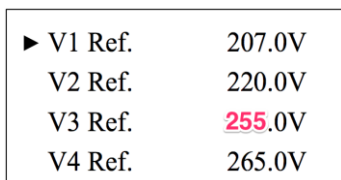


Figure 4 Pmax Parameters

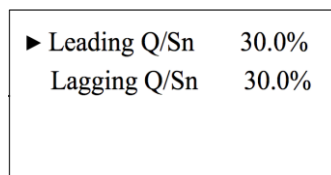


Figure 5 Q/Sn Parameters

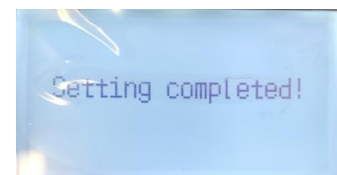


Figure 6 Setting completed

Please watch this tutorial video by clicking [Volt-watt response \(Pmax\)](#) and [10-minute average overvoltage setting](#)