

AN014.6 - sonnen – Inverter Grid Settings – NSW - Essential Energy

sonnenBatterie offer the ‘Australia’ grid code as part of the commissioning process for AU systems. This code enables the inverter to connect and operate with the grid based on the standard, mandatory settings as specified within AS/NZS 4777.2

Networks in Australia may have additional non-mandatory, or specific inverter setting requirements which as default are disabled for compliance with AS/NZS 4777.2.

These settings are ‘installation’ requirements and as such fall upon the system installer to set. The following explains how the system will need to be programmed to be complaint with the networks inverter setting requirements as part of the commissioning process.

Volt-VAR

For correct Volt-VAR setpoints ensure that they are set to the following values in the ‘Reactive power/voltage curve Q(U) (Volt-VAR)’ is checked and set the ST values as follows:

| ST1 | ST2 | ST3 | ST4 | |
|------|------|------|------|---------------------------|
| 0.86 | 0.92 | 1.00 | 1.08 | U/Us |
| 44 | 0 | 0 | -60 | Reactive power in percent |

| | |
|-----|--------|
| 0.8 | CosPhi |
|-----|--------|

Voltage & Frequency Settings

For correct voltage and frequency systems response values ensure that they are set to the following values in the ‘SPI Settings (Voltage/Frequency response)’ table:

SPI Settings

| Min. phase voltage protection | | Max. phase voltage protection | |
|-------------------------------|------------------------|-------------------------------|---------------------------|
| 0.750 | Undervoltage (V<) (2s) | 1.063 | Vnom-ma (10min average) |
| | | 1.083 | Overtoltage 1 (V>) (2s) |
| | | 1.104 | Overtoltage 2 (V>) (0.2s) |

| Under frequency protection | | Over frequency protection | |
|----------------------------|---------------------------|---------------------------|------------------------------------|
| 47.0 | Under-frequency (F<) (2s) | 52.0 | Fstop - Over-frequency (F>) (0.2s) |

Volt-Watt

For Volt-Watt voltage setpoints ensure that they are set to the following values in the ‘P(U) Settings’ as follows, (please note that at setpoint ST4 the inverter rating will reduce to 20%):

P(U) Settings

| ST1 | ST2 | ST3 | ST4 | |
|-----|-----|-----|-----|-------|
| 207 | 220 | 253 | 260 | V Vac |
| 100 | 100 | 100 | 20 | V % |

If you have any further questions or require support or assistance, please contact us at support@sonnen.com.au.