

AN014.1 - sonnen – Inverter Grid Settings – SAPN – TS129

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

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	
0.292	Undervoltage (V<) (2s)	1.075	Vnom-ma (10min average)
		1.104	Overvoltage 1 (V>) (2s)
		1.146	Overvoltage 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 %

**The settings displayed in this note is derived from the latest SAPN Small IES Technical Standard TS129 published on the 15th of February 2021. The new settings need to be applied no later than the 18th of December 2021. sonnen continues to strive to provide the current regulation standard from SAPN but installer is advised to regularly check with any update brought forward by SAPN.*

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