



This document is to declare the grid code compliance for SLOVENIA – according to EN50549-1: 2019 and SLOVENIAN grid code

This is to declare that the inverter model in following table are compliant to - EN50549-1: 2019 - Requirements for generating plants to be connected in parallel with distribution networks - Part 1: Connection to a LV distribution network - Generating plants up to and including Type B and - Slovenian Grid Code (defined by SONDSEE – March 2021)

Inverter Model	SUN2000-2KTL-L1, SUN2000-3KTL-L1, SUN2000-3.68KTL-L1, SUN2000-4KTL-L1, SUN2000-4.6KTL-L1, SUN2000-5KTL-L1, SUN2000-6KTL-L1; SUN2000-3KTL-M1, SUN2000-4KTL-M1, SUN2000-5KTL-M1, SUN2000-6KTL-M1, SUN2000-8KTL-M1, SUN2000-10KTL-M1; SUN2000-12KTL-M2, SUN2000-15KTL-M2, SUN2000-17KTL-M2, SUN2000-20KTL-M2; SUN2000-30KTL-M3, SUN2000-36KTL-M3, SUN2000-40KTL-M3; SUN2000-100KTL-M1
Type of Power Gener. plants	Type A and Type B (according to Commission Regulation (EU) 2016/631)

All inverters listed above can be used in Type A power generating plant (according to Commission Regulation EU 2016/631).

The inverter with the country setting Slovenia have grid protection parameters below (or can be set with the following grid protection parameters according to SIST EN50549-1):

Protection Parameter	Trip Setting	Time
Under-voltage level 1	0.85 Un	2000 ms
Under-voltage level 2	0.7 Un	200 ms
Over-voltage level 1	1.11 Un	2000 ms
Over-voltage level 2	1.15 Un	200 ms
Under-frequency level 1	47 Hz	200 ms
Under-frequency level 2	52 Hz	200 ms

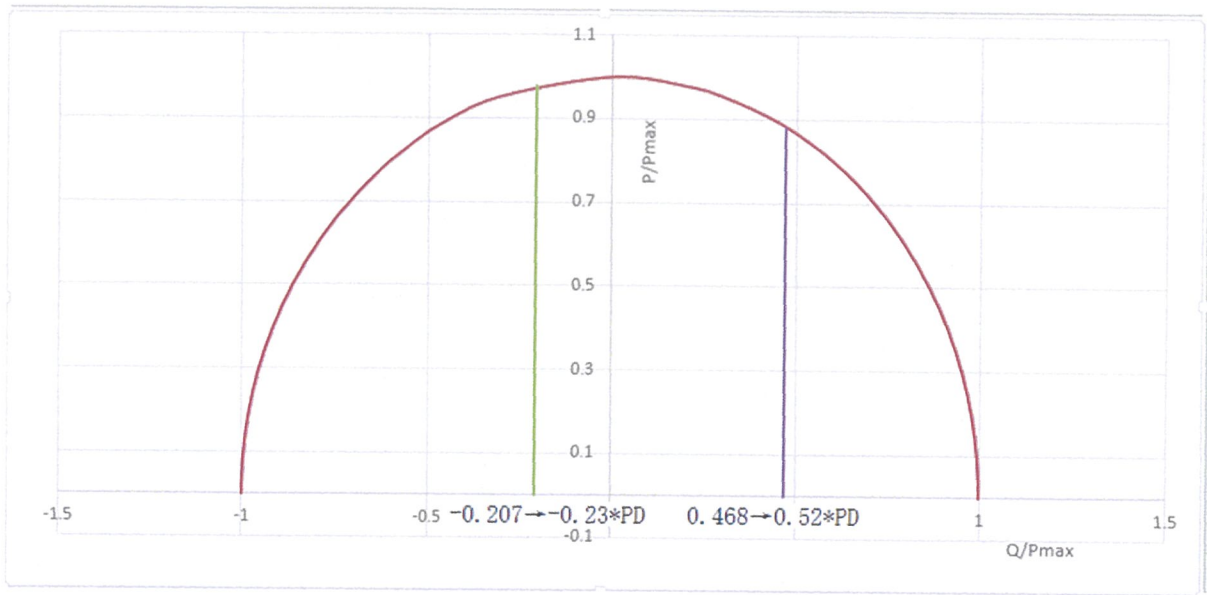
10-min overvoltage protection threshold	253.0 V >	Level-1 overfrequency protection threshold	52.00 Hz >
10-min overvoltage protection time	200 ms >	Level-1 overfrequency protection time	200 ms >
Level-1 overvoltage protection threshold	255.3 V >	Level-2 overfrequency protection threshold	52.00 Hz >
Level-1 overvoltage protection time	2000 ms >	Level-2 overfrequency protection time	200 ms >
Level-2 overvoltage protection threshold	264.5 V >	Level-1 underfrequency protection threshold	47.00 Hz >
Level-2 overvoltage protection time	200 ms >	Level-1 underfrequency protection time	200 ms >
Level-1 undervoltage protection threshold	195.5 V >	Level-2 underfrequency protection threshold	47.00 Hz >
Level-1 undervoltage protection time	2000 ms >	Level-2 underfrequency protection time	200 ms >
Level-2 undervoltage protection threshold	161.0 V >		
Level-2 undervoltage protection time	200 ms >		

Grid connection parameters:

Lower frequency	49.9 Hz
Upper frequency	50.1 Hz
Lower voltage	0.9 U _n
Upper voltage	1.1 U _n
Grid monitoring time	60 s
Gradient	10% P _{max} /min

Grid connection time after power grid recovery	60 s >	Grid reconnection voltage upper limit	253.0 V >
Maximum voltage of grid-tied startup	253.0 V >	Grid reconnection voltage lower limit	207.0 V >
Minimum voltage of grid-tied startup	207.0 V >	Grid reconnection frequency upper limit	50.20 Hz >
Maximum frequency of grid-tied startup	50.10 Hz >	Grid reconnection frequency lower limit	49.90 Hz >
Minimum frequency of grid-tied startup	49.90 Hz >	delay time for connecting automatically to the network	60 s >
Soft start time	600 s >		
Frequency change rate protection	<input type="checkbox"/>		
AFCI	<input checked="" type="checkbox"/>		
Soft start time after grid failure	600 s >		

The reactive power capability graph is according to SONDOSEE requirements and clarifications i.e. within the limit of the following graph for inductive and capacitive behavior, i.e. between $-0.23 \cdot PD$ and $0.52 \cdot PD$ where $PD = P_{max} \cdot \cos\phi_n$ and $\cos\phi_n = 0.9$



Inverters are able to limit the I_{dc} , Dc injection, to 0.5% of nominal current.

On behalf of Huawei Technologies

Yours Faithfully,

Signed: _____

Date: 24.08.2021