



## Declaration of Conformity

### Resolution n° 7 – Addendum to Amendment n° 1 of the Philippine Grid Code

SMA hereby declares that the following inverters (with the correct setting for the Philippines) comply with the following requirements defined in the Section 2 of the Resolution n° 7, Series of 2013, which establishes the connection and operational requirements for variable renewable energy generating facilities, as an addendum to the Amendment n° 1 of the Philippine Grid Code:

- STP 15000TL-30, STP 20000TL-30, STP 25000TL-30, STP 50-40, STP 60-10
- SHP 75-10
- SC 500CP-10, SC 630CP-10, SC 720CP-10, SC 760CP-10, SC 800CP-10, SC 850CP-10, SC 900CP-10, SC 1000CP-10
- SC-2200-10, SC-2475-10, SC-2500-EV-10, SC-2750-EV-10, SC-3000-EV-10
- SCS-2200-10, SCS-2475-10, SCS-2900-10, SCS-2500-EV-10, SCS-2750-EV-10, SCS-3000-EV-10

1. The table below summarizes the minimum time requirements for the inverter to remain connected if the magnitude surpasses the applicable threshold. A disconnection of the inverter occurs after the corresponding minimum time.

Parameter	V <sub>max1</sub>	V <sub>max2</sub>	V <sub>min1</sub>	V <sub>min2</sub>	f <sub>max</sub>	f <sub>min</sub>
Threshold	120%×V <sub>nom</sub>	110%×V <sub>nom</sub>	90%×V <sub>nom</sub>	45%×V <sub>nom</sub>	62,4 Hz	57,6 Hz
Minimum time	0,2 s	2 s	3 s	1,5 s	0,2 s	5 s

V<sub>nom</sub> = 400 V and f<sub>nom</sub> = 60 Hz

2. Within the mentioned frequency limits the inverters will continuously operate without disconnection.
3. The inverters comply with the international Standards (IEC) regarding the flicker severity and current harmonics. The THDi is always lower than 5%I<sub>nom</sub>
4. The power factor can be set within 0.8 underexcited and 0.8 overexcited at the inverter terminals. For the definition of the power factor at the connection point within the required limits of 0.95 underexcited and 0.95 overexcited it is necessary to carry out an on-site analysis and define the proper configuration for the inverters. A communication device might be compulsory to be installed.
5. The rated power is calculated at the nominal voltage and with a power factor equal to the unity. The power will decrease if the voltage goes below the nominal value. If the active power and reactive power must be maintained within voltage variations up to 5%V<sub>nom</sub>, the inverters' power must be set to a lower value than the rated power.
6. The performance during network disturbances is according the figure 4 of the Resolution n° 7. The inverters are able to remain connected during the defined voltage dip profile and inject reactive current during the duration of the fault. Similar voltage dips have been tested by independent testing laboratories for other applicable standards, such as, the German BDEW Medium Voltage Directive.
7. The inverters are able to operate following an active power regulation. Power constrains via set-points can be implemented with additional communication accessories. A characteristic curve can be defined, so that the inverters automatically reduce their output power depending on the grid frequency.

Niestetal, 07.08.2018

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