



Manufacturer's Declaration

SMA declares that all listed devices with NRS 097-2-1 setting that are delivered to South Africa ex works SMA are set with the parameters in table 1. These parameters are password protected and cannot be adjusted by a user or any other unauthorized person.

Devices, which are not preconfigured for NRS 097-2-1 can be adjusted by an installer with the use of a tool (password protected). The changes should be documented in the factory setting sheet of the device.

Approved for following SMA Solar Inverters:

- SB1.5-1VL-40, SB2.5-1VL-40, SBS2.5-1VL-10
- SB 3000TL-21, SB 3600TL-21, SB 4000TL-21, SB 5000TL-21, SB 6000TL-21
- STP 5000TL-20, STP 6000TL-20, STP 7000TL-20, STP 8000TL-20, STP 9000TL-20, STP 10000TL-20, STP 12000TL-20
- STP 15000TL-30, STP 20000TL-30, STP 25000TL-30
- STP 60-10

Power quality and protection (NRS 097-2-1)

| Protection Parameters Settings | Trip Setting | Clearance Time |
|--|--|----------------|
| Over Voltage (230 V + 10 %) | 253 V | 2 s |
| Over Voltage (230 V + 20 %) | 276 V | 0.16 s |
| Under Voltage (230 V - 15 %) | 195,5 V | 2 s |
| Under Voltage (230 V - 50 %) | 115 V | 0.2 s |
| Over Frequency (50 Hz + 4 %) | 52 Hz | 0.5 s |
| Under Frequency (50 Hz - 5 %) | 47,5 Hz | 0.5 s |
| Islanding Detection (Frequency Shift)* | 2 s | |
| Reconnection Time | >60 sec | |
| Max. DC Current injection to grid | 1% of the rated AC output current into the utility interface under any operation condition. 0.5 s clearance time | |
| Total Harmonics Distortion | Not exceed 5% | |
| Limitation of voltage flicker | As per IEC 61727:2004 , EN 61000-3-2/EN 61000-3-12 | |

* Frequency Shift is an active AID method and more safe than methods like df/dt - Vector shift and $rocof$ - rate of change of frequency

Niestetal, 25.07.2017

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