

For Northern Ireland only:
Compliance with G83-1-1



SUNNY BOY / SUNNY TRIPOWER

The requirements of the English G83/1-1 standard are effective for all new PV systems in Northern Ireland.

The SMA inverters listed below are currently set to the G83/2 standard. In order to operate any of these in Northern Ireland, several inverter parameters must be set after commissioning to meet the requirements of the G83/1-1 standard. Only qualified persons are allowed to set the parameters.

This document is valid for the following SMA inverters:

- SBS2.5-1VL-10
- SB1.5-1VL-40 / SB2.0-1VL-40 / SB2.5-1VL-40
- SB 2000HF-30 / SB 2500HF-30 / SB 3000HF-30
- SB 2500TLST-21 / SB 3000TLST-21
- SB 3000TL-21 / SB 3600TL-21 / SB 4000TL-21 / SB 5000TL-21
- STP 5000TL-20 / STP 6000TL-20 / STP 7000TL-20 / STP 8000TL-20 / STP 9000TL-20 / STP 10000TL-20 / STP 12000TL-20
- STP 8000TL-10 / STP 10000TL-10 / STP 12000TL-10 / STP 15000TL-10 / STP 17000TL-10

Requirements:

- The current inverter firmware must contain the country data set G83/2.
- The inverter must be registered in a communication product or must have an integrated webserver.
- Depending on the communication product and the type of communication, a computer with BLUETOOTH or Ethernet interface must be available.
 - For accessing the integrated webserver any device with a WLAN or Ethernet interface is sufficient.
- An SMA Grid Guard code must be available (see order form for the SMA Grid Guard code at www.SMA-Solar.com).

Procedure:

1. Call up the user interface of the communication product or access the integrated webserver or start the software and open the PV system as **Installer**.
2. Enter the SMA Grid Guard code or activate the SMA Grid Guard mode (see manual of the communication product).
3. Make sure that the parameter **Set country standard** is set to **G83/2**.
4. Select and configure the following parameters for voltage monitoring:

Parameter name with RS485	Parameter name with BLUETOOTH or Speedwire/ Webconnect	Default value as per G83/2	Value to be set as per G83/1-1
VolCfl.hhLim	Voltage monitoring median maximum threshold	273.7 V	SB xx00TL-21 / SB xx00TLST-21 / STP xx000TL-10 / STP xx000TL-20 / SBxx-1VL-40 / SBS2.5-1VL-10: 300 V SB xx00HF-30: no change
VolCfl.hhLimTms	Voltage monitoring median max. threshold trip.time	500 ms / 0.5 s	SB xx00TL-21 / SB xx00TLST-21 / STP xx000TL-10 / STP xx000TL-20 / SBxx-1VL-40 / SBS2.5-1VL-10: 60,000 ms / 60 s SB xx00HF-30: no change
VolCfl.hLim	Voltage monitoring lower maximum threshold	262.5 V	264 V
VolCfl.hLimTms	Voltage monitoring lower max. threshold trip. time	1,000 ms / 1 s	5,000 ms / 5 s
VolCfl.lLim	Voltage monitoring lower minimum threshold	200.1 V	207 V
VolCfl.lLimTms	Voltage monitoring lower min. threshold trip. time	2,500 ms / 2.5 s	5,000 ms / 5 s

Parameter name with RS485	Parameter name with BLUETOOTH or Speedwire/ Webconnect	Default value as per G83/2	Value to be set as per G83/1-1
VolCtl.lLim	Voltage monitoring of median minimum threshold	184 V	STP xx000TL-10 / STP xx000TL-20 / SBxx-1VL-40 / SBS2.5-1VL-10: 45 V SB xx00TL-21 / SB xx00TLST-21: 0 V SB xx00HF-30: no change
VolCtl.lLimTms	Voltage monitoring median min. threshold trip.time	500 ms / 0.5 s	SB xx00TL-21 / SB xx00TLST-21 / STP xx000TL-10 / STP xx000TL-20 / SBxx-1VL-40 / SBS2.5-1VL-10: 10,000 ms / 10 s SB xx00HF-30: no change

5. Select and set the following parameters for frequency monitoring:

Parameter name with RS485	Parameter name with BLUETOOTH or Speedwire/ Webconnect	Default value as per G83/2	Value to be set as per G83/1-1
FrqCtl.hhLim	Frequency monitoring median maximum threshold	52 Hz	STP xx000TL-10 / STP xx000TL-20 / SBxx-1VL-40 / SBS2.5-1VL-10: 65 Hz
FrqCtl.Max	Frequency monitoring upper maximum threshold	52 Hz	SB xx00TL-21 / SB xx00TLST-21: 65 Hz SB xx00HF-30: no change

Parameter name with RS485	Parameter name with BLUETOOTH or Speedwire/ Webconnect	Default value as per G83/2	Value to be set as per G83/1-1
FrqCtl.hhLimTms	Frq. monitoring median max. threshold trip. time	500 ms / 0.5 s	STP xx000TL-10 / STP xx000TL-20 / SBxx-1VL-40 / SBS2.5-1VL-10: 10,000 ms / 10 s
FrqCtl.MaxTms	Frq. monitoring upper max. threshold trip. time	500 ms / 0.5 s	SB xx00TL-21 / SB xx00TLST-21: 10,000 ms / 10 s SB xx00HF-30: 550 ms / 0.55 s
FrqCtl.hLim	Frequency monitoring lower maximum threshold	51.5 Hz	50.5 Hz
FrqCtl.hLimTms	Frq. monitoring lower max. threshold trip. time	90,000 ms / 90 s	5,000 ms / 5 s
FrqCtl.lLim	Frequency monitoring upper minimum threshold	47.5 Hz	SB xx00TL-21 / SB xx00TLST-21 / STP xx000TL-10 / STP xx000TL-20 / SBxx-1VL-40 / SBS2.5-1VL-10: 47 Hz SB xx00HF-30: no change
FrqCtl.lLimTms	Frq. monitoring upper min. threshold trip. time	20,000 ms / 20 s	5,000 ms / 5 s
FrqCtl.lLim	Frequency monitoring median minimum threshold	47 Hz	STP xx000TL-10 / STP xx000TL-20 / SBxx-1VL-40 / SBS2.5-1VL-10: 44 Hz
FrqCtl.Min	Frequency monitoring lower minimum threshold	47 Hz	SB xx00TL-21 / SB xx00TLST-21: 44 Hz SB xx00HF-30: no change

Parameter name with RS485	Parameter name with BLUETOOTH or Speedwire/ Webconnect	Default value as per G83/2	Value to be set as per G83/1-1
FrqCfl.lLimTms	Frq. monitoring median min. threshold trip. time	500 ms / 0.5 s	SB xx00TL-21 / SB xx00TLST-21 / STP xx000TL-10 / STP xx000TL-20 / SBxx-1VL-40 / SBS2.5-1VL-10: 30,000 ms / 30 s SB xx00HF-30: 550 ms / 0.55 s

6. Select and set the following parameters for the (re-) connection time:

Parameter name with RS485	Parameter name with BLUETOOTH or Speedwire/ Webconnect	Default value as per G83/2	Value to be set as per G83/1-1
GriFltMonTms	Reconnection time upon grid interruption	20 s	180 s
GrdFltReConTms	Reconnection time upon short interruption	20 s	180 s

7. For SB 1.5-1VL-40, SB2.5-1VL-40, SBS2.5-1VL-10, STP xx000TL-10 and STP xx000TL-20 only: select and set the following parameters for islanding detection:

Parameter name with RS485	Parameter name with BLUETOOTH or Speedwire/ Webconnect	Default value as per G83/2	Value to be set as per G83/1-1
Aid.AsymDetMaxT	Trip.time of islanding detection unbalance detect.	500 ms / 0.5 s	5,000 ms / 5 s
Aid.HzMonTms	Tripping time of islanding detection frq. monitor	500 ms / 0.5 s	5,000 ms / 5 s

8. Record all changes (e.g. on the supplementary sheet with the default settings).
- The changes are saved in the communication product and the data is transferred to the inverter. The saving process can take several hours if the inverter is in night mode. When the inverter starts up, the data is stored in the inverter main memory and the display shows "Adj" (adjusted) as the country data set.