



SUNNY ISLAND X 30 / 50

Approved batteries and information on connecting batteries

1 Validity

This document is valid for:

- SI30-20 (Sunny Island X 30) from firmware version 3.04.xxx.R
- SI50-20 (Sunny Island X 50) from firmware version 3.04.xxx.R

2 Approved Batteries

This section lists the batteries approved for the Sunny Island X (SI-30-20 and SI 50-20) from SMA Solar Technology AG.

i Firmware version of the battery

The firmware versions of the batteries can be viewed via the user interface of the respective battery after successful commissioning. The correct minimum battery firmware must be installed in accordance with the manufacturer's specifications and the product instructions for the respective battery model.

i Inverter firmware version

The firmware version of the inverter can be accessed via the user interface of the inverter.

Manufacturer BYD

	Firmware version of the battery	Firmware version of the inverter SI30-20	Firmware version of the inverter SI50-20
Model: Maxlite	≥ 2.00.06	≥ 3.06.20.R	≥ 3.06.20.R

Manufacturer Cegasa

	Firmware version of the battery	Firmware version of the inverter SI30-20	Firmware version of the inverter SI50-20
Model: E/Xpand	≥ 1.21	≥ 3.07.09.R	≥ 3.07.09.R
Model: E/Scale	≥ 1.21	≥ 3.07.09.R	≥ 3.07.09.R

Manufacturer Dyness

	Firmware version of the battery	Firmware version of the inverter SI30-20	Firmware version of the inverter SI50-20
Model: Stack 100	≥00.00.121.R	≥ 3.07.09.R	≥ 3.07.09.R
Model: Stack 100 Pro	≥00.00.121.R	≥ 3.07.09.R	≥ 3.07.09.R

Manufacturer Pylontech

	Firmware version of the battery	Firmware version of the inverter SI30-20	Firmware version of the inverter SI50-20
Model: M1C	1.10 (RackBMS)	≥ 3.04.xxx.R	≥ 3.04.xxx.R
Model: M5A	≥ 1.8	≥ 3.04.xx.R	≥ 3.04.xx.R

Manufacturer SMA

	Firmware version of the battery	Firmware version of the inverter SI30-20	Firmware version of the inverter SI50-20
Model: Storage XL In- door 89	≥ 1.3.4	≥ 3.07.09.R	≥ 3.07.09.R
Model: Storage XL In- door 197	≥ 1.3.4	≥ 3.07.09.R	≥ 3.07.09.R
Model: Storage XL Out- door 107	≥ 1.3.4	≥ 3.07.09.R	≥ 3.07.09.R
Model: Storage XL Out- door 197	≥ 1.3.4	≥ 3.07.09.R	≥ 3.07.09.R

Manufacturer Sunwoda

	Firmware version of the battery	Firmware version of the inverter SI30-20	Firmware version of the inverter SI50-20
Model: Oasis 60	≥ 4.13	≥ 3.07.09.R	≥ 3.07.09.R
Model: Oasis Rack	≥ 4.13	≥ 3.07.09.R	≥ 3.07.09.R
Model: Oasis Rack Pro	≥ 4.13	≥ 3.07.09.R	≥ 3.07.09.R
Model: Oasis Rack Pro +	≥ 4.13	≥ 3.07.09.R	≥ 3.07.09.R
Model: Oasis Flex	≥ 4.13	≥ 3.07.09.R	≥ 3.07.09.R
Model: Oasis L215	≥ 20251928_1.7.0	≥ 3.07.09.R	≥ 3.07.09.R
Model: Oasis L241	≥ V1.2.0	≥ 3.07.09.R	≥ 3.07.09.R
Model: Oasis L261	≥ V1.2.0	≥ 3.07.09.R	≥ 3.07.09.R
Model: Oasis A180	≥ 4.13	≥ 3.07.09.R	≥ 3.07.09.R
Model: Oasis A200	≥ 4.13	≥ 3.07.09.R	≥ 3.07.09.R

Manufacturer Tesvolt

	Firmware version of the battery	Firmware version of the inverter SI30-20	Firmware version of the inverter SI50-20
Model: E series	≥ 55.19.00	≥ 3.04.xxx.R	≥ 3.04.xxx.R

Manufacturer ZYC

	Firmware version of the battery	Firmware version of the inverter SI30-20	Firmware version of the inverter SI50-20
Model: Simpo HV Pro	≥ V1.15.0	≥ 3.07.09.R	≥ 3.07.09.R

	Firmware version of the battery	Firmware version of the inverter SI30-20	Firmware version of the inverter SI50-20
Model: Simpo ProE	≥ V1.15.0	≥ 3.07.09.R	≥ 3.07.09.R
Model: Simpo ProS	≥ V1.15.0	≥ 3.07.09.R	≥ 3.07.09.R

3 Recommended minimum configuration for various systems

To fully utilize the nominal power and overload capability of the Sunny Island X, the following minimum configurations are recommended for the respective batteries. Deviation from these recommendations is possible but may result in the system being unable to deliver the power specified in the datasheet of our devices. The specified configurations should be especially considered for battery-backup or off-grid operations where no other AC sources are available.

Some electrical loads (e.g., motors) may draw high starting currents for a short duration. These electrical loads may require a larger system design with more battery modules than the minimum configuration specifies.

When used in off-grid systems, the battery generally must not be discharged below 6% SOC. The curtailment of the PV generation must start at 95% SOC at the latest. If any thresholds for the SOC differ from this, they are specified for the respective batteries.

Manufacturer BYD

	On Grid	Off-Grid	Communication type	Minimum configuration SI30-20 (Quantity: modules)	Minimum configuration SI50-20 (Quantity: modules)	Comments
Model: Maxlite From firmware version 2.00.06	✓	-	CAN	7	11	-

Manufacturer Cegasa

	On Grid	Off-Grid	Communication type	Minimum configuration SI30-20 (Quantity: modules)	Minimum configuration SI50-20 (Quantity: modules)	Comments
Model: E/Xpand From firmware version 1.2.1	✓	✓	CAN	7	7	Maximum number of modules is 17
Model: E/Scale From firmware version 1.2.1	✓	✓	CAN	11	2 x 9	-

Manufacturer Dyness

	On Grid	Off-Grid	Communication type	Minimum configuration SI30-20 (Quantity: modules)	Minimum configuration SI50-20 (Quantity: modules)	Comments
Model: Stack 100 From firmware version 00.00.121.R	✓	✓	CAN	7	12	-
Model: Stack 100 Pro From firmware version 00.00.121.R	✓	✓	CAN	7	12	-

Manufacturer Pylontech

	On Grid	Off-Grid	Communication type	Minimum configuration SI30-20 (Quantity: modules)	Minimum configuration SI50-20 (Quantity: modules)	Comments
Model: M1C Firmware version 1.10 (RackBMS)	✓	✓	Modbus	13	18	New BMS firmware versions are not compatible with Sunny Island X
Model: M5A From firmware version ≥ 1.8	✓	✓ ¹⁾	Modbus	5	8	-

Manufacturer SMA

	On Grid	Off-Grid	Communication type	Minimum configuration SI30-20 (Quantity: modules)	Minimum configuration SI50-20 (Quantity: modules)	Comments
Model: Storage XL Indoor 89 From firmware version 1.3.4	✓	✓	CAN	-	-	The capacity of the battery cabinet is not configurable.

¹⁾ When used in off-grid systems, an external AC UPS is required for the BMS.

	On Grid	Off-Grid	Communication type	Minimum configuration SI30-20 (Quantity: modules)	Minimum configuration SI50-20 (Quantity: modules)	Comments
Model: Storage XL Indoor 197 From firmware version 1.3.4	✓	✓	CAN	-	-	The capacity of the battery cabinet is not configurable.
Model: Storage XL Outdoor 107 From firmware version 1.3.4	✓	✓	CAN	-	-	The capacity of the battery cabinet is not configurable.
Model: Storage XL Outdoor 197 From firmware version 1.3.4	✓	✓	CAN	-	-	The capacity of the battery cabinet is not configurable.

Manufacturer Sunwoda

	On-grid	Off-Grid	Communication type	Minimum configuration SI30-20 (Quantity: modules)	Minimum configuration SI50-20 (Quantity: modules)	Comments
Model: Oasis 60 From firmware version 4.13	✓	✓	CAN	-	-	The capacity of the battery cabinet is not configurable.
Model: Oasis Rack From firmware version 4.13	✓	✓	CAN	7	11	-
Model: Oasis Rack Pro From firmware version 4.13	✓	✓	CAN	5	6	-
Model: Oasis Rack Pro + From firmware version 4.13	✓	✓	CAN	5	6	-

	On-grid	Off-Grid	Communication type	Minimum configuration SI30-20 (Quantity: modules)	Minimum configuration SI50-20 (Quantity: modules)	Comments
Model: Oasis Flex From firmware version 4.13	✓	✓	CAN	7	11	-
Model: Oasis L215 From firmware version 20251928_1.7.0	✓	✓ ¹⁾	CAN	-	-	The capacity of the battery cabinet is not configurable.
Model: Oasis L241 From firmware version V1.2.0	✓	✓ ¹⁾	CAN	-	-	The capacity of the battery cabinet is not configurable
Model: Oasis L261 From firmware version V1.2.0	✓	✓ ¹⁾	CAN	-	-	The capacity of the battery cabinet is not configurable
Model: Oasis A180 From firmware version 4.13	✓	✓	CAN	6	6	-
Model: Oasis A200 From firmware version 4.13	✓	✓	CAN	6	6	-

Manufacturer Tesvolt

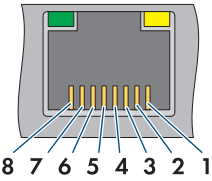
	On Grid	Off-Grid	Communication type	Minimum configuration SI30-20 (Quantity: modules)	Minimum configuration SI50-20 (Quantity: modules)	Comments
Model: E series From firmware version 55.19.00	✓	✓	Modbus	4	7	-

Manufacturer ZYC

	On Grid	Off-Grid	Communication type	Minimum configuration SI30-20 (Quantity: modules)	Minimum configuration SI50-20 (Quantity: modules)	Comments
Model: Simpo HV Pro From firmware version V1.15.0	✓	✓	CAN	4	6	-
Model: Simpo ProE From firmware version V1.15.0	✓	✓	CAN	4	4	-
Model: Simpo ProS From firmware version V1.15.0	✓	✓	CAN	6	10	-

4 Battery Communication Connection

4.1 Pin assignment of RJ45 plug connector for battery communication via CAN bus

RJ45 plug	Pin	Signal
	1	-
	2	EN_GND
	3	-
	4	CAN_H
	5	CAN_L
	6	-
	7	Reserved
	8	-

4.2 Pin assignment of RJ45 plug connector for battery communication via Modbus TCP

When the battery communicates via Modbus, standard, non-crossover network cables must be used in accordance with the requirements for the battery communication cable.

4.3 Battery data cable requirements

The cable length and quality affect the quality of the signal. Observe the following cable requirements:

- ☐ Cable type: 100BaseTx
- ☐ Cable category: minimum CAT5e
- ☐ Plug type: RJ45 of Cat5, Cat5e or higher
- ☐ Shielding: SF/UTP, S/UTP, SF/FTP or S/FTP
- ☐ Maximum cable length between 2 nodes when using patch cables: 50 m
- ☐ UV-resistant for outdoor use

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