

SUNNY TRIPOWER STORAGE 60

STPS60-10

NEW: Multi-Use operating mode increases the efficiency of the overall system



Efficient

- Highest power density with 75 kVA at only 77 kg
- 98.8% maximum efficiency
- Multi-Use to cut peak loads and optimize self-consumption

Versatile

- Four quadrant operation
- Suitable for high-voltage batteries
- Easy to integrate through standard Modbus communication

Scalable

- Modular extendable to the MW range
- A single Inverter Manager manages up to 20 inverters

Universal

- Enables various applications
- Ideal for the commercial and industrial segment
- The perfect complement to your SMA solution

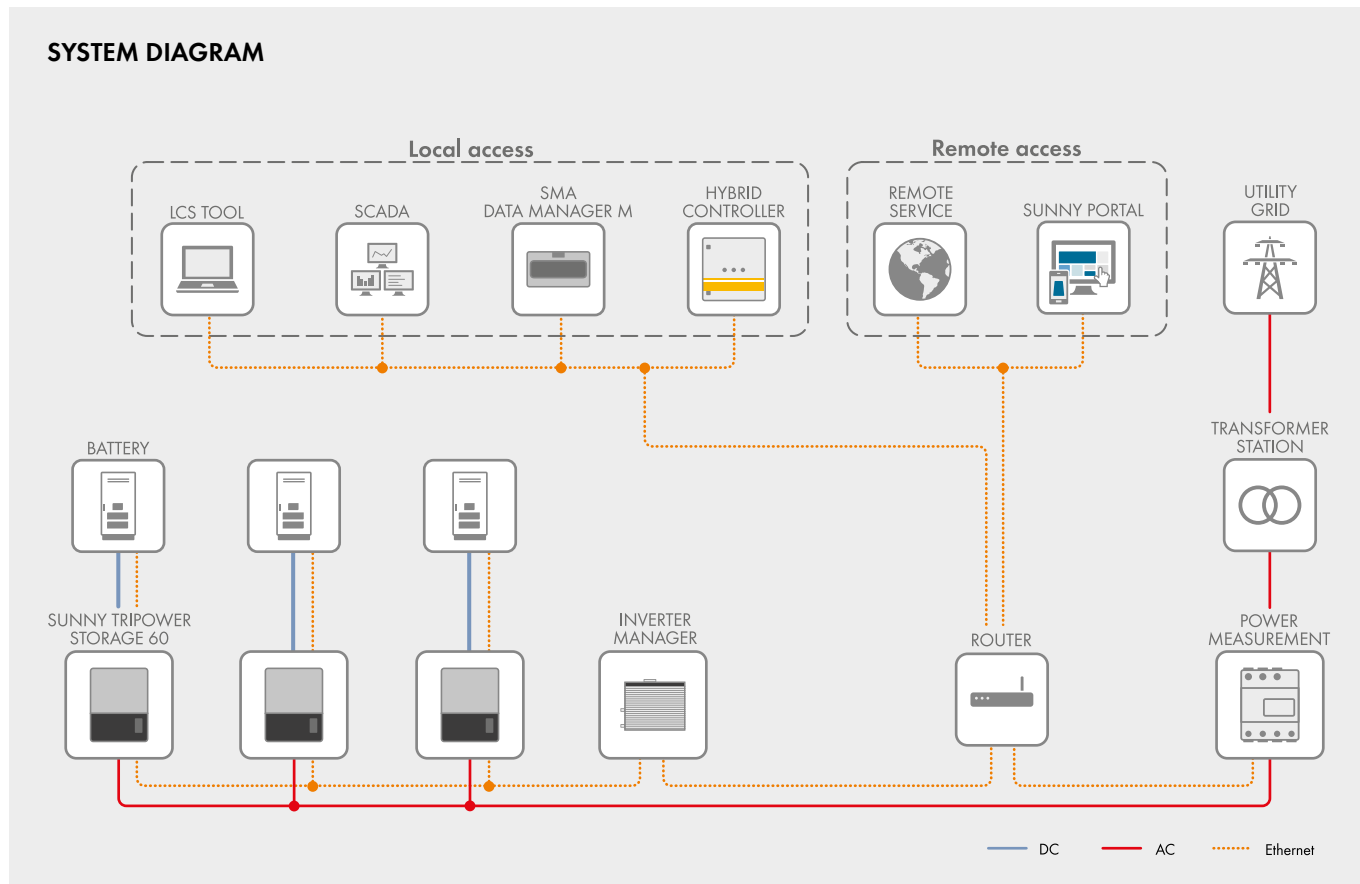
SUNNY TRIPOWER STORAGE 60

Highest power density for flexible applications

The new Sunny Tripower Storage 60 is the perfect solution for commercial and industrial storage solutions. Its modularity guarantees maximum flexibility up to the MW scale. Customers in the commercial and industrial segment profit from extraordinary versatility at low costs. Whether Peak Load Shaving, Time of Use-Tariffs (ToU) and the increase of PV self consumption for grid tied systems or the fuel cost reduction in PV-Diesel-Hybrid applications – the Sunny Tripower Storage offers various use cases and chances for new business models.

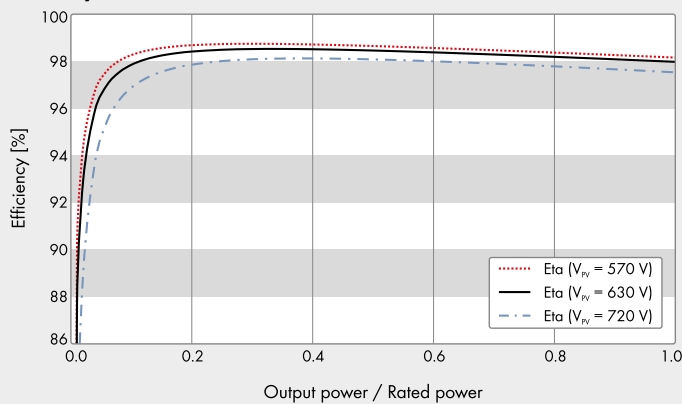
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SYSTEM DIAGRAM



Technical Data	SMA Inverter Manager
Voltage supply	
Input voltage	9 to 36 Vdc
Power consumption	< 20 W
General data	
Dimensions (W/H/D)	160 / 125 / 49 mm (6.3 / 4.9 / 1.9 inches)
Weight	940 g (2 lbs)
Degree of protection	IP21
Mounting	DIN top-hat rails or wall mounting
Operating temperature range	-40 °C to +85 °C (-40 °F to +185 °F)
Relative humidity (non-condensing)	5 % to 95 %
Interfaces	
PC user interface	LCS tool
Sensor interface / protocol	RS485 / Modbus RTU for SunSpec Alliance
Interface to inverter	1 Ethernet port (RJ45)
Interface for external network / protocol	1 Ethernet port (RJ45) / Modbus TCP, SunSpec Alliance
Certificates and approvals (more available upon request)	UL 508, UL 60950-1, CSA C22.2 No. 60950-1-07, EN 60950-1, EN 55022 Class A, EN 61000-3-2 Class D, EN 61000-3-3, EN 61000-6-4, EN 55024, FCC Part 15, Sub-part B Class A
SMA Inverter Manager type designation	IM-20

Efficiency curve



- 1) The values are based on PV inverter SHP 75-10
 2) Does not apply to all national annexes of EN 50438 and/or EN 50549
 3) Restricted (Note Manufacturer's Declaration and/or certificates)

● Standard features ○ Optional – Not available

Data at nominal conditions

Last revision: 03/2022

Technical Data

Battery connection (DC)

Max. DC charging power

DC voltage range

Max. DC current

Battery type

Grid connection (AC)

Max. power

Max. apparent AC power

Max. reactive power

Nominal AC voltage

AC voltage range

AC power frequency / range

Rated power frequency / rated grid voltage

Max. output current

Power factor at rated power / displacement power factor adjustable

THD

Feed-in phases/connection phases

Efficiency

Max. efficiency¹⁾

Protective devices

Input-side disconnection point

Ground fault monitoring / grid monitoring

Integrable DC surge arrester / AC surge arrester

AC short-circuit current capability / galvanically isolated

All-pole sensitive residual-current monitoring unit

Protection class (as per IEC 62109-1) / overvoltage category (as per IEC 62109-1)

General data

Dimensions (W/H/D)

Weight

Operating temperature range

Noise emission, typical

Self-consumption (standby)

Topology / cooling concept

Degree of protection (according to IEC 60529 / UL 50E)

Climatic category (as per IEC 60721-3-4)

Max. permissible value for relative humidity (non-condensing)

Features / function / accessories

DC connection / AC connection

Display

Data interface

Applicable for Off-Grid systems / with SMA Fuel Save Controller

Warranty: 5 / 10 / 15 / 20 years

Certificates and approvals (more available upon request)

Type designation

Sunny Tripower Storage 60

60000 W

575 V to 1000 V

140 A

Li-ion

75000 W

75000 VA

75000 Var

3 / PE, 400 V, ±10 %

360 V to 530 V

50 Hz / 44 Hz to 55 Hz

60 Hz / 54 Hz to 65 Hz

50 Hz / 400 V

109 A

1 / 0 overexcited to 0 underexcited

≤ 1 %

3 / 3

98.8 %

●

● / ●

Type II / type II + III (combined)

● / –

●

I / AC: III; DC: II

570 / 740 / 306 mm (22.4 / 29.1 / 12 inches)

77 kg (170 lb)

-25 °C to +60 °C (-13 °F to +140 °F)

58 dB(A)

< 3 W

Transformerless / active

IP65 / NEMA 3R

4K4H/4Z4/4B2/4S3/4M2/4C2

95 %

Screw terminal / screw terminal

Graphical

SunSpec Modbus TCP (via external SMA Inverter Manager)

– / ●

● / ○ / ○ / ○

C10/11:2019, EN 50438:2013³⁾, EN 50549-1/-2:2019, G99/1-3:2018³⁾,
 G99-NI:2019, IEC 62116, IEC 61727, IEC 62109-1/-2, NA-EEA-NE7 CH 2020,
 NRS 097-2-1:2017³⁾, PN-EN 50549-1/2, TOR Erzeuger Typ A:2019,
 UTE C 15-712-1, VDE-AR-N 4105:2018-11, VDE-AR-N 4110:2018-11,
 VDE 0126-1-1/A1, VFR 2019

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BENEFIT FROM NEW BUSINESS MODELS

enabled by Sunny Tripower Storage 60

The SMA solution for commercial and industrial storage applications opens up whole new business models for customers in these segments. The Sunny Tripower Storage 60 allows efficient integration of storage systems into future-proof energy concepts with or without a PV system.

Peak Load Shaving

Supply peak loads with a storage system and thus reduce demand charges.

Increased PV self consumption

Store temporarily not utilizable solar energy for later use and save energy costs

Multi-Use

The Multi-Use function makes it possible to use the optional peak load shaving and increased self-consumption simultaneously. This allows the electric current from the PV system to be applied even more efficiently and increases the efficiency of the overall system.

Tariff depending business cases /Arbitrage models

Store low tariff energy for use it in high tariff periods

Energy trading

Make solar energy business more reliable through predictable energy volumes

E-mobility

Provide energy for public use by offering a solar powered charging infrastructure