

SUNNY TRIPOWER STORAGE 60

STPS60-10



Efficient

- Highest power density with 75 kVA at only 77 kg
- 98.8% maximum efficiency

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 solar solution

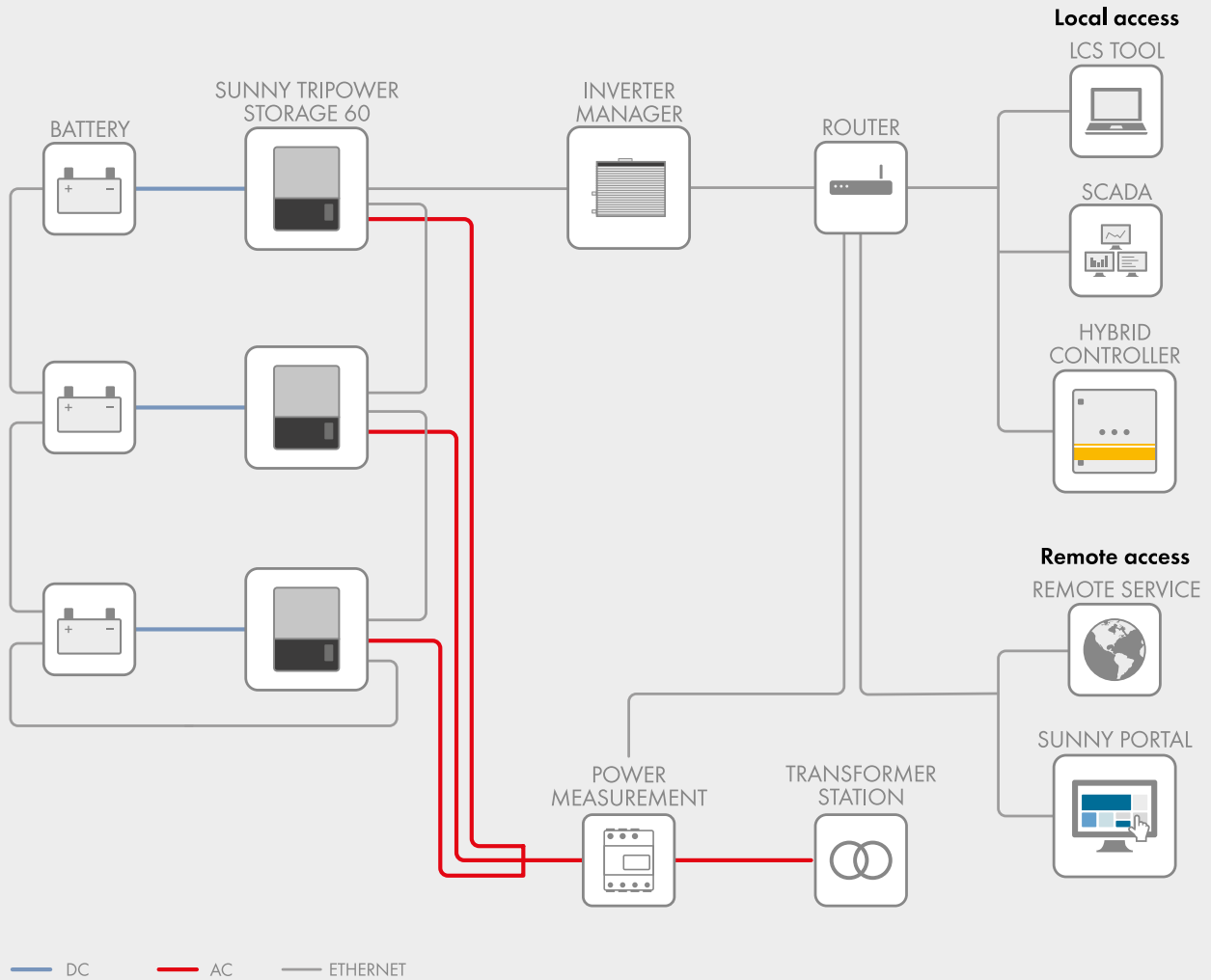
SUNNY TRIPOWER STORAGE 60

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.

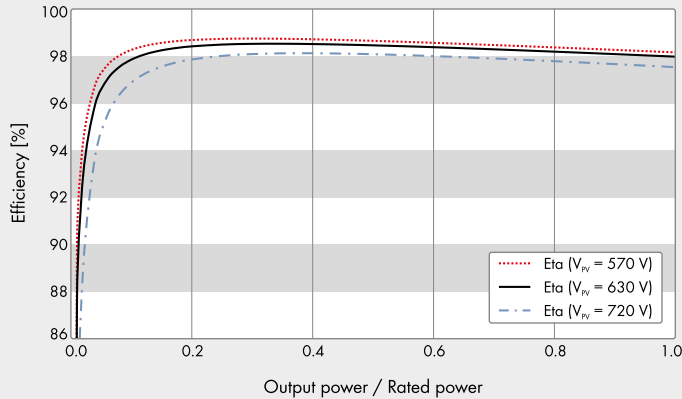
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SYSTEM DIAGRAM



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
 3) Restricted (Note Manufacturer's Declaration)

● Standard features ○ Optional – Not available
 Data at nominal conditions
 Last revision: September 2018

Technical Data	Sunny Tripower Storage 60
Battery connection (DC)	
Max. DC charging power	60000 W
DC voltage range	575 V to 1000 V
Max. DC current	140 A
Grid connection (AC)	
Max. power	75000 W
Max. apparent AC power	75000 VA
Max. reactive power	75000 Var
Nominal AC voltage	3 / PE, 400 V, ±10 %
AC voltage range	360 V to 530 V
AC power frequency / range	50 Hz / 44 Hz to 55 Hz 60 Hz / 54 Hz to 65 Hz
Rated power frequency / rated grid voltage	50 Hz / 400 V
Max. output current	109 A
Power factor at rated power / displacement power factor adjustable	1 / 0 overexcited to 0 underexcited
THD	≤ 1 %
Feed-in phases/connection phases	3 / 3
Efficiency	
Max. efficiency ¹⁾	98.8 %
Protective devices	
Input-side disconnection point	●
Ground fault monitoring / grid monitoring	● / ●
Integrable DC surge arrester / AC surge arrester	Type II / type II + III (combined)
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)	I / AC: III; DC: II
General data	
Dimensions (W/H/D)	570 / 740 / 306 mm (22.4 / 29.1 / 12 inches)
Weight	77 kg (170 lb)
Operating temperature range	-25°C to +60°C (-13°F to +140°F)
Noise emission, typical	58 dB(A)
Self-consumption (standby)	< 3 W
Topology / cooling concept	Transformerless / active
Degree of protection (according to IEC 60529 / UL 50E)	IP65 / NEMA 3R
Climatic category (as per IEC 60721-3-4)	4K4H/4Z4/4B2/4S3/4M2/4C2
Max. permissible value for relative humidity (non-condensing)	95 %
Features / function / accessories	
DC connection / AC connection	Screw terminal / screw terminal
Display	Graphical
Data interface	SunSpec Modbus TCP (via external SMA Inverter Manager)
Applicable for Off-Grid systems / with SMA Fuel Save Controller	– / ●
Warranty: 5 / 10 / 15 / 20 years	● / ○ / ○ / ○
Certificates and approvals (more available upon request)	BDEW 2008, C10/11:2012 ³⁾ , EN 50438:2013 ²⁾ , G59/3, IEC 62116, IEC 61727, IEC 62109-1/-2, UTE C 15-712-1, VDE 0126-1-1/A1, VDE-AR-N 4105 ³⁾ , VFR 2014
Type designation	STPS60-10

BENEFIT FROM VARIOUS BUSINESS CASES

enabled by Sunny Tripower Storage 60

The SMA solution for commercial & industrial storage applications enables various new business models for customers from these segments. As a key element of the innovative SMA portfolio the Sunny Tripower Storage 60 facilitates the economical integration of storage systems into a future-proof energy concept with or without solar supplement.

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

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