# SUNNY TRIPOWER 5.0 / 6.0 / 8.0 / 10.0
# SMART ENERGY




### Store energy
- Three-phase / DC-coupled
- Integrated battery-backup function
- Fast charging
- Compatible with high-voltage batteries from leading manufacturers

### Smart and effective
- Smart energy management with the Sunny Home Manager
- Maximum energy yield thanks to SMA ShadeFix

### Connect to the grid easily
- Intuitive commissioning via app
- Quick and easy to install thanks to external terminals
- Compact design means minimum space requirements

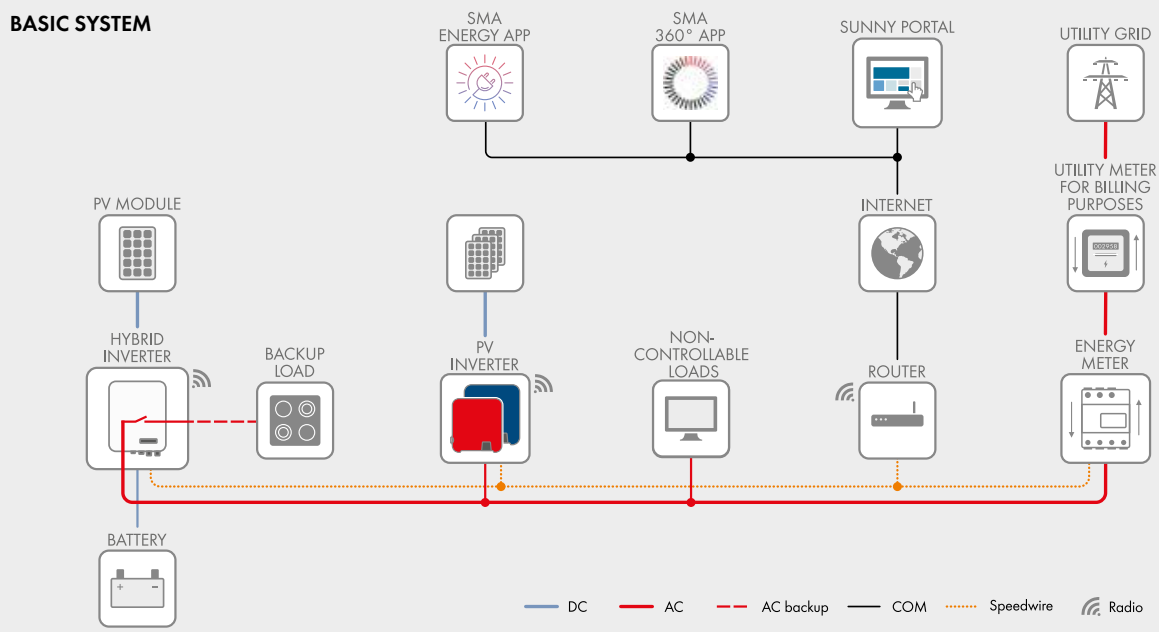
### Convenient all round
- Full-scale professional support for solar power professionals
- Automated service thanks to SMA Smart Connected
- Warranty extension from 5 to 10 years – free of charge

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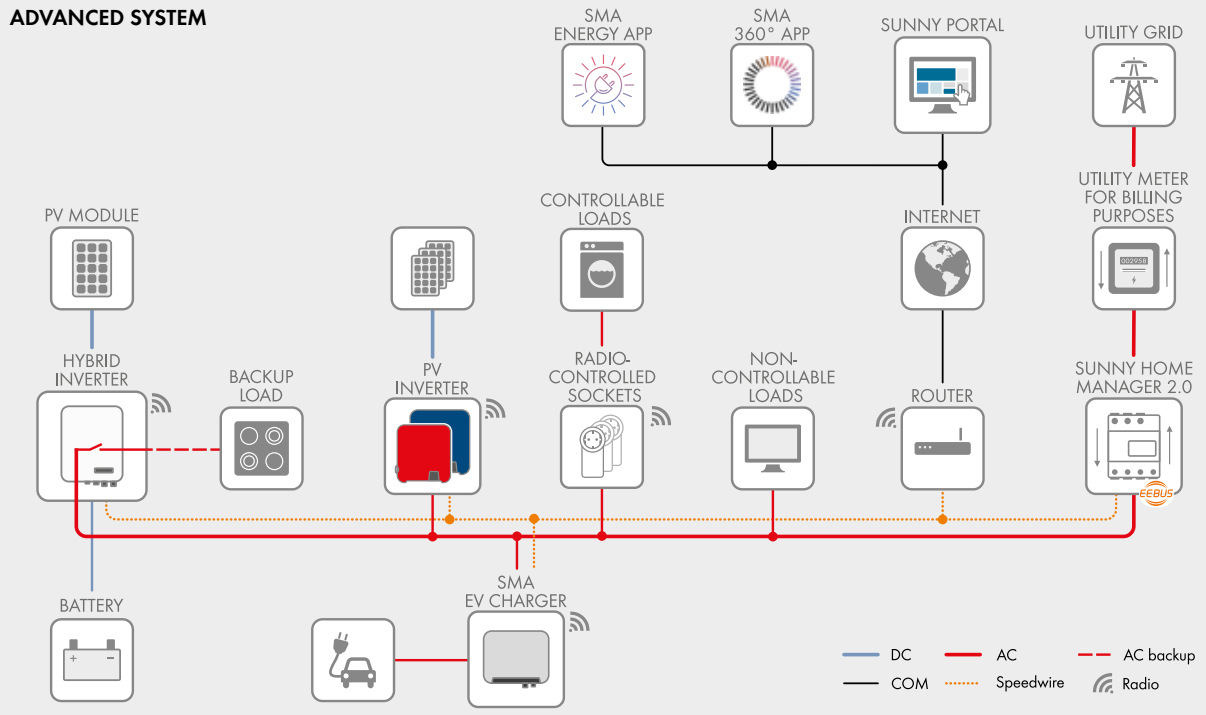
The beating heart of any home

The Sunny Tripower Smart Energy hybrid inverter is the two-in-one system for supplying solar power at home. With this, SMA has combined smart technology and integrated services to create a space-saving compact system, drawing on more than 30 years of experience in storage. With Sunny Tripower Smart Energy, users can easily and conveniently generate, use and store solar power. It is possible to make additions to the system at any time, incorporating e-mobility or heat pumps. The integrated battery-backup function safeguards the household electricity supply even in the event of a grid failure. That makes domestic PV systems comprehensive, smart energy systems with solar energy self-sufficiency of up to 100 percent.

**BASIC SYSTEM**




**ADVANCED SYSTEM**




### Functions of the basic system with SMA Energy Meter

- Maximum system yield and reduced electricity procurement costs thanks to dynamic limits on grid feed-in of between 0% and 100%*
- Reliable supply for selected loads even in the event of grid failure thanks to integrated automatic backup power supply
- Flexible battery use via PV inverter installed in parallel thanks to DC and AC charging
- Easy commissioning via 360° APP and intuitive installation wizard

* Does not apply to multiple inverters in one system

### Functions of the advanced system with Sunny Home Manager 2.0

- Basic system functions
- Increased energy self-sufficiency, ideally matched to your specific installation site and usage by means of artificial intelligence
- Smart combination with heat pumps
- Smart combination with electric vehicles
- Maximum energy use thanks to forecast-based charging
- Visualization of energy consumption
- Dynamic limits on grid feed-in of between 0% and 100% with multiple SMA inverters

| Technical data | Sunny Tripower 5.0 Smart Energy | Sunny Tripower 6.0 Smart Energy | Sunny Tripower 8.0 Smart Energy | Sunny Tripower 10.0 Smart Energy |
|---|---|---|---|---|
| **Input (PV DC)** | | | | |
| Max. PV array power | 7500 Wp | 9000 Wp | 12000 Wp | 15000 Wp |
| Max. input voltage | 1000 V | 1000 V | 1000 V | 1000 V |
| MPP voltage range | 210 V to 800 V | 250 V to 800 V | 330 V to 800 V | 280 V to 800 V |
| Rated input voltage | 600 V | | | |
| Min. input voltage / initial input voltage | 150 V / 180 V | | | |
| Max. input current input A / input B | 12.5 A / 12.5 A | | | 12.5 A / 25 A |
| Max. DC short-circuit current input A / input B | 20 A / 20 A | | | 20 A / 40 A |
| Number of independent MPP inputs / strings per MPP input | 2/A: 1; B: 1 | | | 2/A: 1; B: 2 |
| **Battery connection** | | | | |
| Battery type | Lithium-ion[1] | | | |
| Voltage range | 150 V to 600 V | | | |
| Max. charging current / max. discharging current | 30 A[2] / 30 A[2] | | | |
| Number of connectable batteries | 1 | | | |
| Max. charging power / max. discharging power[3] | 7500 W / 6000 W | 9000 W / 7200 W | 10600 W / 10600 W | |
| **AC connection** | | | | |
| Rated power (at 230 V, 50 Hz) | 5000 W | 6000 W | 8000 W | 10000 W |
| Max. apparent AC power | 5000 VA | 6000 VA | 8000 VA | 10000 VA |
| Nominal AC voltage | 3 / N / PE; 220 V / 380 V<br>3 / N / PE; 230 V / 400 V<br>3 / N / PE; 240 V / 415 V | | | |
| AC voltage range | 156 V to 277 V | | | |
| AC power frequency/range | 50 Hz / 45 Hz to 55 Hz | | | |
| Rated grid frequency / rated grid voltage | 50 Hz/230 V | | | |
| Rated output current | 3 x 7.3 A | 3 x 8.7 A | 3 x 11.6 A | 3 x 14.5 A |
| Max. output current | 3 x 7.6 A | 3 x 9.1 A | 3 x 12.1 A | 3 x 15.2 A |
| Power factor at rated power / adjustable displacement power factor | 1 / 0.8 overexcited to 0.8 underexcited | | | |
| Feed-in phases/connection phases | 3/3 | | | |
| **Efficiency** | | | | |
| Max. efficiency / European Efficiency | 98.2% / 97.3% | 98.2% / 97.5% | 98.2% / 97.8% | 98.1% / 97.5% |
| **Output (AC backup) during on-grid mode** | | | | |
| Max. connectable power for backup load | 13800 W | | | |
| Max. output current for backup load | 3 x 20 A | | | |
| **Output (AC backup) during off-grid mode** | | | | |
| Rated power 1~/3~ (at 230 V, 50 Hz) | 1660 W / 5000 W | 2000 W / 6000 W | 2660 W / 8000 W | 3330 W / 10000 W |
| Max. apparent AC power | 5000 VA | 6000 VA | 8000 VA | 10000 VA |
| Output power / output apparent power < 5 min | 6000 W / 6000 VA | 7200 W / 7200 VA | 12000 W / 12000 VA | |
| Output power / output apparent power < 10 s | 10000 W / 10000 VA | | 12000 W / 12000 VA | |
| Nominal AC voltage | 3 / N / PE; 230 V / 400 V | | | |
| AC grid frequency | 50 Hz | | | |
| Tariff switching to backup mode | 30 ms to 10 s (adjustable) | | | |
| **Protective devices** | | | | |
| Input-side disconnection point (PV DC) | ● | | | |
| Ground fault monitoring / grid monitoring | ● / ● | | | |
| DC reverse polarity protection / AC short circuit current capability / galvanically isolated | ● / ● / – | | | |
| All-pole-sensitive residual-current monitoring unit | ● | | | |
| Protection class (according to IEC 61140) | I | | | |
| Overvoltage category (according to IEC 60664-1) grid/battery/PV | III / II / II | | | |
| SPD | DC type II / AC type II | | | |
| **General data** | | | | |
| Dimensions (W/H/D) | 500 mm / 598 mm / 173 mm (19.7 inch / 23.5 inch / 6.8 inch) | | | |
| Weight | 30 kg (66 lbs) | | | |
| Operating temperature range | -25°C to +60°C (-13°F to +140°F) | | | |
| Noise emission, typical | 30 dB(A) | | | |
| Self-consumption (at night) | 44 W | | | |
| Topology / cooling method | Transformerless/convection | | | |
| Degree of protection (according to IEC 60529) / climate category (according to IEC 60721-3-4) | IP65/4K26 | | | |
| Max. permissible value for relative humidity (non-condensing ) | 100% | | | |
| **Equipment** | | | | |
| PV connection / BAT connection | SUNCLIX / MC4, incl. MC4 battery cable, 3 m | | | |
| AC terminals | AC CONNECTOR (5 x 1.5 to 10 mm²) | | | |
| Display via smartphone, tablet, laptop | ● | | | |
| Number of interfaces: Wi-Fi/Ethernet/BAT-CAN | 1/2/1 | | | |
| Number of digital inputs / outputs | 5/1 | | | |
| Communication protocols | Modbus (SMA, Sunspec), Speedwire/Webconnect | | | |
| Shade management: SMA ShadeFix (integrated) | ● | | | |
| Warranty: 5/10 years | ● / ●[4] | | | |
| Certificates and permits (more available upon request) | CE, IEC 62109-1/-2, TOR Generator type A, VDE0126-1-1, VDE AR-E-2510-2, C10/11, VDE-AR-N4105 | | | |
| Country availability of SMA Smart Connected | AT, BE, CH, DE, NL | | | |
| Model type number | STP5.0-3SE-40 | STP6.0-3SE-40 | STP8.0-3SE-40 | STP10.0-3SE-40 |

● Standard features ○ Optional features – Not available Information refers to nominal conditions Provisional data as of Dec. 2022/1 1) BYD Premium HVS 5.1-12.8, BYD Premium HVM 8.3-22.1; others being planned 2) $U_{PV}$ < 700 V and $U_{BAT}$ >220 V 3) Depending on battery connected 4) When device is registered via the SMA product registration page (sma-service.com). The conditions of the SMA limited factory warranty apply. You can find additional information at SMA-Solar.com

# SMA SMART CONNECTED

## Integrated service for ease and comfort

SMA Smart Connected* allows you to monitor your inverter via the SMA Sunny Portal for free. If an inverter fails, SMA will proactively inform the PV system owner and the installer. This saves valuable working time and costs.

With SMA Smart Connected, the installer benefits from rapid diagnostics by SMA. This allows the installer to rectify the fault quickly and offer customers a range of additional and highly attractive services.



### ACTIVATION OF SMA SMART CONNECTED

During registration of the system in the Sunny Portal, the installer activates SMA Smart Connected and benefits from automatic inverter monitoring by SMA.

### AUTOMATIC INVERTER MONITORING

SMA takes on the job of inverter monitoring with SMA Smart Connected. SMA automatically checks the individual inverters for anomalies around the clock during operation. As a result, every customer benefits from SMA's many years of experience.

### PROACTIVE COMMUNICATION IN THE EVENT OF FAULTS

After a fault has been diagnosed and analyzed, SMA informs the installer and end customer immediately by e-mail. This ensures that everyone involved is properly prepared for the troubleshooting process. This minimizes downtime and saves time and money. Regular power reports also provide valuable information about the overall system.

### REPLACEMENT SERVICE

If a replacement device is necessary, SMA will automatically supply a new inverter within one to three days of the fault being diagnosed. The installer can contact the PV system operator of their own accord and replace the inverter.

### PERFORMANCE SERVICE

The PV system operator can claim compensation from SMA if the replacement inverter is not delivered within three days.

* Details: see document "Description of Services - SMA SMART CONNECTED"



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