

SUNNY TRIPOWER CORE1

STP 50-40



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World's first free standing inverter

Up to 60 % faster installation for commercial PV systems

Cost-Effective

- Floor-mounted device easy to install
- No DC fuses required
- Integrated DC disconnect

Highly Integrated

- Integrated Wi-Fi access with any mobile device
- 12 direct string inputs reduce labor and material costs
- AC/DC overvoltage protection (optional)

Fastest Installation

- Fast grid connection due to easy inverter configuration and commissioning
- Completely accessible connection areas

Maximum Yields

- Up to 150% DC:AC ratio
- Six independent MPP trackers guarantee optimal energy production for every use, even in shading

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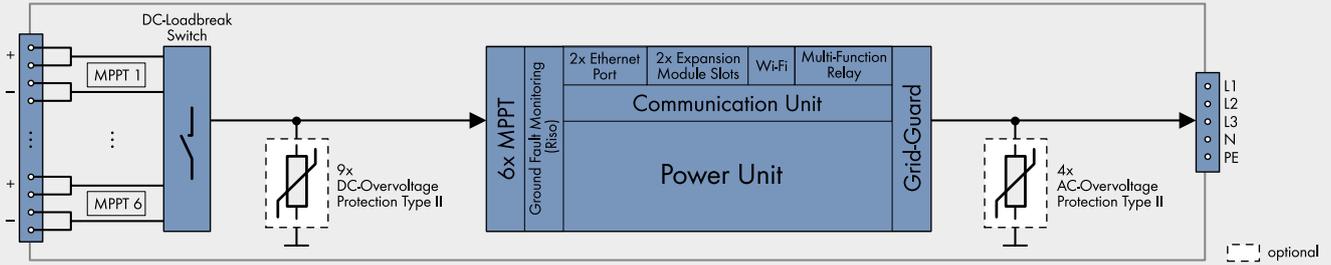
Stands on its own

The Sunny Tripower CORE1 is the world's first free-standing string inverter for decentralized rooftop and ground-based PV systems as well as covered parking spaces. The CORE1 is the third generation in the successful Sunny Tripower product family and is revolutionizing the world of commercial inverters with its innovative design. SMA engineers developed an inverter that combines a unique design with an innovative installation method to significantly reduce installation time and provide all target groups with a maximum return on investment.

From delivery and installation to operation, the Sunny Tripower CORE1 generates widespread savings in logistics, labor, materials and services. Commercial PV installations are now quicker and easier to complete than ever before.

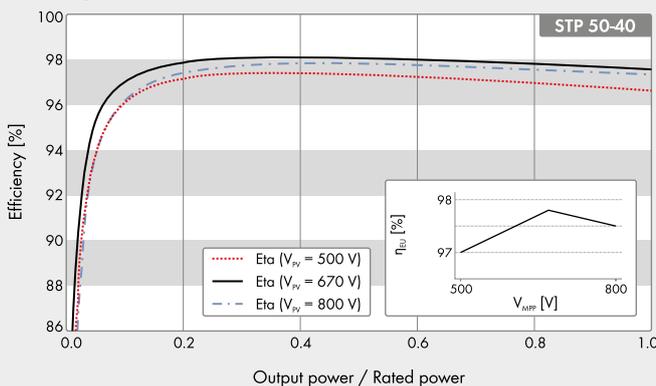
BLOCK DIAGRAM

STP 50-40



| Technical Data | Sunny Tripower CORE1 | Technical Data | Sunny Tripower CORE1 |
|---|--|---|---|
| Input (DC) | | Efficiency | |
| Max. generator power | 75000 Wp STC | Max. efficiency / European efficiency | 98.1% / 97.8% |
| Max. input voltage | 1000 V | General data | |
| MPP voltage range / rated input voltage | 500 V to 800 V / 670 V | Dimensions (W/H/D) | 621 mm / 733 mm / 569 mm (24.4 in / 28.8 in / 22.4 in) |
| Min. input voltage / start input voltage | 150 V / 188 V | Weight | 84 kg (185 lb) |
| Max. operating input current / per MPPT | 120 A / 20 A | Operating temperature range | -25°C to +60°C (-13°F to +140°F) |
| Max. short circuit current per MPPT / per string input | 30A / 30A | Noise emission (typical) | < 65 dB(A) |
| Number of independent MPPT inputs / strings per MPP input | 6 / 2 | Self-consumption (at night) | 4.8 W |
| Output (AC) | | Topology / Cooling concept | Transformerless / OptiCool |
| Rated power (at 230 V, 50 Hz) | 50000 W | Degree of protection (as per IEC 60529) | IP65 |
| Max. apparent AC power | 50000 VA | Climatic category (according to IEC 60721-3-4) | 4K4H |
| AC nominal voltage | 220 V / 380 V 230 V / 400 V 240 V / 415 V | Max. permissible value for relative humidity (non-condensing) | 100% |
| AC voltage range | 202 V to 305 V | Features / functions / accessories | |
| AC grid frequency / range | 50 Hz / 44 Hz to 55 Hz 60 Hz / 54 Hz to 65 Hz | DC connection / AC connection | SUNCLIX / screw terminal |
| Rated power frequency / rated grid voltage | 50 Hz / 230 V | Mounting feet | • |
| Max. output current / Rated output current | 72.5 A / 72.5 A | LED indicators (status / fault / communication) | • |
| Output phases / AC connection | 3 / 3-(N)-PE | Interface: Ethernet / WLAN / RS485 | • (2 ports) / • / ○ |
| Power factor at rated power / Adjustable displacement power factor | 1 / 0.0 leading to 0.0 lagging | Data interface: SMA Modbus / SunSpec Modbus / Speedwire, Webconnect | • / • / • |
| THD | < 3% | Multi-Function relay / Expansion Module Slots | • / • (2 ports) |
| Protective devices | | OptiTrac Global Peak / Integrated Plant Control / Q on Demand 24/7 | • / • / • |
| Input-side disconnection device | • | Off-grid capable / SMA Fuel Save Controller compatible | • / • |
| Ground fault monitoring / grid monitoring | • / • | Guarantee: 5/10/15/20 years | • / ○ / ○ / ○ |
| DC reverse polarity protection / AC short-circuit current capability / galvanically isolated | • / • / - | Certificates and permits (more available on request) | ANRE 30, AS 4777, BDEW 2008, C10/11:2012, CE, CEI 0-16, CEI 0-21, EN 50438:2013*, G59/3, IEC 60068-2-x, IEC 61727, IEC 62109-1/2, IEC 62116, MEA 2016, NBR 16149, NEN EN 50438, NRS 097-2-1, PEA 2016, PPC, RD 1699/413, RD 661/2007, Res. n°7:2013, SI4777, TOR D4, TR 3.2.2, UTE C15-712-1, VDE 0126-1-1, VDE-ARN 4105, VFR 2014, P.O.12.3, NTCO-NTCyS, GC 8.9H, PR20, DEWA |
| All-pole sensitive residual-current monitoring unit | • | * Does not apply to all national appendices of EN 50438 | |
| Protection class (according to IEC 62109-1) / overvoltage category (according to IEC 62109-1) | I / AC: III; DC: II | | |
| AC/DC surge arrester (Type II) | ○ / ○ | | |
| | | • Standard features ○ Optional - Not available | |
| | | Data at nominal conditions - status: 07/2017 | |
| | | Type designation | STP 50-40 |

Efficiency Curve



Assessories

- SMA Sensor Module MD.SEN-40
- SMA IO-Module MD.IO-40
- SMA RS485 Module MD.485-40
- Antenna Extension Kit EXTANT-40
- AC Surge Protection Module Kit AC_SPD_Kit1-10
- DC Surge Protection Module Kit DC_SPD_Kit4-10