

ITEM OPPORTUNITY SYNOPSIS

Name of the item to be scouted: Inverter - free-standing string inverter for decentralized rooftop and ground-based PV systems

State item to be used in: New Mexico

Describe the Item:

Please describe the item application/the end use of item. Solar Kit Manufacturer and installer is seeking a US made inverter that meets the same specs as the Sunny Tripower Core1 - STP 50-40 - see attached specs

Supplier Information:

Type of Supplier being sought (select from list below)

Manufacturer

Contract Manufacturer

Distributor

Other (please specify)

Reason for scouting submission (select from list below)

2nd Supplier

Price

Re-Shore

Past supplier no longer available

New Product Startup

Other (please specify) BABA

Summary of Technical Specifications and Performance Requirements:

Describe the manufacturing processes (elaborate to provide as much detail as possible). Electronic Assembly

Provide dimensions / size / tolerances / performance specifications of the item. 569 mm / 733 mm / 621 mm or 22.4 in / 28.8 in / 24.4 in) * Dimensions (W/H/D) without feet or DC load break switch

List required materials needed to make the product, including materials of product components, if applicable. Please see spec sheet

Are there applicable certification requirements?

Yes

No

Please Explain: 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

Are there any applicable regulations that apply to the production of this item?

Yes

No

Please Explain:

Are there any other standards, requirements?

Yes

No

Please Explain:

Additional Comments:

Additional technical comments:

Volume and Pricing:

Estimated Potential Business Volume (i.e. #Units per day, month, year): Initially three are needed by end of year but projections show possibility for an additional 10-20 units

Estimated Target Price / Unit Cost Information: Current unit is generally \$3500-\$4000

Delivery Requirements:

When is it needed by? (Immediate, 30 days, 6 months, etc) Delivery needed by April 2024

Describe packaging requirements (i.e., individually/ group packaging). N/A

Where will this item be shipped? Customer warehouse in Albuquerque, NM

SUNNY TRIPOWER CORE1

STP 50-40



STP 50-40



SMA ShadeFix
STRING LEVEL OPTIMIZATION

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
- Yield increase without installation effort due to integrated shade management SMA ShadeFix

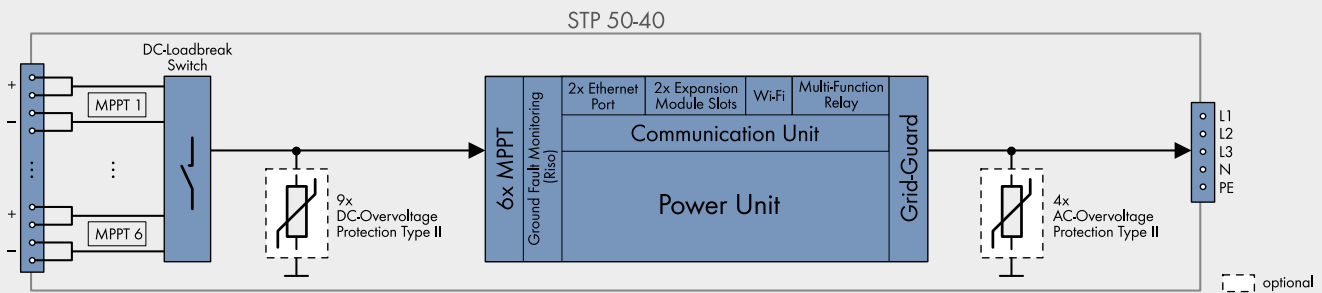
SUNNY TRIPOWER CORE1

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.

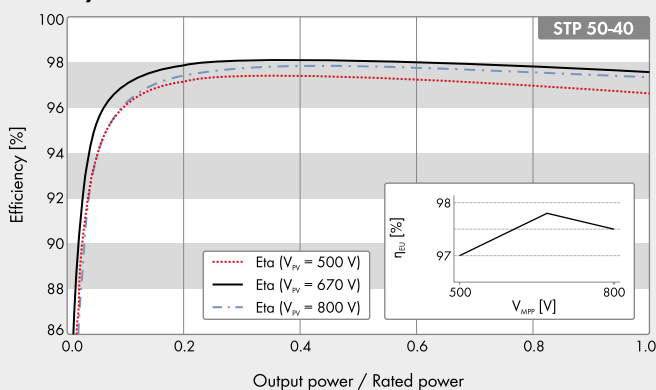
From delivery and installation to operation, the Sunny Tripower CORE1 generates widespread savings in logistics, labor, materials and services. Commercial PV installations are now quicker and easier to complete than ever before.

BLOCK DIAGRAM



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) without feet or DC load break switch	569 mm / 733 mm / 621 mm (22.4 in / 28.8 in / 24.4 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	LC display	○
Power factor at rated power / Adjustable displacement power factor	1 / 0.0 leading to 0.0 lagging	Interface: Ethernet / WLAN / RS485	● (2 ports) / ● / ○
THD	< 3%	Data interface: SMA Modbus / SunSpec Modbus / Speedwire, Webconnect	● / ● / ●
Protective devices		Multi-Function relay / Expansion Module Slots	● / ● (2 ports)
Input-side disconnection device	●	Shade management SMA ShadeFix / Integrated Plant Control / Q on Demand 24/7	● / ● / ●
Ground fault monitoring / grid monitoring	● / ●	Off-grid capable / SMA Fuel Save Controller compatible	● / ●
DC reverse polarity protection / AC short-circuit current capability / galvanically isolated	● / ● / -	Guarantee: 5/10/15/20 years	● / ○ / ○ / ○
All-pole sensitive residual-current monitoring unit	●	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
Protection class (according to IEC 62109-1) / overvoltage category (according to IEC 62109-1)	I / AC: III; DC: II	Legend: ● Standard features ○ Optional - Not available Data at nominal conditions - status: 02/2020	
AC/DC surge arrester (type 2, type 1/2)	○	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		Universal Mounting System UMS_KIT-10
	AC Surge Protection Module Kit type 2, type 1/2 AC_SPD_Kit1-10, AC_SPD_KIT2_T1T2		DC Surge Protection Module Kit type 2, type 1/2 DC_SPD_Kit4-10, DC_SPD_KIT5_T1T2