# SMARTFORMER FOR SUNNY ISLAND





#### Simple

- Pre-wired AC distribution board
- Fast installation and commissioning

### Complete

- Bypass switch for direct grid operation
  - Load shedding relay to prevent deep battery discharge
  - Miniature circuit breakers for PV and load

#### Efficient

- Maximum efficiency of 99%
- Highest yield over the entire power spectrum

#### Safe

- UL certified
- Optimized overload protection

## SMARTFORMER FOR SUNNY ISLAND

Split-phase stand-alone grids-now easier than ever

The Smartformer is the complete solution for off-grid and battery back-up systems up to eight kilowatts. It acts simultaneously as AC distribution and a 120/240 V autoformer. The autoformer provides step-up and step-down options to supply loads with 120 V and 240 V using a Sunny Island and a Sunny Boy, with high efficiency over the entire power spectrum. Thanks to the pre-wired bypass function, the PV system can be easily bridged via a robust switch for maintenance. The optimized transformer overload protection and a load shedding relay provide extra protection to the system. The Smartformer makes the stand-alone power supply simple and reliable.

#### **Technical Data**

Smartformer

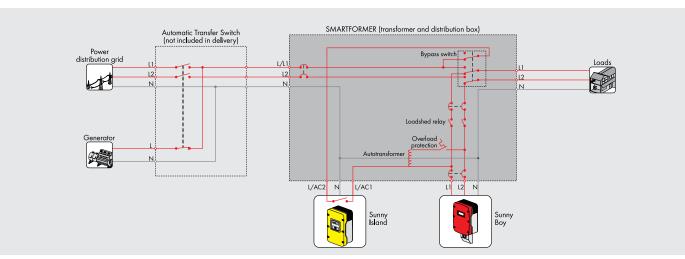
SI-TD-BOX-10

General data Split-phase Number of phases 120/240 VAC Rated voltage 102 ... 132 V / 204 ... 264 V AC voltage range between: L, and N / L, and L, Rated frequency 60 Hz Dimensions (W x H x D) / Weight 24.02 x 24.02 x 9.25 in (610 x 610 x 235 mm) / approx. 123.5 lbs (approx. 56 kg) Idle power consumption 19 W (typical) Nominal power transformer\* 3.4 kVA AC-power transformer for 30 min / 1 min\* 4.4 kVA / 8.8 kVA Max. efficiency/CEC efficiency 99% / 98.8% Hookup access Knockouts: top 2x 3/4", 2x 1", 2x 1 1/4" bottom 5x 3/4", 3x 1", 3x 1 1/4" **Connections for Sunny Island** Maximum number and nominal voltage of Sunny Island 1 x 120 V (L1, N) Rated power 7.2 kW 48 A, 60 A Current at rated values 1x miniature circuit breaker K60A for AC2 Fuses **PV** plant connection 1 x 240 V (L1, L2, N) Number of connections/nominal voltage Rated power / AC power at grid parallel operation 9.6 kW / 6 kW 40 A AC current at rated values 2 x miniature circuit breaker Z50A or Z25A, adaptable Fuses Load connection Number of connections/nominal voltage 1 x 120/240 V (L1, L2, N) Rated power / AC power at 40 °C 7.2 kW / 6.6 kW Rated power / current between L1 and L2 6.7 kW / 28 A 3.8 kW / 32 A Rated power / current between L, and N Rated power / current between L<sub>2</sub> and N 3.4 kW / 28 A Current at rated values 32 A, 28 A (with activated bypass: 2 x 48 A) 2 x K40A (with activated bypass: K60A) Fuse Grid/generator connection 1 x 120 / 240 V (L1, L2, N) Number of connections/nominal voltage 11.5 kW Rated grid input power AC input current 2 x 48 A 2x miniature circuit breaker K60A Fuse Ambient conditions Operating temperature range -13 °F ... +122 °F (-25 °C ... +50 °C) 0 - 100 % (non-condensing) Air humidity Protection class NEMA Type 1 Certification and permits UL 1741 Features/function •/0/0/0 Warranty: 5/10/15/20 years Integrated bypass for maintenance/load-shedding relay/transformer protection • / • / •

\*Power that can be transfered from one leg to another

• Standard features O Optional features - Not available

Type designation



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