



# SMARTFORMER FOR SUNNY ISLAND

SI-TD-BOX



## 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%

## Safe

- UL certified
- Optimized overload protection
- 5-year standard warranty, extendable to 20 years

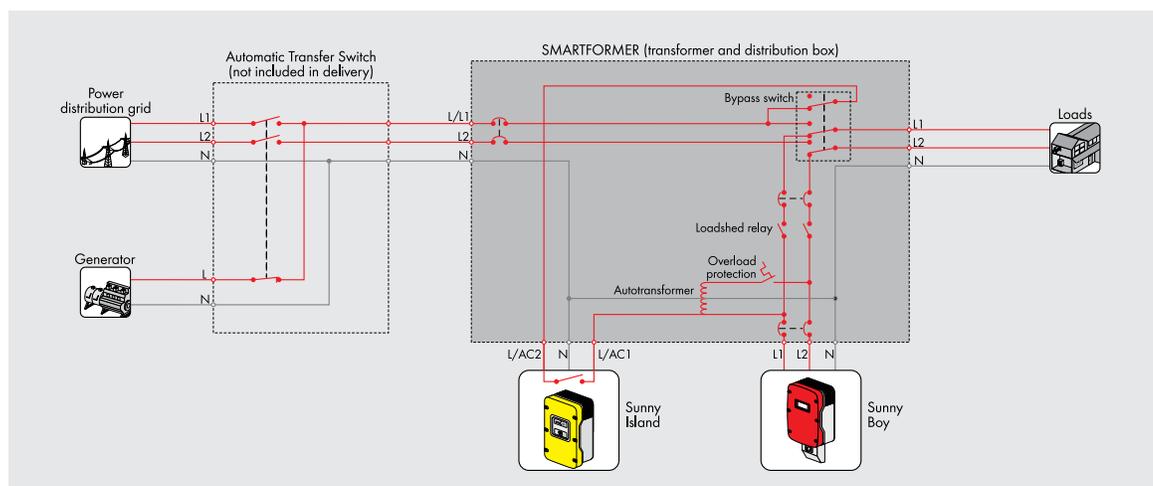
## SMARTFORMER FOR SUNNY ISLAND

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
<b>General data</b>	
Number of phases	Split-Phase
Rated voltage	120 / 240 Vac
AC voltage range between L1 and N	102 V - 132 V
AC voltage range between L1 and L2	204 V - 264 V
Rated frequency	60 Hz
Dimensions (W / H / D)	610 x 610 x 235 mm
Weight	56 kg
Self-consumption (no-load operation)	19 W
Rated power transformer <sup>1</sup>	3.4 kVA
Max. efficiency / CEC efficiency	99 % / 98.8 %
Transformer AC power for 30 min <sup>1</sup>	4.4 kVA
Transformer AC power for 1 min <sup>1</sup>	8.8 kVA
Hookup access	Knockout top: 2 x 3/4", 2 x 1", 2 x 1 1/4" Knockout bottom: 5 x 3/4", 3 x 1", 3 x 1 1/4"
<b>Connections for Sunny Island</b>	
Max. number and nominal voltage of Sunny Island	1 x 120 V (L1, N)
Rated power	5.8 kW
Current at rated values	48 A
Fuses	1
<b>PV plant connection</b>	
Number of connections / rated voltage	1 x 240 V (L1, L2, N)
Rated power	9.6 kW
AC power in parallel grid operation	6 kW
AC current at rated values	40 A
Fuses	2
<b>Load Connection</b>	
Number of connections / rated voltage	1 x 120/240 V
Rated power	7.2 kW
AC power at 40 °C	6.6 kW
Rated power / current between L1 and L2	6.7 kW / 28 A
Rated power / current between L1 and N	3.8 kW / 32 A
Rated power / current between L2 and N	3.4 kW / 28 A
Current at rated values	32 A, 28 A (with activated bypass: 2 x 48 A)
Fuse	K40A (with activated bypass: K60A)
<b>PV array connection</b>	
Number of connections / rated voltage	120 / 240 V (L1, L2, N)
Rated grid input power	11.5 kW
AC input current	48 A
Fuse	2
<b>Ambient Conditions</b>	
Operating temperature range	-25 °C ... +60 °C
Humidity	0 - 100 % (non-condensing)
Protection class	NEMA Type 1
Certification and approval	UL 1741
<b>Features / function</b>	
Warranty: 5 / 10 / 15 / 20 years	● / ○ / ○ / ○
Integrated bypass for maintenance / load-shedding contactor / transformer protection	● / ● / ●
● Standard feature ○ Optional feature – Not available	
Type designation	SI-TB-BOX-10

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<sup>1</sup> Power which can be transferred from one line to another.