



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%
- 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
General data	
Number of phases	Split-phase
Rated voltage	120/240 V _{AC}
AC voltage range between: L ₁ and N / L ₁ and L ₂	102 ... 132 V / 204 ... 264 V
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
Current at rated values	48 A, 60 A
Fuses	1x miniature circuit breaker K60A for AC2
PV plant connection	
Number of connections/nominal voltage	1 x 240 V (L1, L2, N)
Rated power / AC power at grid parallel operation	9.6 kW / 6 kW
AC current at rated values	40 A
Fuses	2 x miniature circuit breaker Z50A or Z25A, adaptable
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 L ₁ and L ₂	6.7 kW / 28 A
Rated power / current between L ₁ and N	3.8 kW / 32 A
Rated power / current between L ₂ and N	3.4 kW / 28 A
Current at rated values	32 A, 28 A (with activated bypass: 2 x 48 A)
Fuse	2 x K40A (with activated bypass: K60A)
Grid/generator connection	
Number of connections/nominal voltage	1 x 120 / 240 V (L1, L2, N)
Rated grid input power	11.5 kW
AC input current	2 x 48 A
Fuse	2x miniature circuit breaker K60A
Ambient conditions	
Operating temperature range	-13 °F ... +122 °F (-25 °C ... +50 °C)
Air humidity	0 - 100 % (non-condensing)
Protection class	NEMA Type 1
Certification and permits	UL 1741
Features/function	
Warranty: 5/10/15/20 years	● / ○ / ○ / ○
Integrated bypass for maintenance/load-shedding relay/transformer protection	● / ● / ●
*Power that can be transferred from one leg to another	
● Standard features ○ Optional features – Not available	
Type designation	SI-TD-BOX-10

SMARTFORMERDUS124616 SMA and Sunny Island are registered trademarks of SMA Solar Technology AG. Text and figures comply with the state of the art applicable when printing. Subject to technical changes. We accept no liability for typographical and other errors.

