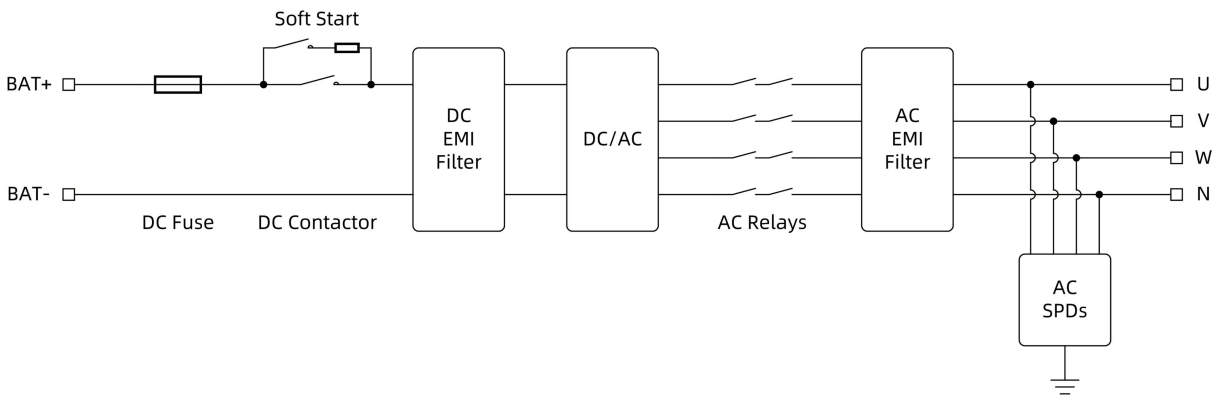


Main Features

- Seamless on-grid/off-grid transfer within 20 ms with a fast transfer switch.
- Improve battery capacity utilization through multi-level topology and application of SiC MOSFETs.
- Functional safety design. Multiple safety protection mechanisms.
- Type 4 and C5. UL certified, applicable for North America.



Circuit Diagram



Specifications

Product Name	Metis-135-T
DC Port	
DC voltage range	750-1050 V
Rated input/output power	135 kW
Maximum continuous current	170 A
AC Port (On-Grid Mode)	
Rated AC power	135 kVA
Rated AC current	162 A
Rated grid voltage	277/480 V; 3W+N+PE or 3W+PE
Frequency	60 Hz
Power factor range	1.0 (leading)-1.0 (lagging)
THDi	<3% (rated power)
AC Port (Off-Grid Mode)	
Rated output voltage ⁽¹⁾	277/480 V; 3W+N+PE
Maximum AC power	135 kVA

(1) Transformer can be configured for off-grid operation.
In off-grid mode, the output AC voltage decreases with the decrease of the battery voltage when it is lower than 820 Vdc.
The minimum output voltage is higher than 88% of the rated voltage.

Specifications

Product Name	Metis-135-T
AC Port (Off-Grid Mode)	
Maximum AC current	162 A (linear load)/100 A (nonlinear load)
Maximum unbalanced power	22 kVA (linear load)
Frequency	60 Hz
Maximum crest factor	2.5
THDv	<3% (rated conditions, balanced resistance load)
On-Grid and Off-Grid Transfer	
On-grid to off-grid mode transfer time	20 ms ⁽²⁾
Off-grid to on-grid mode transfer time	0 ms ⁽²⁾
Alarm and Protection	
Alarm and protection functions	Anti-reverse DC connection protection, DC overvoltage and undervoltage protection, AC phase sequence error alarm, AC overcurrent protection, AC voltage and frequency protection, Overtemperature protection, Anti-islanding protection, AC surge protection, Communication fault protection, Cooling system fault protection
General Parameter	
Topology	Transformerless
Maximum efficiency	99.2%
Maximum rated power efficiency	98.5%
Operating temperature range	-13 °F to +140 °F (-25 °C to +60 °C), derating above 104 °F (40 °C)
Relative humidity	0%-95% (non-condensing)
Maximum altitude	9842 ft (3000 m)
Audible noise	<75 dBA @ 3.3 ft (1 m)
Mechanical	
Dimensions (W x H x D)	27.6 × 10.5 × 32.3 in (700 × 266 × 820 mm)
Weight	176.4 lb (80 kg)
Cooling method	Intelligent forced air cooling
Enclosure material	Aluminum alloy
Installation type	Rack-mounted
Ingress protection rating	Type 4
Interface	
Display	LED
Communication interface	RS485/CAN
Firmware update method	Remote update supported
Standards	
Safety	UL 1741, CSA 22.2 No.107.1-01
Grid connection	IEEE 1547, UL 1741 SB
EMC	FCC PART 15 Class A

(2) A static transfer switch (STS) is needed for fast on-grid and off-grid transfer. The transfer time of the STS should be less than 15 ms.