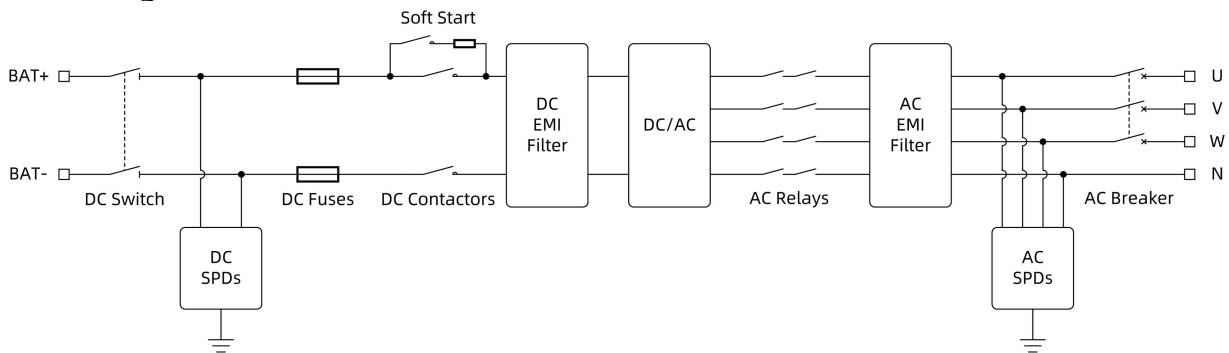


Main Features

- Seamless on-grid/off-grid transfer within 20 ms with a fast transfer switch.
- Integrated HV box and AC power distribution functions.
- Support on-grid and off-grid operation without transformer.
- Multi-level topology with low-loss modulation for high conversion efficiency.
- Functional safety design. Multiple safety protection mechanisms.
- IP65 and C5. Multi-country grid connection certifications.



Circuit Diagram



Specifications

Product Name	Metis-100-ET
DC Port	
DC voltage range	650-950 V ⁽¹⁾
Rated input/output power	100 kW
Maximum continuous current	158 A
AC Port (On-Grid Mode)	
Rated AC power	100 kVA
Rated AC current	145 A
Rated grid voltage	230/400 V; 3W+N+PE or 3W+PE
Frequency	50/60 Hz
Power factor range	1.0 (leading)-1.0 (lagging)
THDi	<3% (rated power)
AC Port (Off-Grid Mode)	
Rated output voltage ⁽²⁾	230/400 V; 3W+N+PE
Maximum AC power	100 kVA
Maximum AC current	145 A (linear load), 90 A (nonlinear load)
Maximum unbalanced power	17.5 kVA (linear load)
Frequency	50/60 Hz

(1) Operating at the rated grid voltage.

(2) 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 710 Vdc.

The minimum output voltage is higher than 90% of the rated voltage.

Specifications

Product Name	Metis-100-ET
AC Port (Off-Grid Mode)	
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 ⁽³⁾
Off-grid to on-grid mode transfer time	0 ms ⁽³⁾
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	98.1%
Operating temperature range	-25 °C to +60 °C (derating above 45 °C)
Relative humidity	0%-95%
Maximum altitude	3000 m
Audible noise	<75 dBA @ 1 m
Mechanical	
Dimensions (W x H x D)	700 × 266 × 820 mm
Weight	85 kg
Cooling method	Intelligent forced air cooling
Enclosure material	Aluminum alloy
Installation type	Rack-mounted
Ingress protection rating	IP65
Corrosivity category	C5
Interface	
Display	LED
Communication interface	RS485/CAN
Firmware update method	Remote update supported
Standards	
Safety	EN IEC 62477-1:2023, IEC 62477-1:2022
Grid connection	EN 50549-1/-2:2019-10:2022, RENBLAD 342:2020, G99/1-10/03.24, VDE-AR-N 4105:2018, C10/11:2021, EIFS 2018:2, TR 3.3.1:2024, Order no.3, MEA, PEA, NTS SEPE V2.1, NA/EEA-NE7, NA/EEA-NE3-5, NRS-097, AS4777.2
EMC	EN IEC 61000-6-2/-4:2019

(3) 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.