Ohms Box
Datasheet

Off-Grid Europe

On demand features

PV Integration	PV can be connected via AC or DC input, simplifying system design and reducing costs for the end user.
Grid Integration, with NH1 fuse and Automatic Contactor	Grid can be connected via built in NH1 Fuse and Contactor, enabling both grid-connected and off-grid modes while supporting advanced grid services.
GenSet Integration, with NH1 fuse and Automatic Contactor	One or more gensets can be integrated directly in the cabinet via built in NH1 Fuse and Contactor as backup or to enable smart fuel-saving strategies in hybrid systems.
Automatic Transfer Switch backup option in case of BESS failure	Automatically switches the power source for connected loads between the grid, BESS, and GenSet, ensuring an uninterrupted power supply.
Micro-grid Controller	Built-in micro-grid controller manages PV, BESS, grid, and genset operations, ensuring reliable, optimized, and fully automated system performance.

BESS Electrical Specification	
Overload capacity 125 % (10 min)	125 kVA
Overload capacity 150% (1 min)	150 kVA
Overload capacity 300% (0.5 s)	300 kVA
Cell Chemistry (LFP)	Lithium Iron Phosphate
BESS Nominal Capacity	265 kWh
Cell Capacity	314 Ah
BESS Configuration	1P24Sx11S
Expected cycles	>8000

General Parameters	
Ohms Box Size	2155*1440*2185mm
Space Requirements	2.3*4.5 m
External Temperature Range	-20 C° to + 55 C°
Operating Temperature	10 °C to 30 °C
Relative Humidity	Max 95%
Cooling System	HVAC unit (R134a)
Noise Level	<75 dB(A) at 1 m
Enclosure Material	Mild steel powder coated
Color	White
IP Rating	IP 55-level design
Weight	3500 kg
Handling Options	Highload Forklift/Crane
Modular System Expansion	Supported via parallel operation

PCS (Trumpf TruConvert AC 3025)	
Charge/ Discharge Nominal Apparent Power	100 kVA
Operational Frequency Range	45 - 65 Hz
Maximum Efficiency	98 %
Reaction Time	<10 ms
AC Output Voltage Range	380/480 V ± 10%
Maximum Permissible AC Voltage	528 V
Nominal Operational AC Frequency	50/60 Hz
Asymmetrical load	< 33.2 kVA/phase

GenSet Connection	
Number	3 phases (3 phases plus neutral)
Gen. power maximum	200 kW
Usable Gen. power	100 kW
Fuses	NH1 Fuse up to 250 A

DC Coupled PV Plant Connection	
Number	Up to 4 connections
Maximum total nominal DC power	200 kW

AC Coupled PV Plant Connection	
Number	up to 3 connections
Maximum total nominal AC power	170 kW

Load Connection	
Rated voltage	230 V Line to Neutral (single phase) 400 V Line to Line (3 phase)
AC voltage range	200 V - 275 V Single phase / Line to Neutral 340 V - 480 V 3 phase/ Line to Line
Rated frequency / frequency range	50 Hz with 60 Hz optional, ± 5 Hz frequency range
Number	3 phases (3 phases plus neutral)
Rated power	100 kW
AC current at rated values	3x 145 A
Fuses	NH1 Fuse max 250A

Monitoring / Communication	
Communication Protocol	Modbus via RS485/Ethernet
Remote Control System	OGE Off-Grid Controller
Grid Code Compliance **Combined inverter and protection relay*	VDE-AR-N 4105:2018-11, VDE-AR-N 4110:2018-11, Tor Typ A: 2019-12, EN 50549-1:2019-02, UNE 217002:2020, K62477-1 (2011-12), UL1741SA 2nd Edition, IEEE 1547.1