

eBESS15 – Bidirectional 15kW AC/DC converter for BESS

Overview

eBESS15 is a bidirectional, non-isolated AC/DC converter designed for scalable parallel operation, enabling a total output power of up to 150 kW. Its **bidirectional** topology supports both inverter mode, for providing ancillary services to the grid, and charging mode, for energy storage in the battery system.



TOPOLOGY

Non-isolated Bidirectional Converter
MOSFET / SiC switching technology

MAXIMUM CHARGING POWER

15 kW (*modular*)

OUTPUT VOLTAGE

650V - 950 V_{DC}

INPUT VOLTAGE

3ph: 380/400 Vac

EFFICIENCY

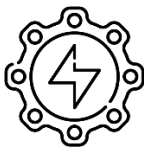
>96% at full load

MECHANICS

Air-cooled

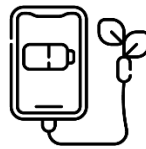
COMMUNICATION

EtherNET & CANopen



High Efficiency

SiC (Silicon Carbide) technology ensures high performance and long service life, contributing to reduced operating costs and improved overall system



Power & Modularity

Scalable 15 kW module, up to 150 kW total system power.

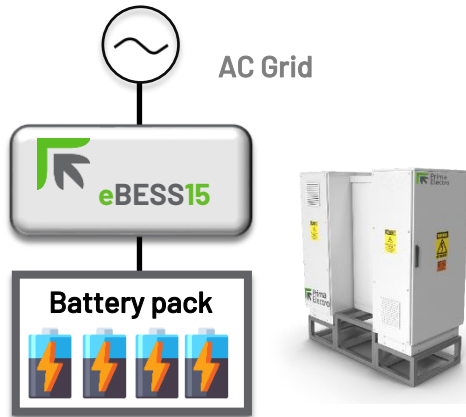


Bidirectional Power Flow

Seamless AC/DC and DC/AC operation, enhancing grid stability and enabling efficient energy exchange.



Application Example



Key Features

- Desing and Manufacturing Made in Italy
- SiC technology design
- AC to DC mode
- DC to AC mode (inverter)

Technical Specifications

AC Input	
Voltage range	3 ph: 360 – 440 V
Input current	Up to 25 A
DC Output	
Voltage range	650 – 950 V
Max current	20 A
Nominal power	15 kW
Efficiency	>96% full load
Features	
Communication	Ethernet, CAN
Topology	Bidirectional, NON-Isolated
Additional feature	Suitable for Ancillary Services – VSM
Information	
Electrical protections	Input and Output Overcurrent and Overvoltage Protection
Other protections	Internal Overtemperature, Fan Monitoring, Pre-charge
Storage temperature	-40°C up to + 70°C
Operating ambient temperature	-30°C up to 70°C, derating from 50°C
Humidity	0 – 95%RH non-condensing
Dimensions (mm)	100 (H)x 400 (W)x 340 (D)
Weight	< 25 kg
Internal Electronics / External Enclosure	IP20
Max Operating Altitude	2000 m without derating 4000 m derating
Heatsink cooling	Forced air cooling
Standby Consumption	<30 W
Power connections	Copper bars
Marking	-
Installation	Wall mount, Push-through