

DZ GROUP

PRODUCT TECHNICAL DATASHEET

Model: FB-025K050KWH

1. GENERAL OVERVIEW

The FB Series energy storage system is a highly integrated, high-performance industrial solution specifically designed for micro-grid development and securing total electrical autonomy for isolated infrastructures (Off-Grid). To guarantee optimal safety and isolation, this architecture ensures strictly off-grid operation with complete galvanic separation, distinguishing itself from standard parallel systems. This premium system integrates a cutting-edge energy storage inverter, comprehensive photovoltaic flux management through multiple independent MPPT architectures, an advanced Energy Management System (EMS), and fast switching/cut-off capabilities for backup grids or diesel generators.

2. AC OUTPUT (OFF-GRID / GRID OUTPUT)

Rated Output Power	25 kVA
Output Waveform	Pure Sine Wave
Output Voltage	400V / 230V AC
Frequency Range	50 Hz - 60 Hz
Output Overload Capacity	1.25% / 10s

3. BATTERY SYSTEM

Nominal Voltage	256 Vdc
Total Nominal Capacity	52.480 kWh
Max Battery Voltage	850 V
Minimum Voltage	200 V
Max Charger Current	100 A
Life of Cycle	8000 cycles (@ 80% DOD, 25°C)

4. PV INPUT (PHOTOVOLTAIC INPUT)

PV Input Max Power	27.5 kW
Max PV Voltage	850 Vdc
MPPT Voltage Range	200 Vdc - 830 Vdc
Max PV Charging Configuration	25A + 25A

5. AUXILIARY GENERATOR INTERFACE (DIESEL GENERATOR)

Reserve Dry Contacts	Integrated (Automatic remote control and start of the generator authorized)
Automatic Transfer Switch (ATS) Management	Integrated support via EMS

6. PHYSICAL, ENVIRONMENTAL & PROTECTION DATA

System Dimensions (L × W × H)	1750 × 1350 × 1100 mm
Total Net Weight	600 kg
Operating Temperature	-23°C ~ +65°C
Humidity	0 ~ 95% (Non-condensing)
Maximum Operating Altitude	≤3500 meters
Noise Level	< 70dB (@ 1 meter, <30°C)
Global System Efficiency	97.8%
Communication Ports	EMS: CAN / RS485
Integrated Protections	Overcharge, Over-discharge, Overcurrent, Short-circuits

7. EUROPEAN & REGULATORY COMPLIANCE

This system is certified compliant with the essential requirements of the European Union directives. Third-party laboratory tests validate the application of industrial safety and compatibility standards:

- Low Voltage Directive (LVD) 2014/35/EU: EN 62109-1:2010, EN 62109-2:2011, EN 62133-2:2017+A1:2021.
- Electromagnetic Compatibility (EMC) Directive 2014/30/EU: EN IEC 61000-6-3:2021, EN IEC 61000-6-1:2019.
- RoHS Directive 2011/65/EU: EN IEC 63000:2018 (Environmental compliance of components).

- Battery Regulation (EU) 2023/1542: Traceability, sustainability criteria, and safety of high-voltage lithium cells.

Responsible Manufacturer & Market Placement:

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