

# BESS

## FLUX 418

ENERGY STORAGE SYSTEM



## Overview

The Flux 418kWh ESS is a compact, high performance LFP battery energy storage system designed for commercial, industrial, and renewable energy applications, with stable performance across  $-20^{\circ}\text{C}$  to  $55^{\circ}\text{C}$ , 5–95% humidity, and up to 3000 m altitude.

Featuring IP55 protection, liquid cooling, and optional aerosol / water fire suppression, it ensures high safety, durability, and reliability. With Ethernet and RS485 communication and a modular containerized design, it enables easy integration, fast deployment, and scalable energy storage solutions.

## Key applications

- Commercial & Industrial Peak Load Shaving
- Excess Solar Energy Storage & Peak Shifting
- Industrial Power Outage Backup (UPS Support)
- EV Charging Load Management & Grid Support

## Standard conformity

Fully compliant with all critical safety, environmental, and communication protocol requirements.

## Confidence Built In

Comprehensive maintenance and care services engineered to maximize reliability, safety, and system uptime.



# Flux 418

## Battery Energy Storage System

Category	Parameter	Value
DC Parameters	Cell Type	LFP
	Configuration	1P416S
	Battery Rated Capacity	418 kWh
	Nominal Voltage	1331.2 Vdc (Voltage range:1040–1500 Vdc)
	Charging / Discharging C-Rate	≤0.5 CP
	Cooling Method	Liquid Cooling
AC Parameters (Grid-connected)	Rated Power	215 kW
	Rated Voltage	690V (-15% ~ 15%)
	Rated Current	180 A
	Rated Grid Frequency	50 Hz / 60 Hz
	Grid Frequency Range	45–55 Hz / 55–65 Hz
	Total Current Harmonic Distortion	<3% (At rated power)
	Power Factor	>0.99 (At rated power)
Power Factor Adjustable Range	-1 (leading) ~ 1 (lagging)	
AC Parameters (Off-Grid)	AC Off-grid Voltage	690 V (-15% ~15%)
	AC Off-grid Frequency	50 Hz / 60 Hz
	Off-grid Output Voltage Distortion	<3% (Linear load)
System Parameters	Cooling Method	Liquid Cooling
	Fire Protection System	Aerosol fire suppression system, Deflagration Vent, Fire Hose Coupling
	Anti-corrosion Grade	C5
	Protection Level	IP55
	Operating Temperature Range	-30°C ~ +55°C (Derating when >40°C)
	Storage Temperature	-20°C ~ +35°C
	Operating Humidity Range	0 ~ 95% RH (No condensation)
	Installation Method	Outdoor Installation
	Working Condition	Max. 2 charges & 2 discharges per day
	System Communication Interface	CAN / Ethernet / RS485
	External System Communication Protocol	Modbus TCP / IEC104 / Modbus RTU
	Altitude	Within 4000m (Derating when >2000m)
	Dimensions (W × D × H)	1300 x 1350 x 2380
Weight	≤3700 kg	
Certification	IEC62619, IEC60730, IEC61000, IEC62477, EN50549, VDE4105, VDE4110, VDE4120, UN38.3, UN3480	