

# FIAMM

Energy Storage Solutions



# SO|NICK

SPRING 620V 1,5 MWh

SODIUM NICKEL TECHNOLOGY



## Battery Energy Storage System (BESS)

- + 620 Vdc Battery System for Energy Storage
- + 20' containerized solution with 64 battery ST523 for medium voltage applications

### Applications

- + Load Levelling
- + Power Quality
- + Renewable Resource Optimization
- + Utility Grid Ancillary Services
- + On-Grid
- + Off-Grid
- + Micro-Grid

## Technical features for BESS Application

- + No cooling system required
- + 100% maintenance free in operation



FIAMM ST523 Battery Inside

## FIAMM Energy Spring Plus

### Safety

- + Zero ambient emission
- + No hazardous components
- + All access from outside: no internal walking

### Modularity

- + Scalable with parallel operation
- + Compact footprint: high energy density and design
- + Compatible with DC power supply and bidirectional inverters

### Flexibility of installation

- + Suitable for any place of installation
- + Ambient temperature (extendable operative condition):  
-20°C to +40°C / -4°F to 104°F

## FIAMM Manufacturing

Over 10 years experience with sodium nickel technology  
ISO 9001 Quality Management System  
ISO 14001 Environmental Management System

## Applicable Standards

- COUNCIL DIRECTIVE 2006/95/EC on low voltage equipment safety
- COUNCIL DIRECTIVE 2004/108/EC on electromagnetic compatibility

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## Technical Specifications of BESS Spring

Battery / Chemistry Type	<b>NaNiCl<sub>2</sub></b>
Constant Power Discharge	<b>400kW for 3 hours*</b>
System Rating (Voltage, Current Capacity)	<b>Nom. 620 Vdc, Nom. 2432 Ah</b>
Min / Max Operative System Voltages	<b>500 Vdc / 700 Vdc</b>
Standard Charge / Discharge hours	<b>8 hours of charge, 3 hours of discharge</b>
Standard Circuit Design	<b>Up to 64 battery modules connected in parallel*</b>
Enclosure Dimensions	<b>L: 6058 mm / 238.5 in H: 2896 mm / 114 in W: 2438 mm / 96 in</b>
Weight (metric ton)	<b>25 t (with 64 modules), 10 t (without modules)</b>
Heater Consumption	<b>&lt;10kW per hour per container</b>
Ventilation	<b>Forced ventilation in BUS area</b>
Design Cycle Life	<b>4500 Cycles at 80% DOD</b>
Product / Material Specifications	<b>Please refer to ST523 battery specifications</b>
BMS Characteristics	<b>Please refer to ST523 battery specifications</b>

\* Performances of the system are directly linked to the numbers of battery modules

