Sodium Nickel Technology for Energy Storage Application:
SoNick Cabinet 620 V 90 kWh

Cabinet System

+ 620 VDC Battery System for Energy Storage
+ Suitable for On-Grid and Off-Grid applications as well as Micro-Grid
+ Solution up to 4 ST523 battery modules
+ 100% maintenance free in operation
+ System does not need to shut down to replace energy modules (increased uptime, system remains in operation)

Application

+ Load Levelling
+ Power Quality
+ Renewable Resource Optimization
+ Utility Grid Ancillary Services

Applicable Standards

+ C.D. 2006/95/EC and C.D. 2004/108/EC
+ CEI EN 61000-6-2
+ CEI EN 61000-6-4
+ CEI 64-8
+ IEC EN 61439-1
+ IEC EN 61439-2
+ Non-Environmental Constraints according to 2012/18/EU

FIAMM Manufacturing

+ ISO 9001 Quality Management System
+ ISO 14001 Environmental Management System

Energy Spring 164 Benefits

SAFETY

+ Zero ambient emission
+ No hazardous components
+ Redundant safety features (chemistry, cell, battery module and BMS)

MODULARITY

+ Scalable with parallel operation (up to 6 cabinets or 24 battery modules)
+ Compact footprint: high energy density and design
+ Compatible with DC power supply and bidirectional inverters
+ Front side access to batteries

FLEXIBILITY OF INSTALLATION

+ Indoor installation
+ Range of operating temperature in standard conditions: -20°C to 60°C

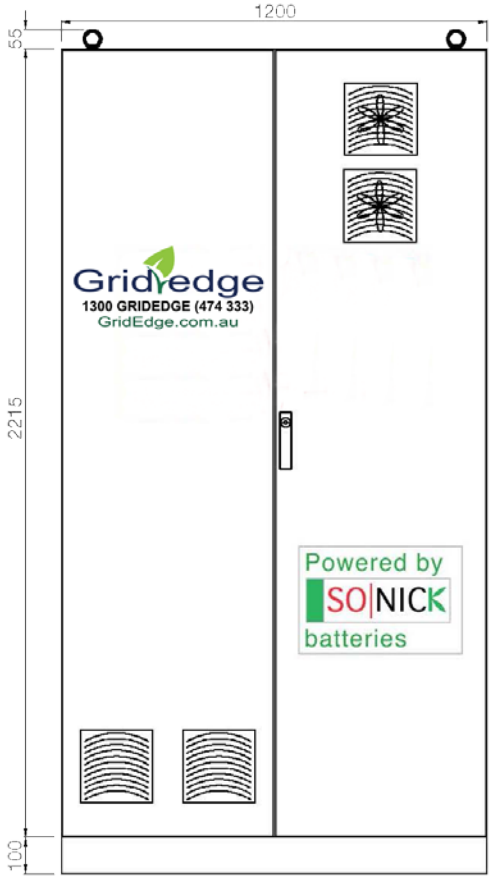
SoNick™ Tecnology Overview

+ Long-term safety and reliability with over 15 years of field deployment
+ Multipurpose application: EV, TLC, UPS, Railway
+ Over 100MWh installed globally
+ No auxiliary equipment (air conditioning, generator) needed

Cabinet Technical Specification for configuration of 4 ST523

Battery / Chemistry Type	$NaNiCl_2$
Constant Power Discharge (Rated)	25 kW for 3 hours
Nominal Energy Capacity	90 kWh (100% DOD)
System Rating (Voltage, Current Capacity)	Nom. 620 VDC, Nom. 152 Ah
Min / Max Operative System Voltages	500 VDC / 700 VDC
Standard Charge / Discharge hours	8 hours of charge, 3 hours of discharge
Standard Circuit Design	Up to 4 ST523 battery modules in parallel per Cabinet Up to 6 Cabinet in parallel (No. 24 FIAMM ST523 battery modules with one Gateway for communication)
Enclosure Dimensions	L: 1200 mm H: 2300 mm W: 1200 mm
Weight	1500 kg
Heater Consumption during floating	<700 Wh
Ventilation	Not need Air Conditioning, only forced-air ventilation for power electronics
Design Cycle Life	4500 Cycles at 80% DOD
Product / Material Specifications	Please refer to ST523 battery specifications
BMS Characteristics	Please refer to ST523 battery specifications

Front View



Top View