

Application

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



ST523 620V 23,5kWh

SODIUM NICKEL TECHNOLOGY

BATTERY TECHNICAL FEATURES

- + Use of sodium and nickel as active materials with solid ceramic electrolyte
- + No memory effect
- + Specific energy: 70% lighter and 30% smaller than conventional batteries
- + Battery outside temperature only few degrees above the ambient temperature
- + Steel cell case and double stainless steel battery case
- + Integrated battery monitoring system (BMS) for monitoring, diagnostics and data logging
- + User interface on front panel
- + No memory effect

SoNick Solution Plus

Safety

- + Zero ambient emission
- + 100% recyclable
- + No hazardous components: intrinsically safe chemistry
- + Robust structure: safe from any physical damage

Modularity

- + Light and compact solution (high energy density)
- + Scalable with parallel operation
- + Compatible with DC power supply and bidirectional inverters

Flexibility of installation

- + Suitable for any place of installation (IP55)
- + Temperature: constant performance at -20°C to +60°C / -4°F to 140°F

MANUFACTURING

ISO 9001 Quality Management System
ISO 14001 Environmental Management System



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

APPLICABLE STANDARDS

EN 61000-6-1
CE
CAS Nr 7440-02-0 - Nickel specification

Characteristics

| | | |
|--|---|----------------|
| Cell Chemistry | Sodium Nickel Chloride (NaNiCl) | |
| Total Number of Cells | 240 | |
| Nominal Current Capacity | 38 Ah | |
| Nominal Energy Capacity | 23.5 kWh (100% efficiency, 100% DOD) | |
| Operation Voltage | Minimum | Nominal |
| VDC | Maximum 450 VDC | 620 |
| | 641 VDC | |
| Max Charge Voltage | 700 VDC (DC Bus) | |
| Min Discharge Voltage | 450 VDC (DC Bus) | |
| Operating Ambient Temperature | -20°C to 60°C / -4°F to 140°F | |
| Weight | 256 kg / 564lb | |
| Heating from cold to operation temperature | Take up to 15hr | |
| Cooling | Not Needed | |



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BMS Features

| | |
|--------------------------|---|
| AUX Power for 24VDC feed | Depends on requirements |
| Monitor/Control | SOC |
| Thermal management | Fault detection Over/under voltage |
| Over/under temperature | Over current |
| Charge Control | Current control by IGBT |
| Communication | CAN Open, Modbus |

