

FIAMM

Energy Storage
Solutions



SO|NICK

ST108v 48V 7,7 kWh

SODIUM NICKEL TECHNOLOGY

Residential Storage Application

- + Buildings with presence of renewable generation
- + Suitable for weak grid with frequent power interruption (backup supply)

Key Benefits

- + Increase of own-consumption
- + Higher energy independency
- + Improvement of peak power management without extension of grid power connection

Technical features for Residential Application

- + 48V sodium nickel chloride battery, specifically designed for residential storage application
- + 48V for highest electrical safety
- + Ideal for residential rate of discharge (5 to 12 hours)
- + No cooling system required
- + 100% maintenance free in operation
- + Allows remote monitoring



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

Battery technical features

- + Use of sodium and nickel as active materials with solid ceramic electrolyte
- + 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 management system (BMS) for monitoring, diagnostics and data logging
- + User interface on front panel
- + No memory effect

FIAMM Manufacturing

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

Applicable Standards

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

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Electrical Characteristics

Nominal Voltage	48 VDC
Open Circuit Voltage	51.6V
Nominal Capacity	160 Ah at C4 to 42V
Nominal Energy	7700 Wh at C4 to 42V
Bus Voltage Range (charging)	53 to 59 V
Max Continuous Discharge Current	65 Amps
Faradic Charge Efficiency	100%
Gravimetric Energy Density	86 Wh / Kg - 39 Wh / lb
Volumetric Energy Density	83 Wh / liter

Operating Conditions

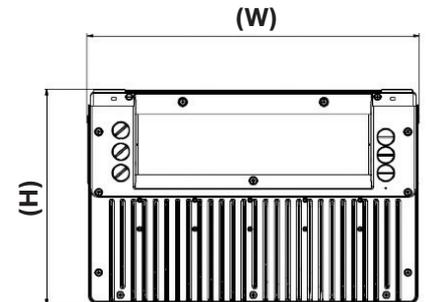
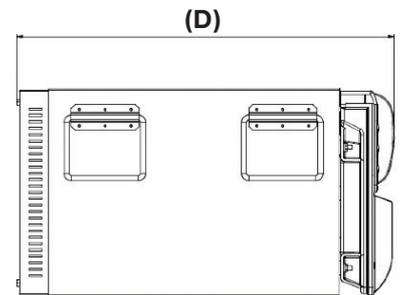
Operating Temperature Range	-20°C to + 60°C / -4°F to 140°F continuous
Warm-up Time to be Operational	< 13 hours
Thermal Losses in Operation	< 55W
Nr. Cycles	> 4000 Cycles (at 80% DoD, rate of discharge > C/5)
Design Life in Operation	> 7000 days
IP Rating	IP-55

Communication

Data Interface Protocol	RS 485 / USB / Ethernet / CAN-bus
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Dimensions

Width (W)	496 mm / 19.5 in.
Depth (D)	578 mm / 22.8 in.
Height (H)	325 mm / 12.8 in.
Weight	90 kg / 198 lb



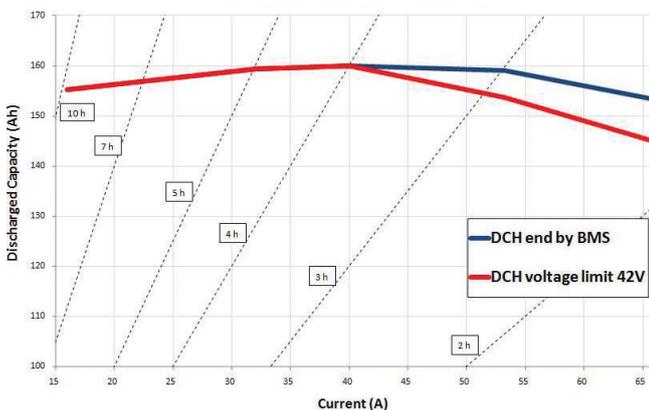
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ST108v Capacity vs Discharge Current



ST108v Recharge time

