

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

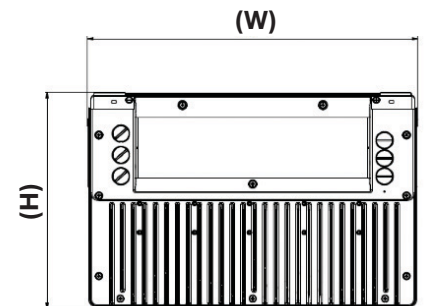
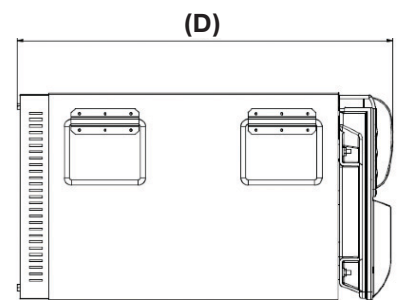
| | |
|--------------------------------|--|
| Operating Temperature Range | -20°C to + 60°C / -4°F to 140°F continuous |
| Warm-up Time to be Operational | < 13 hours |
| Thermal Losses in Operation | < 55W |
| Nr. Cycles | > 4000 Cycles (at 80% DoD, rate of discharge > C/5) |
| Design Life in Operation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

Communication

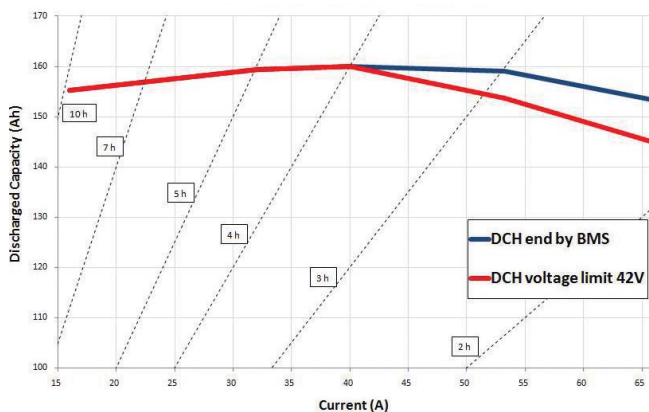
| | |
|-------------------------|--|
| Data Interface Protocol | RS 485 / USB / Ethernet / CAN-bus |
|-------------------------|--|

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 |



ST108v Capacity vs Discharge Current



ST108v Recharge time

