SUSTAINABLE MOBILITY

Sodium Nickel Technology for Sustainable Mobility

Z range

FZSoNick

SODIUM NICKEL TECHNOLOGY

Sodium Nickel Technology

- Use of sodium and nickel as active materials, with solid ceramic electrolyte
- Cells with hermetically sealed steel case, packed in double-thick mica to insulate each cell and prevent electrical shorting
- Internal operating temperature around 270°C / 518°F, with external surface temperature only few degrees above ambient
- Made with 2.58 Volt cells with 140 Wh/kg or 310Wh/lb and 280 Wh/liter specific density
- Proven technology for energy storage and clean powering of electric vehicles

Applications

COMMERCIAL VEHICLES

BUS

OFF HIGHWAY - MINING

Key benefits

- More than 10 years of field experience
- Made in Switzerland
- 300.000.000 km
- Temperature immunity (constant performance from -40°C to +50°C)
- No outgassing and zero ambient emissions
- No hazardous components
- 100% recyclable
- High level industrialization production
- Manufacturing capacity for high volumes

Battery Technical Features

- Highest specific energy
- High level of safety
- Integrated battery BMS
- Integrated thermal management
- Double stainless steel battery case
- Opportunity charge supported
- No memory effect

Certifications

- ISO 9001
- E24 / R10 homologation
- CE mark
- ISO 14001

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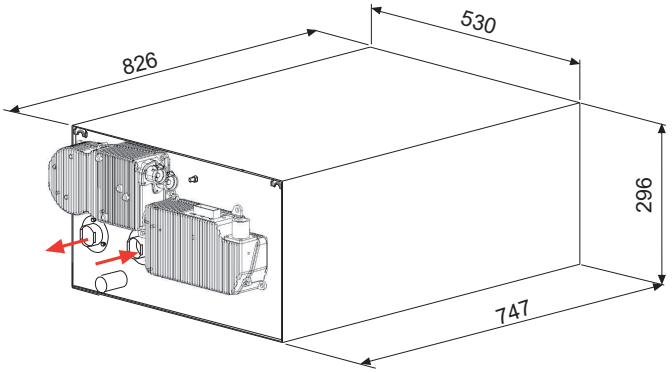
Characteristics

Z5	Z5-278-76	Z5-557-38
Capacity	76 Ah	38 Ah
Rated Energy	21.2 kWh	21.2 kWh
Open Circuit volage 0 - 15% DOD	278 V	557 V
Max. voltage (regen braking)	312 V	625 V
Min. voltage (30 sec. peak power)	186 V	372 V
Cell Type / n° of cells	ML3X / 216	ML3X / 216
Weight with BMI	187 kg	187 kg
Specific energy with BMI	113 Wh/kg	113 Wh/kg
Energy density without BMI	181 Wh/l	181 Wh/l
Ambient temperature	-40 to + 50 °C	-40 to + 50 °C
Thermal loss at 270°C (internal temp)	< 105 W	< 105 W
Cooling	air	air
Heating time	24 h at 230 VAC	24 h at 230 VAC
Periphery	BMI, Fan	BMI, Fan

System design recommendation

> **Min Discharging Time: 120 min**
> **Max Depth of Discharge: 80%**



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