

LION Smart Mobility Power 42 Datasheet



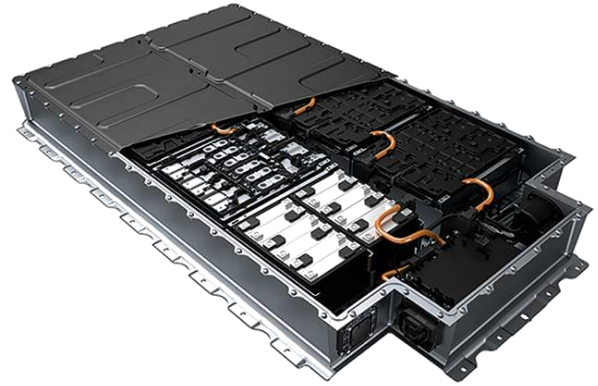
E-Bus



E-Truck



E-Off Highway



Features

Availability

- Off-the-shelf available

High peak power

- High peak power capability
- Fast charging compatibility

Customizable setup

- Connectivity up to 12 batteries via gateway up to 506 kWh
- Ideal for 400V & 800V architectures

Field proven technology

- Based on automotive BMW i3 battery
- Over 1 Bn. km driven p.a.

High quality components

- Samsung SDI battery cells (NMC)
- High quality electronic components
- Long lifetime proven
- Manufactured in Germany

Easy integration

- Contact protection on pack level
- Standardized interfaces & customized software

Designed for critical mobility applications

- Safety certified Battery Management Systems (BMS)
- Robust passive safety structure



The Future Of Battery Technology

LION Smart

Standards Compliance

- ECE R100 Battery safety
- ECE R10 EMC
- UN 38.3 Transport Safety
- ISO 16750 Environmental conditions
- Functional safety
 - IEC 61508 SIL 2
 - ISO 26262 ASIL C

Applicable Conditions

- Ordering Code: 1001485-01
- Optimized shipping quantity:
 - Europe: 42 packs in wooden box or 54 in returnable rig
 - Overseas: 48 packs in wooden box

Contact Info

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| Parameter | Unit | Value* |
|--|------|--|
| Configuration (Modules x Cells) | | 96s1p (8 x 12) |
| Battery Cell Chemistry | | NMC |
| Charging end point (operation) | V | 403.2 |
| Nominal Voltage (DC) | V | 352.3 |
| Discharge end point (operation) | V | 259.2 |
| Nominal Capacity | Ah | 120 |
| Energy Content (nominal) | kWh | 42.2 |
| Energy Content (usable) | kWh | 37.9 |
| End of Life (State of Health)* | % | 70 |
| Cycle Life (@25°C ambient, 1C/1C & 100% DoD) | # | >2500 |
| Cycle Life (@25°C ambient, 1C/1C & 80% DoD) | # | >3000 |
| Max. Discharge Power (5s, 90 % SoC, 25 °C) | kW | 148 |
| Discharge Power cont. (1200 s, 90 % SoC, 25 °C) | kW | 53 |
| Max. Charge Power Recuperation (3s, 50% SoC, 25 °C) | kW | 80 |
| Max continuous DC charging power ((@ 25 °C ambient, until CV charging step, for one cycle, cooling required) | kW | 50 |
| Cell (JR) Temperature Range - Operational Cell (JR) Temperature Range - Optimal | °C | -40 <-> 53 17 <-> 28 |
| Storage heating | kW | 1 |
| Protection class (IP class) | | IP67, IP6K9K |
| Dimensions (L x W x H) Housing | mm | 1662 x 964 x 174 |
| Total Weight (depending on variant) | kg | approx. 276 |
| Humidity Range (during storage) | % | 0-90 (no condensation) |
| Cooling (Direct Refrigerant) | | R1234yf; R134a |
| Certificates, Norms & Standards (To be discussed in detail depending on application & use case) | | Fully compliant for a wide range of mobility applications and use cases. |

*Further use beyond this point is not recommended for safety reasons.



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