

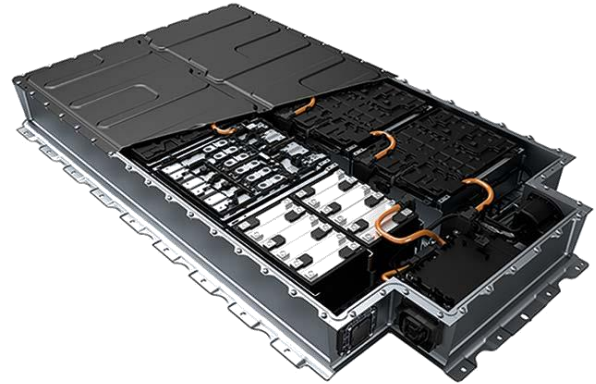
# LION Smart Storage 42 Datasheet



Industry and Commercial Energy Storage



Uninterruptible Power Supply



## Features

### Availability

- Off-the-shelf available

### High peak power

- High peak power capability
- Fast charging compatibility

### Customizable setup

- Connectivity up to 26 batteries via gateway up to 1.097 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

### 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



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## 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: 1001489-01
- Optimized shipping quantity:
  - Europe: 42 packs in wooden box or 54 in returnable rig
  - Overseas: 48 packs in wooden box

## Contact Info

[sales@lionsmart.com](mailto:sales@lionsmart.com)



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 mobile and stationary energy storage applications and use cases.

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



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