

JB

**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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General requirements for lithium-ion battery module cases

锂离子蓄电池模块箱通用要求

(English Translation)

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1 Scope

This Standard specifies the terms and definitions, model and classification, technical requirements, test methods, inspection rules, inspection items, marking, packaging, transportation and storage of module case for lithium-ion battery.

This Standard applies to the module cases for lithium-ion battery modules, which are composed of lithium-ion batteries such as lithium manganate and lithium iron phosphate that are greater than or equal to 6 A·h, and the general lithium-ion battery modules.

2 Normative references

The following documents are indispensable for the application of this document.

For dated references, only the dated version applies to this document. For undated references, the latest edition (including all amendments) applies to this document.

GB 4208-2008, Degrees of protection provided by enclosure (IP code)

3 Terms and definitions

The following terms and definitions are applicable to this document.

3.1 Module case for lithium-ion battery

The case assembly, that is used to compose the lithium-ion battery module, which includes the case and mechanical parts and assemblies.

4.1 Model

The model composition of the module case for lithium-ion battery is shown in Figure 1.

The width of the general module case for lithium-ion battery is a specified value; for the height and length, only the maximum dimensions are specified; the actual product is allowed to be less than the maximum dimension.

The overall dimensions of the 12V-series general module case for lithium-ion battery are shown in Table A.1.

The overall dimensions of the 24V-series general module case for lithium-ion battery are shown in Table A.2.

The overall dimensions of the 36V-series general module case for lithium-ion battery are shown in Table A.3.

The overall dimensions of the 48V-series general module case for lithium-ion battery are shown in Table A.4.

4.2.2 Special battery module case

The overall dimensions of the special module case for lithium-ion battery are specified in the relevant product standards.

5.1 Appearance

The appearance of the battery case shall not have deformation or falling-off of the protective paint; the surface shall be flat, dry, free of external injuries and dirt; the marking shall be clear.

5.2 Overall dimensions and quality

The overall dimensions of the battery case shall comply with 4.2. The specific requirements for overall dimensions and quality shall meet the requirements of the product technical documents that are provided by the manufacturer.

5.3 Material requirements

The material that constitutes the module case for lithium-ion battery can be steel, light metal material or high-strength flame-retardant non-metal material.

5.4 Insulation layer

When the case is made of steel or light metal material, there shall be a flame-retardant insulation layer between the interior of the case and the lithium-ion battery (see Figure 3). The specific requirements shall comply with the specific provisions of the relevant product standards. The insulation resistance shall be greater than 10 M ohm; the dielectric strength shall be greater than AC 2 500 V.

The maximum overall dimensions of the module case for lithium-ion battery without installation and positioning device shall meet the requirements of 4.2.

5.6.2 Screw installation and positioning

The battery module case of screw installation and positioning is generally used for the installation of special lithium-ion battery module; specific requirements are specified in the

relevant product technical standards.

5.6.3 Quick installation and positioning

The battery module case of quick installation and positioning is used for the installation of special lithium-ion battery module; specific requirements are specified in the relevant product technical standards.

5.7 Thermal management design

The battery module case shall meet the design requirements of the thermal management system and have a design for installing thermal management equipment. Generally, natural ventilation, air-cooled heat dissipation, and hot-wind heating thermal management equipment shall be used. Specific requirements are specified in the relevant technical specifications.

When there are specific requirements in the contract, the specific requirements of the contract shall be met.

5.8 Vibration

The vibration performance requirements of the module case for lithium-ion battery are specified in the relevant product technical standards.

When there are specific requirements in the contract, the specific requirements of the contract shall be met.

5.9 Impact

The impact performance requirements of the module case for lithium-ion battery are specified in the relevant product technical standards.

When there are specific requirements in the contract, the specific requirements of the contract shall be met.

5.10 Drop

The drop performance requirements of the module case for lithium-ion battery are specified in the relevant product technical standards.

When there are specific requirements in the contract, the specific requirements of the contract shall be met.

- b) Product model or specifications;
- c) Date of manufacture;
- d) Polarity symbol;