

ICS 43.040
CCS T47



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

GB/T 34014-2017

Coding regulation for automotive traction batteries

汽车动力蓄电池编码规则

Issued on: July 12, 2017

Implemented on: February 1, 2018

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine;
Standardization Administration of the PRC**

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Foreword

This Standard is drafted in accordance with the rules given in GB/T 1.1-2009. This Standard is proposed by Ministry of Industry and Information Technology of the People's Republic of China. This Standard is under the jurisdiction of National Technical Committee of Auto Standardization (SAC/TC 114). Drafting organizations of this Standard. China Automotive Battery Research Institute Co., Ltd., China Automotive Technology & Research Center, BYD Co., Ltd., Ningde Contemporary Amperex technology Co., Ltd., Jianghuai Automobile Group Corp., Ltd., Shanghai Jiexin Traction battery System Co., Ltd., Shanghai Cenat New Energy Co., Ltd., Jiangsu Chunlan Clean Energy Research Institute Co., Ltd., Chongqing Changan Automobile Co., Ltd., Tianjin Lishn Battery Joint-stock Co., Ltd., Huizhou Yineng Electronics Co., Ltd., HuaChen Auto Group Holdings Co.,Ltd., Zhejiang Tianneng Technology Co., Ltd., Zhejiang Godsend Power Technology Co., Ltd., SAIC Volkswagen Automobile Co., Ltd. Main drafters of this Standard. Lu Shigang, Meng Xiangfeng, Chen Wanpeng, Wang Lin, Wang Pan, Lu Chun, Wang Fang, Fan Bin, Chen Weifeng, Dai Weijie, Xu Shujie, Ai Chong, Fan Xiaosong, Li Hongwei, Li Yugang, Zhang Hailin, He Rongfang, Yuan Changrong, Zhang Na, Zhang Hongbo, Fan Yaoguo, Shan Chong, Wang Jian, Yu Zhaona, Wang Qing. Coding regulation for automotive traction battery

1 Scope

China's national coding rule for electric vehicle traction batteries, applied together with Amendment 1 of 2026. It specifies the objects to be coded, the composition of the code structure, the method of representing it and the data carriers, and it applies to automotive traction batteries, supercapacitors and other rechargeable energy storage devices. The code is what makes everything else in the battery lifecycle possible. A traction battery is not

a component that is fitted and forgotten: it is warranted on its state of health, it may be replaced or swapped, it has a second life in stationary storage after it leaves the vehicle, and at the end it is a regulated waste containing valuable and hazardous materials. Every one of those transactions needs the pack, the module and the cell to be identifiable years after the manufacturer's records were filed. Fixing the code structure nationally, rather than leaving each maker to devise their own, is what allows a recycler, an insurer or a regulator to read a battery's identity without a key from whoever built it.

This Standard specifies the objects, composition of code structures, representation method for code structures and data carriers of coding of automotive traction battery. This Standard applies to automotive traction batteries, super capacitors and other rechargeable energy storage devices.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the dated edition cited applies. For undated references, the latest edition of the referenced document (including all amendments) applies.

GB/T 15425 Bar code for commodity - 128 bar code GB/T 18284 QR code GB/T 18347 128 bar code

GB/T 19596 Terminology of electric vehicles ISO/

IEC 16022 Information technology - Automatic identification and data capture techniques - Data matrix bar code symbology specification

3 Terms and definitions

For the purpose of this Standard, the following terms and definitions and those defined in GB/T 19596 shall apply.

3.1 traction battery code Identification code represents main attributes and uniqueness of traction batteries, which consists of a group of numbers and English letters having a certain information meaning.

4 Coding

4.1 Coding objects The coding objects are automotive traction battery packs, battery modules, cells and cascade-use traction battery packs, battery modules, cells.

4.2 Composition of code structures The code structure consists of two parts, see Table 1 and Table 2, the first part is the design information, the second part is the manufacture information. The two parts can be coded separately or together.

4.3 Representation method for code structures

4.3.1 Manufacturer code Manufacturers include manufacturers, cascade-use manufacturers and importers. The manufacturers code is represented by three English capital letters, numbers 0 ~ 9 or combination of letters and numbers and is allocated by the industry management department.

4.3.2 Product type code Respectively use capital letters P, M, C to represent traction battery packs, battery modules and cells.

4.3.3 Battery type code The battery type is represented by the battery material type, and the battery type code is represented by an English capital letter, as shown in Table

3. For multicomponent material systems, it is coded with the material component of maximum content; when there are two or more material components of the same content, it is coded with the material component of less security.

4.3.4 Specification code The specification code is represented by two English capital letters, numbers 0 to 9 or combination of letters and numbers, which is defined by the enterprise and refer to different product specifications. The enterprise shall record and describe the custom specification code.

4.3.5 Traceability information code The traceability information code is represented by seven English capital letters, numbers 0 to 9 or combination of letters and numbers, which is defined by the enterprise.

4.3.6 Manufacture date code The manufacture date is represented by three English capital letters and numbers. The first digit represents the year, the year code is used as specified in Table 4 (cycle once 30 years); the second digit is the month, expressed in hexadecimal; the third digit is the natural day, used as specified in Table 5.

4.3.7 Serial number The serial number code is represented by a seven-digit decimal value, and the value range is 0000000 to 9999999.

4.3.8 Cascade use code The cascade use code applies to cascade-use products, represented by two capital English letters, as shown in Table

6. For non-cascade-use products, the cascade use code is not required;

5.1 Identification methods

5.1.1 Requirements for identification methods The identification method shall use either one-dimensional code or two-dimensional code or both.

5.1.2 One-dimensional code The data carrier of one-dimensional code shall meet the requirements of GB/T 18347 and GB/T 15425. See Annex A for code examples.

5.1.3 Two-dimensional code The data carrier of two-dimensional code shall meet the

requirements of GB/T 18284 and ISO/IEC 16022, respectively.

5.2 Identifying symbols

5.2.1 Position of identifying symbols Identifier symbols shall be fixed on traction battery packs, modules and cells where they are easy to read, not easy to deformation, wear and replace.

5.2.2 Media of identifying symbols Identifying symbols shall be on wear-resistant and corrosion-resistant media, and the printing on identifying symbols shall be clear and durable.