

ICS 43.040.99

CCS T 35

GB

NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA

GB/T 20234.3-2023

Replacing GB/T 20234.3-2015

Connection Set for Conductive Charging of Electric Vehicles
– Part 3: DC Charging Coupler

电动汽车传导充电用连接装置 第 3 部分：直流充电接口

Issued on: September 7, 2023

Implemented on: September 7, 2023

Issued by: State Administration for Market Regulation;

Standardization Administration of the People's Republic of China.

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Foreword

This Document was drafted as per the rules specified in GB/T 1.1-2020 *Directives for Standardization – Part 1: Rules for the Structure and Drafting of Standardizing Documents*.

This Document was Part 3 of GB/T 20234 *Connection Set for Conductive Charging of Electric Vehicles*. GB/T 20234 consists of the following parts:

- Part 1: General requirements;
- Part 2: AC charging coupler;
- Part 3: DC charging coupler.

This Document replaced GB/T 20234.3-2015 *Connection Set for Conductive Charging of Electric Vehicles – Part 3: DC Charging Coupler*. Compared with GB/T 20234.3-2015, the major technical changes of this Document are as follows besides the structural adjustments and editorial modifications:

- a) Change the rated voltage and rated current of the DC charging interface (see Clause 1, Tables 1 and 2 of this Edition; Clause 1, Tables 1 and 2 of the 2015 Edition);
- b) Add requirements for locking devices (see 6.4 of this Edition);
- c) Change the height dimensions of the vehicle socket CC2 plug bush (see 7.3 of this Edition; Appendix A of the 2015 Edition);
- d) Added structural examples of locking devices (see Clause 10 of this Edition).

Please note some contents of this Document may involve patents. The issuing agency of this Document shall not assume the responsibility to identify these patents.

This Document was proposed by the Ministry of Industry and Information Technology of the People's Republic of China.

This Document shall be under the jurisdiction of National Technical Committee of Auto Standardization (SAC/TC 114).

Drafting organizations of this Document: BYD Auto Industry Company Limited; China Automotive Technology and Research Center Co., Ltd.; China Association of Automobile Manufacturers; NIO Technology (Anhui) Co., Ltd.; Guangzhou Greater Bay Technology Co., Ltd.; Guangzhou Xiaopeng Motors Technology Co., Ltd.; China Automotive Research Institute New Energy Motor Inspection Center (Tianjin) Co., Ltd.; China FAW Co., Ltd.; GAC Ai'an New Energy Automobile Co., Ltd.; Dongfeng Motor Group Co., Ltd.; Contemporary Amperex Technology Co., Ltd.; Chongqing Changan New Energy Vehicle Co., Ltd.; Xi'an Linchr New Energy Technology Co., Ltd.; Shenzhen Busbar SCI-Tech Development Co., Ltd.; Beiqi Foton

Motor Co., Ltd.; Suzhou Chilye Green Technology Co., Ltd.; China National Electric Apparatus Research Institute Co., Ltd.; Amphenol PCD (Shenzhen) Co., Ltd.; TELD New Energy Co., Ltd.; Zeekr Automobile (Ningbo Hangzhou Bay New Zone) Co., Ltd.; CSG Smart (Hefei) Science & Technology Co., Ltd.; Xiaomi Automobile Technology Co., Ltd.; Beijing Xiaoju New Energy Automobile Technology Co., Ltd.; Hangzhou Jiawa New Energy Technology Co., Ltd.; Qingdao Huashuo Gaoke New Energy Technology Co., Ltd.; Anhui Jianghuai Automobile Group Corp., Ltd.; Chery Automobile Co., Ltd.; Hefei Gotion High-Tech Power Energy Co., Ltd.; Shenzhen CEGN Co., Ltd.; Potevio New Energy Co., Ltd.; Zhengzhou Shanxiang New Energy Tech Co., Ltd.; Yunshan Smart New Energy Technology Co., Ltd.; Great Wall Motor Company Limited; Hozon New Energy Auto Co., Ltd.; and Shenzhen Daotong Hechuang New Energy Co., Ltd.

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The historical editions replaced by this Document are as follows:

- GB/T 20234.3-2011 was first-time published in 2011; it was first-time revised in 2015;
- It was second-time revised hereby.

Introduction

Conductive charging is the basic way to realize electric energy supply for electric vehicles. GB/T 20234 aims to standardize the technical requirements and test methods of charging connection devices and unify the interface type and structural size of charging interfaces, thereby realizing the interconnection between electric vehicles and charging infrastructure. GB/T 20234 is planned to consist of the following 4 parts:

- Part 1: General requirements. It aims to establish the general performance requirements for charging connection devices and ensure the functionality and reliability of the product.
- Part 2: AC charging coupler. It aims to establish the contact definition, contact connection interface, structural dimensions, etc. of the AC charging coupler to achieve the interchangeability of the AC charging coupler.
- Part 3: DC charging coupler. It aims to establish the contact definition, contact connection interface, structural dimensions, etc. of the DC charging coupler (including high-power charging) to achieve the interchangeability of the DC charging coupler.
- Part 4: High-power DC charging coupler. It aims to establish the composition, coupler function and layout, cable requirements, thermal management system, technical requirements, test methods, etc. of the DC charging connection device, as well as the definition, technical requirements, test methods, inspection rules, etc. of the adapter.

In order to cover more charging scenarios, it is necessary to expand the rating of the DC charging coupler to meet the use requirements of high-power DC charging and low-power DC charging, respectively.

As the physical connection interface between electric vehicles and charging infrastructure, the charging coupler needs to maintain compatibility and interchangeability with already produced electric vehicles and built charging equipment.