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**Overhead contact charging system for electric buses - Part 2:
Charging connection set**

电动客车顶部接触式充电系统 第2部分：充电连接装置

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is part 2 of GB/T 40425 "Top contact charging system for electric buses". GB/T 40425 has published the following part.

- Part 1: General requirements;
- Part 2: Charging connection device.

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

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Introduction

Electric buses have the characteristics of large vehicle mass and large on-board power. They have high platform voltage and large battery capacity.

Electric city buses generally run on fixed routes and can use stations and temporary stations for charging.

Therefore, we can learn from the experience of supercapacitor electric vehicles and adopt the top contact automatic charging method to reduce the manual operation of charging and improve GB/T 40425 "Top contact charging system for electric buses" aims to establish the top contact conductive charging system for electric buses.

The system requirements are to be composed of two parts.

- Part 1: General requirements. The purpose is to establish the overall requirements for the top contact charging system of electric buses and give the charging system Guidance circuit and control principle.
- Part 2: Charging connection device. The purpose is to establish the definition, requirements and test methods of the top contact charging connection device for electric buses.

The test methods are used to guide the design and development of the industry as well as the construction and installation of charging facilities.

Top contact charging system for electric buses Part 2: Charging connection device

1 Scope

This document specifies the ratings, technical requirements, test methods and markings for the top contact charging connection device of electric buses.

This document is applicable to M2 and M3 electric buses with rated voltage not exceeding 1500V, rated current not exceeding 1500A, and complying with Design, development, production and installation of charging connection devices for top contact charging systems

with connection method D.

2 Normative references

GB/T 2408

GB/T 2423.1-2008

GB/T 2423.2-2008

GB/T 2423.4-2008

GB/T 11918.1-2014

GB/T 16935.1-2023

GB 18384

GB/T 18487.1-2023

GB/T 19596

GB/T 20234.1

GB/T 21561.2-2018

GB/T 28046.3-2011

GB/T 40425.1-2021

3 Terms and definitions

GB/T 11918.1-2014, GB/T 18487.1-2023, GB/T 19596, GB/T 20234.1 and GB/T 40425.1-2021 The following defined terms and definitions apply to this document.

3.1 Note 2. See Figure 1 for a schematic diagram of the charging connection device

Mechanical and electrical connection components connecting electric buses and electric bus power supply equipment.

Note 1. Includes charging pantograph, charging bus, charging cable, etc.