GB

NATIONAL STANDARD OF THE

PEOPLE'S REPUBLIC OF CHINA

ICS 29.020; 91.140.50

CCS P 63; T 47

GB/T 16895.36-2024

Low-voltage electrical installations - Part 7-722: Requirements for special installations or locations - Supplies for electric vehicles

低压电气装置 第 7-722 部分：特殊装置或场所的要求 电动车供电

(IEC 60364-7-722:2018, MOD)

Issued on: August 23, 2024 **Implemented on: August 23, 2024**

Issued by: State Administration for Market Regulation;
Standardization Administration of PRC.

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Foreword

This document was drafted in accordance with the provisions of GB/T 1.1-2020 *Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents*.

GB/T 16895 *Low-voltage electrical installations* has been published in 6 parts, of which Part 4, Part 5, Part 7 and Part 8 are divided into several sub-parts:

-- Part 1: Fundamental principles, assessment of general characteristics, definitions;

-- Part 4: Protection for safety;

-- Part 5: Selection and erection of electrical equipment;

-- Part 6: Verification;

-- Part 7: Requirements for special installations or locations;

-- Part 8: Functional aspects.

This document is a subpart of 7-722 of GB/T 16895. Part 7 of GB/T 16895 has been published the following subparts:

-- Low-voltage electrical installations - Part 7-701: Requirements for special installations or locations - Locations containing a bath or shower;

-- Low-voltage electrical installations - Part 7-702: Requirements for special installations or locations - Swimming pools and fountains;

-- Electrical installations of buildings - Part 7-703: Requirements for special installations or locations - Rooms and cabins containing sauna heaters;

-- Low-voltage electrical installations - Part 7-704: Requirements for special installations or locations - Construction and demolition site installations;

-- Low-voltage electrical installations - Part 7-705: Requirements for special installations or locations - Agricultural and horticultural premises;

-- Low-voltage electrical installations - Part 7-706: Requirements for special installations or locations - Conducting locations with restricted movement;

-- Electrical installations of buildings - Part 7-710: Requirements for special installations or locations - Medical locations;

Low-voltage electrical installations - Part 7-722: Requirements for special installations or locations - Supplies for electric vehicles

722 Supplies for electric vehicles

722.1 Scope

Special requirements of this document apply to:

-- Circuits that provide electrical energy to electric vehicles, and

-- Circuits that feed electrical energy back from electric vehicles.

The circuits specified in this document terminate at the connection points.

NOTE 1: Requirements for conductive charging and related charging modes of EV supply equipment are given in IEC 61851 (all parts). Requirements for wireless power transfer of EV supply equipment are given in IEC 61980 (all parts).

NOTE 2: This document is not applicable to the explosion risk assessment of hydrogen or other flammable gases that may be generated during battery charging.

722.2 Normative references

The provisions of the following documents constitute the essential clauses of this document through normative references in this text. Among them, for referenced documents with dates, only the versions corresponding to the dates are applicable to this document; for referenced documents without dates, the latest versions (including all amendments) are applicable to this document.

GB/T 16895.21-2020, Low-voltage electrical installations - Part 4-41: Protection for safety - Protection against electric shock (IEC 60364-4-41:2017, IDT)

IEC 60269 (all parts), Low voltage fuses

NOTE: GB/T 13539 (all parts), Low voltage fuses [IEC 60269 (all parts)]

IEC 60309-1, Plugs, socket-outlets and couplers for industrial purposes - Part 1: General requirements

switching and control devices for wireless power transmission systems.

NOTE 2: The in-cable control and protection device (IC-CPD) described in IEC 62752 is not designed for use in fixed installations.

722.530.3.102 For circuits specified in 722.531.3.101, if more than one electric vehicle is supplied from the same unearthed power supply, an insulation fault location system (IFLS) complying with IEC 61557-9 should be used to detect the faulty circuit in the shortest possible time.

722.531 Devices for protection against indirect contact by automatic disconnection of supply

722.531.2 Residual current protective device

The following content is added.

722.531.2.101 In accordance with the provisions of 722.411.3.3, the RCDs used for the protection of each connection point shall at least meet the requirements of a Type A RCD, and its rated residual operating current shall not exceed 30 mA.

In EV charging stations equipped with sockets or vehicle connectors complying with IEC 62196 (all parts), DC fault current protection measures shall be taken unless the EV charging station has its own protection measures. The appropriate measures to be taken at each connection point are as follows:

-- the use of a Type B RCD, or

-- the use of a type A RCD in combination with a residual direct current detecting device (RDC-DD) in accordance with IEC 62955, or

-- the use of a type F RCD in combination with a residual direct current detecting device (RDC-DD) in accordance with IEC 62955.

RCD shall comply with IEC 61008-1, IEC 61009-1, IEC 60947-2 or IEC 62423.

NOTE: 722.531.2.101 does not apply when there are other means of protection against electric shock at the connection point, such as safety extra low voltage (SELV) or electric separation.

722.531.2.1.1

The following replaces the existing provisions (including NOTEs):

The RCD shall disconnect all live conductors.

722.531.3 Insulation monitoring devices

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