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Safety Technical Requirements of Charger for Electric Bicycles
电动自行车用充电器安全技术要求

(English Translation)

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CONTENTS

Safety Technical Requirements of Charger for Electric Bicycles

1 SCOPE

This document specifies the classification by protection against electric shock, and technical requirements for safety, marking, warnings and instructions with respect to charger for electric bicycles, and describes their respective test methods.

This document is applicable to the chargers for electric bicycles specified in GB 17761.

This document is not applicable to the charging facilities, e.g., onboard charger of electric bicycles, charging/battery swap cabinet, charging spot, or fast charging station, etc.

2 NORMATIVE REFERENCES

The following normative documents contain provisions which, through normative reference in this text, constitute essential provision of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendment) applies.

GB/T 1002	Single phase plugs and socket-outlets for household and similar purposes—Types, basic parameters and dimensions
GB/T 2099.1	Plugs and socket-outlets for household and similar purposes—Part 1: General requirements
GB/T 2423.1	Environmental testing - Part 2: Test methods - Tests A: Cold
GB/T 2423.2	Environmental testing - Part 2: Test methods - Tests B: Dry heat
GB/T 2423.3	Environmental testing—Part 2: Testing method—Test Cab: Damp heat, steady state
GB/T 2423.10-2019	Environmental testing—Part 2: Test methods—Test Fc: Vibration (sinusoidal)
GB/T 4208-2017	Degrees of protection provide by enclosure (IP code)
GB 4343.1	Electromagnetic compatibility requirements for household appliances, electric tools and similar apparatus—Part 1: Emission
GB 4706.1-2005	Household and similar electrical appliances-Safety—Part 1: General requirements
GB 4943.1-2022	Audio/video, information and communication technology equipment—Part 1: Safety requirements
GB/T 5013.1	Rubber insulated cables of rated voltages up to and including 450/750V - Part 1: General requirements
GB/T 5169.11-2017	Fire hazard testing for electric and electronic products—Part 11: Glowing/hot-wire based test methods—Glow-wire flammability test method for end-products (GWEPT)
GB/T 5169.16-2017	Fire hazard testing for electric and electronic products—Part 16: Test flames—50W horizontal and vertical flame test methods
GB/T 5169.21-2017	Fire hazard testing for electric and electronic products—Part 21: Abnormal heat—Ball pressure test method
GB/T 16935.1-2008	Insulation coordination for equipment within low-voltage systems - Part 1: Principles, requirements and tests
GB 17625.1-2012	Electromagnetic compatibility—Limits—Part 1: Limits for harmonic current emissions (equipment input current ≤ 16A per phase)
GB 17761	Safety technical specification for electric bicycle

CISPR 16-2-3 Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-3: Methods of measurement of disturbances and immunity - Radiated disturbance measurements

3 TERMS AND DEFINITIONS

For the purpose of this document, the terms and definitions established in GB 4706.1-2005 and the following apply.

Note: Unless otherwise stated or specified, the terms “Voltage” and “Current” in this document refer to root mean square (RMS) values.

3.1 trickle charge

The continuous charging at a small electric current (≤ 0.03C) to maintain the battery in an approximately fully charged state

3.2 rated input voltage

The input voltage specified by the manufacturer for the charger

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