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Electrical Safety Requirements for Electric
Bicycles

电动自行车电气安全要求

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Electrical Safety Requirements for Electric Bicycles

1 SCOPE

This document specifies the requirements for markings, warnings, wiring, cables, connections, voltage, insulation resistance, electrical strength, heating, protection, temperature resistance and humidity resistance, and vibration and shock with respect to electrical safety of electric bicycles, and describes their respective test methods.

This document is applicable to the electric vehicles (hereinafter referred to as “vehicles”) covered by the boosting bicycle defined in QB/T 1714.

This document is not applicable to the vehicles equipped with an onboard charger.

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 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 3956-2008	Conductors of insulated cables
GB/T 4208	Degrees of protection provide by enclosure (IP code)
GB 4706.1-2005	Household and similar electrical appliances-Safety-Part 1: General requirements
GB/T 16842-2016	Protection of persons and equipment by enclosures—Probe for verification
GB 17761	Safety Technical Specification for Electric Bicycle
GB/T 22199.1-2017	Valve-regulated lead-acid batteries for moped—Part 1: Technical conditions
GB/T 32504-2016	Civil lead-acid battery technical code for safety
GB/T 36972-2018	Lithium-ion battery for electric bicycle
QB/T 1714	Cycle – The rule for drawing up the name and model

3 TERMS AND DEFINITIONS

For the purpose of this document, the terms and definitions established in GB 17761 and the following apply.

3.1 main circuit

A circuit that transmits the dynamic electrical energy from the output terminal of battery system (3.13) to drive the electric motor

3.2 secondary circuit

Other circuit than main circuit (3.1), including control circuit, audible/optical circuit, etc.



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