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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB 47371-2026

Safety technical specification for electric bicycle charging piles

电动自行车充电桩安全技术规范

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Standardization Administration of the PRC

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1 Scope

GB 47371-2026 is the Chinese national standard covering the public e-bike charging post - the output and its protection, the identification of the battery being charged, the detection of an abnormal charge, the fire separation and the enclosure, on equipment installed in courtyards and at the foot of apartment blocks. A mandatory standard, first edition, in force from 1 April 2027, and part of the same regulatory push as the charger standard GB/T 36944-2026 and the centralized facility series GB/T 42236. It was issued on 31 March 2026 and takes effect on 1 April 2027, as a first edition. The document is under the responsibility of the Ministry of Industry and Information Technology. This page is published from the official record of the 2026 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document defines the terms for electric bicycle charging piles (hereinafter referred to as "charging piles"), specifies the test conditions, general requirements, safety protection function requirements, and special requirements for DC charging piles, and describes the corresponding test methods. This document applies to AC/DC charging piles that charge electric bicycles and their batteries complying with GB 17761.

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2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB 1002 Single phase plugs and socket-outlets for household and similar purposes - Types, basic parameters and dimensions

GB/T 1003 Three phases 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 2423.2 Environmental testing - Part

3 Terms and definitions

For the purpose of this document, the following terms and definitions apply.

3.1 electric bicycle A two-wheeled bicycle powered by an onboard battery, providing electric drive and/or electric assistance. [Source: GB 17761-2024, 3.1.1]

3.2 electric bicycle charging pile A power supply control device with output power on/off control, charging safety control, and human-machine interaction functions, used for the

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management and control of the charging process of electric bicycles and their batteries. NOTE. Electric bicycle charging piles are generally classified into AC charging piles and DC charging piles according to charging type. [Source: JB/T 14055-2022, 3.1, modified]

3.3 AC charging pile A facility consisting of an AC charging controller, power distribution lines, and sockets, capable of providing and managing 220 V AC power for charging electric bicycles and their batteries. [Source: GB/T 42236.1-2022, 3.4, modified]

3.4 DC charging pile A DC power supply device integrating DC output power on/off control and charging safety control functions. This device can directly provide a matching DC charging power supply to electric bicycles and their batteries. [Source: JB/T 14055-2022, 3.3, modified]

3.5 enclosure An enclosure that provides the appropriate type and degree of protection for its intended use.

3.6 maximum output current for a single port The maximum output current value for a single port of an electric bicycle charging pile as specified by the manufacturer.

4 Test conditions

4.1 Test environmental conditions Unless otherwise specified, the test is generally conducted under the following conditions.

a) ambient temperature. 25 °C ± 5 °C;

b) relative humidity. <= 75 %.

4.2 Parameter measurement tolerances Relative to specified or actual values, the accuracy of all control or measured values shall be within the following tolerance ranges.

a) voltage. ±0.5 %;

b) current. ±1 %;

c) temperature. ±2 °C.

5 General requirements

5.1 General rules Electric bicycle charging piles shall not pose a danger under normal use, reasonably foreseeable misuse, or malfunction conditions.

5.2 Basic requirements Unless otherwise specified, the basic safety requirements for charging piles shall comply with the provisions of GB 4943.1.

5.3 Safety-critical components Safety-critical components used in charging piles shall meet applicable safety protection requirements and be used within their rated values. Critical components such as wires, cables, sockets, and switches shall, as applicable, meet the

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safety-related requirements in the relevant national and industry standards listed in Table A.1 of Annex A. The safety-critical components used in charging piles and relevant standards, according to applicable conditions, include, but are not limited to, the categories listed in Table A.1.

5.4 Markings and instruction manual

5.4.1 Markings The following markings shall be clearly displayed in Chinese on charging piles.

a) Name. "Electric bicycle charging pile", model. NOTE

1.Note any additional information such as AC or DC type after the name.

b) Manufacturer, production plant.

c) Equipment serial number (The charging pile equipment serial number uses a 13- digit code structure, consisting of three parts. from left to right, the manufacturing enterprise code, the year of production code, and the model specification code, separated by "-", as shown in Figure 1).

d) Production date (year-month-day).

e) Rated input voltage (it shall be 220 V or three-phase 380 V), frequency (it shall be

50 Hz), rated input current (A), rated input power (kW).

f) Output voltage range (V), maximum total output current (A), maximum output current value for a single port (A).

g) Nature of the power supply voltage. DC, AC, or three-phase AC, which shall be indicated near the rated voltage value of the equipment. If symbols are used, they shall meet the relevant requirements of GB/T 5465.2.

h) Degrees of protection provide by enclosure (IP code).

i) Necessary safety warnings, such as "Do not open if not a staff member," "Do not charge non-rechargeable batteries," "Read the operating instructions carefully before use," and "Carry out regular inspection and maintenance," etc.

j) For equipment only suitable for use in areas with an altitude of 2000 m and below, warning statements or labels shall be clearly marked on the equipment.

k) For DC charging piles, the polarity (+, -) of the output port and the type of electric bicycle battery to be charged shall be indicated. In addition to the above markings, other information deemed necessary may be indicated. Figure 1 -- Schematic diagram of charging pile equipment serial number The codes in Figure 1 are explained as follows: - X1 ~ X

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