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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB 31187-2014

Sporting goods-General requirements for electrical parts

体育用品 电气部分的通用要求

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Foreword

The standard Chapter 5 - Chapter 18 is mandatory, the rest are recommended. This standard was drafted in accordance with GB/T 1.1-2009 given rules. This standard by the National Sporting Goods Standardization Technical Committee (SAC/TC291) and focal points. This standard was drafted. China Sports Goods Industry Association, Tianjin Product Quality Supervision and Detection Technology Research Institute, Beijing century state system body Sporting goods Quality Certification Center, Kunming Institute of Sport electrical equipment, Shu Hua (China) Co., Ltd., Shanxi O Reiter Health Industry Co. Shares The company, Nanjing Wande Recreation Equipment Co., Ltd., the National Sporting Goods Quality Supervision and Inspection Center, Beijing Aokang Da Sporting Goods Co., river Su Jinling Sports Equipment Co., Ltd., Qingdao Impulse Health Technology Co., Ltd., Shanghai Double Happiness Co., Ltd., Nantong Iron SPLM Dynamic Products Co., Ltd., Anhui Province Product Quality Supervision and Inspection Institute, Shanghai Intertek Testing Services Ltd., Shenzhen, a good solid family Industry Co., Ltd. Hangzhou Eagle boats, evergreen (Shanghai) Co., Ltd. sports equipment. The main drafters of this standard. Sun Yundong, INTEGRATED TRADITIONAL, Yuan Yilong, Chen Xiaowei, Wang Shao Bao, Wang Su, Li Zheng Qi, Han Lanting, Zan into Kun, Hu Shihui, Zhou

Yunfeng Cai Jie, Liu Xiuping, Zhang Gang, Shi Jianxin standard, Xuan Ping, Wu Xiao Wei. General requirements for the electrical part of the Sporting Goods

1 Scope

GB 31187-2014 is the Chinese national standard on sporting goods-general requirements for electrical parts, in the field of domestic and commercial equipment, entertainment, sport. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 3 September 2014 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 January 2015. Classification: ICS 97.220.99, CCS Y56. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the electrical part of the Sporting Goods (hereinafter referred to as the instrument) terms and definitions, classification, basic requirements, risk of electric shock protection, transport Into power, leakage current and electric strength at operating temperature, water resistant to moisture, heat and abnormal operation, structure, external and internal wiring, then Ground equipment, clearances and creepage distances, heat fire, lightning, mechanical safety, signs and instructions. This standard applies to single-phase rated voltage not exceeding 250V, the other rated voltage not exceeding 480V sports safety equipment. This standard does not apply to the electrical part of the medical rehabilitation equipment, boats, aircraft, automobile and motorcycle category, model aircraft, Cars instruments.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 2423.55-2006 Environmental testing for electric and electronic products Part 2. Test methods - Test Eh. Hammer tests

GB 4208 housing protection (IP Code) Part 1

GB 4706.1-2005 Safety of household and similar electrical appliances. General requirements

GB/T 5169.11 Fire hazard testing for electric and electronic products - Part 11. Glowing/hot wire based test methods for finished burning Hot wire flammability test method

GB/T 5169.21 Fire hazard testing for electric and electronic products - Part 21. Abnormal heat - Ball pressure test

GB/T 12113-2003 touch current and protective conductor current measurement methods

GB 15092.1 Switches for appliances - Part 1. General requirements

GB 17498.1 Stationary training equipment - Part 1. General safety requirements and test methods General requirements

GB 19272-2011 outdoor fitness equipment

GB 50231-2009 mechanical equipment installation construction and acceptance of universal norms

3 Terms and Definitions

Terms and definitions GB 4706.1-2005 defined apply to this document. Category 4

4.1 The method of classification according to protection against electric shock The electrical portion of the instrument can be divided into. I type, II type, III class.

4.2 by dust, water classification Instrument shall be classified as specified in GB 4208 "IP number" classification.

5 Basic requirements

Various instruments contained in the electrical equipment shall be guaranteed in the environment and the use of the prescribed period, the normal should be used safely. which is It makes it possible to neglect occur in normal use, the staff and should not result in harm to the surrounding environment. In addition to the electrical portion of the instrument to meet requirements of this standard, we must also meet the requirements of the relevant product standards.

6 Shock hazard protection

Construction and housing

6.1 devices when in normal use it should work, the position and remove all removable parts, live parts shall Inaccessible. Foldable equipment, folded proper protection against electric shock. By the following test.

--- The instrument at all possible positions, the instrument inserted into the opening position with 1 test probe B, probe extends through the opening Yun Any depth promised, during insertion, rotation and bending probe. If the test probe B can not be inserted into the opening, is applied to the probe Plus 20N vertical force. Test probe B can not touch live parts, or just paint, oxide film, paper and similar materials as Protection of live parts. II II

class structure and class equipment, test probe B only allow access to those produced by double insulation or reinforced insulation Edge parts separated from live parts;

--- For each instrument category and the opening II II class structure, using 2 test probe 13 is inserted into the opening position of the instrument, leading to the lamp And the opening of the socket live parts excluded. Test probe 13 can not touch the live parts;

--- If accessible parts as safety extra-low voltage power supply, may not be considered as a live parts. Millimeters

Note. Unless otherwise specified materials, metal. No individual tolerance limit deviation angle. 0-10 °; without individual tolerance of the general linear dimension tolerances. 25 and below Is 0-0.05,25 above is ± 0.2; two rotatable hinge point in the range of 90 ° 10 0 ° in the same direction in the same plane. Figure 1 test probe B Linear dimensions in millimeters Figure 2 test probe 13

6.2 to provide protection against electric shock housing and other parts shall mechanical strength after impact test shall not touch live parts, normal operation When not loose. By visual, manual and the following test. Use GB/T 2423.55-2006 impact test prescribed spring means for the fragile parts of the impact energy is 0.35J, other components red Impact energy is 0.5J, the impact on the weakest point three times. NOTE. Fragile member refers to a glass or translucent cover, as well as highlighting the housing does not exceed 10mm or surface area of not more than 4cm2 ceramic and widgets.

6.3 is connected via a plug and the power of the equipment, which shall be constructed so that in normal use when touching the plug pins, will not There are a charged capacitor cause an electric shock hazard.

Note. the rated capacity of not more than 0.1μF capacitor does not think it will cause a shock hazard. By the following test. Devices with rated voltage, then switch to any of the "off" position, the instrument voltage peak when disconnected from the power. in 1s off after use will not have a significant effect on the measured value of the instruments, measuring voltage between the pins of the plug should not exceed 34V.

7 Input Power

Equipment at normal operating temperature, input power rated power input deviation should not exceed the following error.

--- When the rated input power less than 300W, 20%;

--- Rated input power is greater than 300W, 15%. When the input power is stable, by measuring to determine eligibility. When measuring, all circuits can operate simultaneously are in working condition. in case The whole work cycle of the input power varies, the average value occurs during a press representative of the input power with the input power decision. Marked with one or more rated voltage range of instruments, test on each range,