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PEOPLE'S REPUBLIC OF CHINA**

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**Technical specifications of junction box for terrestrial
solar-photovoltaic modules**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses the redrafting method to modify the use of IEC 62790.2014 "Safety Requirements and Tests for Junction Boxes for Photovoltaic Modules".

The technical differences between this standard and IEC 62790.2014 and their reasons are as follows.

---About the normative reference documents, this standard has made technical adjustments to adapt to China's technical conditions, adjustments

The situation is reflected in Chapter 2, "Regulatory Citations", and the specific adjustments are as follows.

- * Replace ISO 868 with GB/T 2411-2008 equivalent to the international standard;
- * Replace IEC 60068-1 with GB/T 2421.1-2008 equivalent to the international standard;
- * Replace IEC 60068-2-70 with GB/T 2423.53-2005 equivalent to the international standard;
- * Replace IEC 60068-2-75 with GB/T 2423.55-2006 equivalent to the international standard;
- * Replace IEC 60112 with GB/T 4207-2012 equivalent to the international standard;
- * Replace IEC 60529 with GB/T 4208-2017 equivalent to the international standard;
- * Replace IEC 60695-2-11 with GB/T 5169.11-2017 equivalent to the international standard;
- * Replace IEC 60695-11-10 with GB/T 5169.16-2017 equivalent to the international standard;
- * Replace IEC 60695-11-20 with GB/T 5169.17-2017 equivalent to the international standard;
- * Replace IEC 60695-10-2 with GB/T 5169.21-2017 equivalent to the international standard;

standard;

* Replace IEC 60998-2-3 with GB/T 13140.4-2008 equivalent to the international standard;

* Replace IEC 60947-7-1.2009 with GB/T 14048.7-2016 modified to international standards;

* Replaced ISO 4892-2.2013 with GB/T 16422.2-2014 equivalent to the international standard;

* Replace IEC 61032 with GB/T 16842-2016 equivalent to the international standard;

* Replace IEC 60060-1.2010 with GB/T 16927.1-2011 modified to adopt international standards;

* Replace IEC 60352-2.2006 with GB/T 18290.2-2015 equivalent to the international standard;

* Replace IEC 60352-3.1993 with GB/T 18290.3-2000 equivalent to the international standard;

* Replace IEC 60352-4 with GB/T 18290.4-2015 equivalent to the international standard;

* Replace IEC 60352-5 with GB/T 18290.5-2015 equivalent to the international standard;

* Replace IEC 61730-1 with GB/T 20047.1-2006 equivalent to the international standard;

* Replace IEC /T R60943.2009 with GB/T 25840-2010 equivalent to the international standard;

* The inclusion of normative references in international standards, but not actually cited in the text;

* Added reference to IEC 61191-1.2013, IEC 62730-1.2016, IEC 62730-2.2016, with IEC 62852.2014

Replaced IEC 62852.

--- Removed the international standard 4.20 to adapt to the technical conditions of China's photovoltaic module junction box.

This standard has been edited as follows.

--- The standard name is modified as "Technical Conditions for Junction Box for Solar Photovoltaic Modules for Floors".

This standard is under the jurisdiction of the China National Institute of Standardization.

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1 Scope

This standard specifies the structural requirements and performance requirements for ground-based solar photovoltaic module junction boxes, as well as test methods.

This standard applies to light with a DC voltage less than or equal to 1500V and in accordance with the application of Class II in GB/T 20047.1-2006.

Junction box for volt components.

For electronic devices mounted on components for control, monitoring or similar operations, refer to this standard.

Note. Refer to this standard for junction boxes that meet application levels 0 through III in photovoltaic systems.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 2421.1-2008 Overview and guidelines for environmental testing of electronic and electrical products (IEC 60068-1.1988, IDT)

GB/T 2423.22-2012 Environmental testing - Part 2. Test methods Test N. Temperature change (IEC 60068-2-14.

2009, IDT)

GB/T 2423.53-2005 Environmental testing of electric and electronic products - Part 2. Test method Test Xb. Caused by friction of the hand

Wear of markings and printed characters (IEC 60068-2-70.1995, IDT)

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

(IEC 60068-2-75.1997, IDT)

GB/T 4207-2012 Determination of the tracking resistance index of solid insulating materials and the method of measuring the electrical tracking index (IEC 60112.2009, IDT)

GB/T 4208-2017 enclosure protection class (IP code) (IEC 60529..2013, IDT)

GB/T 5169.11-2017 Electrical and electronic products - Fire hazard testing - Part 11. The basic test method

Glow wire flammability test method (GWEPT) (IEC 60695-2-11.2014, IDT)

GB/T 5169.16-2017 Electrical and electronic products - Fire hazard test - Part 16. Test flame 50W horizontal and vertical flame

Test method (IEC 60695-11-10.2013, IDT)

GB/T 5169.17-2017 Electrical and electronic products - Fire hazard testing - Part 17. Test flames 500 W

(IEC 60695-11-20..2015, IDT)

GB/T 5169.21-2017 Electrical and electronic products - Fire hazard testing - Part 21. s. (IEC 60695-10-2.2014, IDT)

GB/T 13140.4-2008 Connections for low-voltage circuits for household and similar use - Part 2

Particular requirements for connecting devices with insulated clamping members (IEC 60998-2-3.2002, IDT)

GB/T 14048.7-2016 Low-voltage switchgear and controlgear - Part 7-1. s.

(IEC 60947-7-1..2009, MOD)

GB/T 16422.2-2014 exposure test methods for plastics - Part 2. Xenon arc lamps (ISO 4892-2.2006,

IDT)

GB/T 16422.3-2014 exposure test methods for light source in plastics - Part 3. Fluorescent UV lamps (ISO 4892-3.