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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB 17464-2012

Replacing GB 17464-1998

Connecting devices - Electrical copper conductors - Safety requirements for screw-type and screwless-type clamping units - Part 1: General requirements and particular requirements for clamping units for conductors from 0.2 mm² up to 35 mm² (included)

连接器件 电气铜导线 螺纹型和无螺纹型夹紧件的安全要求 适用于0.2 mm²以上至35 mm²（包括）导线的夹紧件的通用要求和特殊要求

(English Translation)

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Foreword

The standard Chapter 7, Chapter 8 are mandatory, others are recommended.

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

This standard replaces GB 17464-1998 "Connecting devices copper conductors with screw-type and screwless-type clamping units to be safe General requirements for the required conductor cross-section of 0.5mm² ~ 35mm² clamp and special requirements ", and in accordance with IEC 60999-1:1999 Standard, adjusted its name to "Connecting devices Safety requirements for electrical copper conductors screw-type and screwless-type clamping units suitable for 0.2mm² or more to 35mm² (including) the general requirements of the wire clamp and special requirements. " this section compared with GB 17464-1998, the main changes are as follows.

--- According to IEC standard name change to its original safety requirements "Connecting devices - Electrical copper conductors screw-type and screwless-type clamping units it applies to more than 0.2mm² to 35mm² (including) the general requirements of the wire clamp and special requirements. "

--- Chapter 1 Scope, rated connection capacity ranges from "0.5mm² ~ 35mm²" to "0.2mm² ~ 35mm²".

--- Increase in Chapter 2 normative references content.

--- 3.11 definition of "connected to the most coarse conductor cross-section" to "hot wire can be connected in line, mechanical and electrical requirements Cross-sectional area. "

--- 8.1.1 Steel coating thickness requirements change, the original ISO 2081 requirements "5μm" to GB/T 9799 requirements "5μ, 8μ, 12μ ", original ISO 1456 requirements" 20μm "to" 10μ, 20μ, 30μ ", original ISO 2093 requirements" 12μm "to GB/T 12599 requirements "12μ, 20μ, 30μ".

--- 8.3 third paragraph, the original "body is aluminum" to "the body is steel, aluminum or aluminum alloy," original "to prevent copper and aluminum or aluminum alloy Contacts "to" prevent copper and steel, aluminum or aluminum alloy in contact. "

--- 8.1.3 and current carrying parts in aluminum and aluminum screws 8.4 are required for physical tests specified in IEC 61545.

--- 9.4 last sentence add "after each test wire test immediately placed on tests of 9.5 (tensile testing) equipment."

--- Table 2 adds that "casing bore diameter deviation. $\pm 2\text{mm}$ ".

--- 9.6 third paragraph "all use the new wire" to "use all the new conductor of the end."

--- Table 4 thread nominal diameter " $D \leq 2.8$ " to " $D \leq 1.6$ ".

--- Appendix A, B, C in the header name, content control IEC original text has been modified.

--- References increased [1], [2], [3].

This standard uses the translation method is equivalent to using IEC 60999-1:1999 (2nd edition) "Connecting devices - Electrical copper conductors Screw-type and screw General and special requirements apply to more than 0.2mm² to 35mm² (including) the clamping member. Safety requirements for grain-type clamping units - Part 1 Specific requirements. " Correspondence between the consistency of the standards of international documents and normative references of the following documents.

--- GB/T 3956-2008 conductor cable (IEC 60228:2004, IDT)

--- GB/T 9799-1997 Metallic coatings on steel zinc plated layer (eqvISO 2081. 1986)

--- GB/T 12599-2002 tin plated metallic coating layer specification and test methods (ISO 2093. 1986, MOD) the standard IEC 60999-1:1999 made the following editorial changes.

--- According to GB/T 1.1 relevant provisions in Chapter 1, "scope" in the first line of supplements "This standard specifies applicable to 0.2mm² Up to 35mm² wire clamp main features, wire connections, structural requirements, technical requirements, test methods. " the standard proposed by China Electrical Equipment Industrial Association.

This standard by the National Electric annex Standardization Technical Committee (SAC/TC67) centralized.

This standard was drafted. China Electric Apparatus Research Institute Co., Ltd., Zhejiang

Chint Building Appliance Co., TCL- Legrand International Electrotechnical Workers (Huizhou) Co., Ltd., the Bulls Group Limited, based Electric (Shenzhen) Co., Ltd., Guangdong Product Quality Supervision and Inspection Institute, Zhejiang Hengtai Electrical Co., Ltd.

1 Scope

This standard specifies the main characteristics of the above applies to 0.2mm² to 35mm² wire clamping member, wire connections, structural requirements, Technical Test Method requirements.

This standard applies to the device as a standalone unit or as an integral part of the screw-type and screwless-type clamping units, rated AC Pressure does not exceed 1000V, frequency no greater than 1000Hz and rated DC voltage does not exceed 1500V, for connection in line with GB/T 3956 to Seeking a cross-section of more than 0.2mm² to 35mm² (AWG wire gauge size or corresponding) stiff (single or stranded) copper wire and/or Soft copper wire.

This standard applies primarily used to connect wires untreated clamping member.

This standard does not apply to.

- a) Crimp or tin solder connections clamping member;
- b) or digital signal clamp circuit;
- c) Flat quick connect terminals, insulation piercing connecting devices and twist - on connecting devices such as clamps; these clamps are GB 17196 [3], GB 13140.4 [1] and GB 13140.5 [2] and other standards are summarized.

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 9797-2005 Metallic coatings nickel-chromium and copper-nickel-chromium plating layer (ISO 1456:2003, IDT) GB/T 18213-2000 frequency cables and wires and coated free copper conductor resistance Calculation Guide (idt IEC 60344. 1980) IEC 60228. 1978 insulated cable conductors (Conductorsofinsulatedcables) IEC 60228A. 1982 insulated cable conductor 1st Supplement (Conductorsofinsulatedcables-Firstsupple-ment) IEC 61545:1996 Connecting devices clamping means any material of aluminum and aluminum clad in copper wire clamp connector Member
(Connectingdevices-Devicesfortheconnectionofaluminiumconductorsinclampingunitsofany materialandcopperconductorsinaluminiumbodiedclampingunits) ISO 2081. 1986 Metallic coatings on steel zinc plated layer (Metalliccoatings-Electroplatedcoatingsof

zinc on iron or steel) ISO 2093. 1986 tin plated layer specification and test methods
(Electroplated coating soft tin - Specification and test methods)

3 Terms and Definitions

The following terms and definitions apply to this document.

Clamp clamping unit

In the terminal on the wire clamp mechanical and electrical connections necessary components, including maintaining normal contact pressure necessary components.

Terminal

By one or more electrically conductive members combined into the necessary clamping member and the insulating one electrode.

Connecting devices connecting device by one (or more) fixed to the base member integral constituent equipment or terminal, used one (or more) electrical conductors Gas connection devices.

Screw type clamping screw-type clamping unit it is used to connect or disconnect a wire or wires used to interconnect two or more clamping members, and this is connected directly or indirectly Grounding through any kind of screws and nuts to.

Cylindrical clamp pillar clamping unit Insert the wires into the hole or slot, up clamping screw threaded screw-type clamping units below, which can be directly applied by the clamping pressure screw screw Add, by a screw or screws through the pressure applied to the intermediate member.

Note: Figure 2 example cylindrical clamping member.

Screw clamp screw clamping unit the conductor is clamped under the screw head screw-type clamping units, which clamping pressure may be applied directly by the head of the screw or through an intermediate member, such as a washer, clamping plate or the locking member or the like is applied.

Note: Screw clamp example shown in Figure 3.

Bolt clamp stud clamping unit the conductor is clamped under a nut screw-type clamp, clamping pressure which can be processed directly by a suitably shaped nut is applied, or by Through an intermediate member, such as a washer, clamping plate or the like is applied to the locking member.

NOTE: bolt clamp example shown in Figure 3.

Saddle clamp saddle clamping unit with two or more screws or nuts under the saddle wire clamp plate screw-type clamping units.