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

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**Residual current devices with or without overcurrent protection
for socket-outlets for household and similar uses**

家用和类似用途的带或不带过电流保护的插座式剩余电流电器 (SRCD)

(English Translation)

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Foreword

All technical contents of this standard is mandatory.

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

This Standard is a modified IEC 62640:2011 is electrically socket residual current "household and similar purposes with or without overcurrent protection Device "(in English).

This standard and IEC 62640:2011 The main differences are as follows.

--- applicability of the flat pin type socket. Considering the plug of the home system is a flat pin, 8.3.1 and increase of Home Single phase plug and socket type similar purposes, the basic parameters and dimensions of the content, an increase of 9.2 dedicated check the contents.

--- Note on the process. IEC 62640:2011 in all of the note, who did not tally with our country or our country do not apply to the situation in this standard are to be deleting and properly

treated.

--- an increase of 4.10 based on content classification unprotected door.

--- SRCD for overcurrent protection, the overcurrent trip increase in Annex D test routine experiments.

--- "earth leakage current" to "fault current to ground." Since the fault current can cause a fire.

--- a note in Table 6 of "9.13.2" to "9.16." Because only in line with the impulse voltage test of 9.16, among the electric 8.3.2 the gap can be reduced.

--- 9.19.2 of "21h at the end of the last power-on period, the measurement terminals with thin thermocouple temperature, which temperature should not exceed 50K "to" 21h at the end of the last power-on period, with the temperature measuring terminals of fine wire thermocouples, the temperature should not exceed 60K ". This is consistent with the requirements in Table 8.

The standard proposed by China Electrical Equipment Industrial Association.

This low-voltage electrical standard by the National Standardization Technical Committee (SAC/TC189).

This standard is drafted. Shanghai Electric Apparatus Research Institute.

Participated in the drafting of this standard. Shanghai Electric Division Electrical Technology Co., Ltd. Zhejiang Chint electrical construction, through leading technology group, benefits the benefit (Group) Co., Ltd., Nanjing tripod Electric Co., Ltd. brand, Goodwin Electronics Co., Ltd. Yuyao City, Zhejiang Chint Electric Co. shares the company, Shi Naide Electric (China) Investment Co., Ltd., Shanghai electrical equipment testing by the Zhejiang People Electric Co., Ltd.

Introduction

GB 16916 and GB 16917 series of standards having one to four residual current electric poles suitable for installation in any part of the electrical device Device. The collector may be mounted at the end of the entire electrical device into the line, the front end or one or more fixed electrical circuit means, or to a power supply One or several outlets of the front end circuit. These appliances may be assembled with the receptacle in the same housing.

The RCD is possible to provide fault protection (indirect contact), additional protection (protection against direct contact) (if rated residual current is equal to or less than 30mA), and a fire hazard due to the fault current and the overcurrent protection is not provided due to the persistence of protection. Satisfies GB GB 16917 or 16916 series of standards to ensure isolation of the RCD, and similar household can withstand high the level of electromagnetic disturbances, and the electrical device can be used safely.

Although GB 16916 and GB 16917 series of standards applicable to the "combination in the socket of the RCD", but we know that due to the socket the particular use and mounting portion, the boundary fixed electrical installations, close to the front end of the electrical device taken through the electrical plug into the socket, these RCD requirements of different characteristics.

RCD socket usually installed by skilled or trained person can operate several times a day. Since it is considered the plug from the plug Block has been pulled provide effective isolation, it does not require isolation. Outlet end of the RCD is not permanently connected and long wire has Limit the number of electrical appliances to prove that it is reasonable to reduce the level of EMC. This standard includes the additional SRCD expected only for direct contact protection. Taking into account these unique characteristics, it is necessary to draw up a SRCD standards.

Household and similar uses or without overcurrent protection Residual current collector receptacle (SRCD)

1 Scope

This standard specifies the residual current collector comprises a function of detecting residual current, the residual current value and the residual operating current value is compared Function, and a function when the residual current exceeds this value, the disconnection of the protected circuit.

Maximum rated residual current is 30mA.

Does not exceed the rated voltage of 250V AC SRCD, which is the maximum rated current. 16A; not exceed the rated voltage of AC 130V the SRCD, its maximum rated current is 20A.

Remaining power for use with the present standard applies to the special assembly or the use of household and similar with or without ground contacts pole sockets for electrical flow (SRCD. residual current electrical socket). SRCD meet this standard by the phase - neutral power, phase - phase supply or Phase - the intermediate power supply conductor to ground.

SRCD only provides additional protection to the outlet end thereof. SRCD intended for use in the front stage it has to ensure fault protection (indirect access Contact protection) circuits.

NOTE 1: For example, fault protection (indirect contact) provided by the following means.

- TT system, using the former stage of GB 16916.1 and GB 16917.1 RCCB or RCBO compliance.
- TN system, the first stage may be employed overcurrent protection device.

SRCD can not provide isolation, it can not be used in IT systems.

Note 2: Isolation provides protection for the intended function or malfunction, or SRCD the IT system should be used and GB 16916.1 and GB 16917.1 GB 2099.1 as with the applicable standards.

Note 3: Technical requirements and test intended for use in IT systems SRCD under consideration.

SRCD distribution board should not be used, they are not a complete circuit of the terminal to protect the distribution circuit or complete. These products Subject GB prospective mounting the mounting box 17466.1; or in compliance with GB/T 19215.1 cable trunking and ducting systems; or in compliance with IEC 61534 Supply piping system; or near the outlet box and meet one of the above standard installation box. These products are not intended for use in accord GB 7251 GB 17466.24 or family housing.

RCD household and similar purposes not covered by this standard, including in GB 16916 or GB 16917. By a battery, or in addition to the power to other load circuits other than the power SRCD not included within the scope of this standard.

This standard is also applicable to SRCD with overload or over-current protection.

This standard is also applicable to the assembly of a residual current wiring electrical components, the residual current collector is only used for a single wire assembly adjacent Fixing electrical equipment (example. hand dryer, water coolers, etc.) to provide protection.

Note 4: SRCD designed to be operated by non-professional and does not require maintenance.

This standard applies to the technical requirements and environmental conditions of normal temperature. Used under more severe environmental conditions you may need to fill SRCD Charge technical requirements.

SRCD socket portion meets the requirements of GB 2099.1-2008.

2 Normative references

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

GB 2099.1 household and similar purposes plug and socket - Part 1. General requirements (GB 2099.1-2008, IEC 60884-1.

2006, E3.1, MOD)

GB/T 2423.4 electric and electronic products Environmental testing - Part 2. Test Db Test Method. Damp heat, cyclic (12h 12h cycle Ring) (GB/T 2423.4-2008, IEC 60068-2-30:2005, IDT) GB/T 2424.2 electric and electronic products environmental testing damp heat tests (GB/T 2424.2-2005, IEC 60068-3-4.

2001, IDT)