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**Safety requirements for temperature control systems for floor
heating for household and similar use**

家用和类似用途地暖设备用温度控制系统的安全要求

(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.

The standard proposed by China Electrical Equipment Industrial Association.

This standard by the National Standardization Technical Committee home automation controller (SAC/TC212).

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Introduction

Household and similar floor heating temperature control system is widely used in hot water or heat medium heating cables, electric film is applied Temperature of the radiation heating elements of the thermal engineering system for controlling an electric valve, electric valve, electric valve and heating equipment and other equipment to control and display System, is involved in product safety, energy conservation and environmental protection of critical infrastructure pieces for pressure, cold and corrosion and other areas have higher requirements.

This standard provides the corresponding safety and performance evaluation based on the temperature control system for the warm household and similar equipment, to the industry Designers and provides a reference design platform, the safety design of the end product is more standardized.

Household and similar floor heating temperature Safety requirements for control systems

1 Scope

This standard specifies the safety requirements of mechanical, electronic and similar household apparatus to warm to a temperature control system. This standard contains Requirements for a temperature control system controls the warm interior of the room, and also includes pipeline pumps, water heaters, central air conditioning system and building automation systems, etc.

Matching requirements warm temperature control system used, further comprising

temperature control system is required to warm with remote control and intelligent control functions. this Standard does not include requirements for warm radiating portion.

This standard applies to not more than the rated voltage 690V, rated current not exceeding 63A, for converting electrical energy into heat in the room (often called power Warm) or by thermal diffusion of heat a fluid medium (often referred to warm water), the temperature control system requires warm single or dual temperature control.

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/T 2423.1 electric and electronic products Environmental testing - Part 2. Test methods Test A. Cold GB/T 2423.2 electric and electronic products Environmental testing - Part 2. Test Test Method B. High Temperature GB/T 2423.3 electric and electronic products environmental testing - Part 2. Test Method Test Cab. Damp heat, GB/T 2423.22 Environmental testing for electric and electronic products - Part 2. Test Test Method N. temperature GB 4208 shell protection (IP code) GB 4343.1-2009 electromagnetic appliances, electric tools and similar apparatus compatible Part 1. emission GB 4343.2-2009 household appliances, electric tools and similar apparatus electromagnetic compatibility requirements - Part 2. Immunity GB 14536.1-2008 household and similar use automatic controller Part 1. General Requirements GB 14536.10-2008 Particular requirements for household and similar use automatic control temperature sensing controls Protection against electric shock IEC 60536 electrical and electronic sorting equipment (Classification of electrical and electronic equipment with regard to protection against electric shock)

3 Terms and Definitions

The following terms and definitions apply to this document.

Warm floorheating

Electricity or hot water as heat medium or heat source, the heating member tube or the like electric heating device embedded in the ground in the building, a heat-conducting Floor heating mode, the heat exchange surface of the radiation and convection heat of the indoor heating mode.

Water to warm water floorheating Also known as the low temperature hot water floor radiant heating. Hot water temperature is not higher than 60 °C of heating medium in the heating pipe of the floor heating circulating Heating mode.

Electricity to warm electrical floorheating Use energy directly into electrical energy, electrical

heating member is laid under the floor, the entire ground-based heat radiation and warm to the room heating mode.

Note: electric floor heating, the heat generating element, the temperature control system consists of a core part of the power supply.

The temperature control system Medium temperature or a portion of the wall temperature or environmental control system to ensure a space (floor heating) in a predetermined range, to meet UN Room or other space regions required thermal regulation device sets.

Note: including thermostat, temperature limiter, the temperature sensor. The temperature control system wiring schematic Appendix A.

Thermostat A cyclical temperature sensitive controller that the temperature was maintained between two particular values under normal operating conditions. And where can with means to be set by the user.

Room thermostat Independently mounted or built-in type for controlling the temperature of the living space thermostat.

Temperature limiter A temperature-sensitive control that causes the temperature under normal operating conditions is kept below a certain value. And wherein there may be from the use of Performed by means of setting.

Set temperature settingtemperature Temperature control system for obtaining a temperature over the set temperature value.

Frost protection temperature Frost protection thermostat having a temperature set value control mode in antifreeze.

3.10

Deviation control switch controlswitchbias when the temperature control system is set to a certain temperature, maximum temperature or minimum temperature and when the set floor heating system output excitation Temperature the absolute value of the difference value.

3.11

Periods feature timesettingfunction Automatically operating thermostat set temperature corresponding to the time period set in advance.

3.12

Electric heating equipment heatingconductor in the heating for the purpose of heat after the power cable can.

3.13

Key lock function keylockedfunction to prevent unauthorized persons or children, by mistake, the wrong press is free to modify, you can lock the keys by the operation of the