

ICS 29.120.70

CCS L 25



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

GB/T 36640-2018

Solid-state relay

Issued on: September 17, 2018

Implemented on: April 1, 2019

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

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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 translation method equivalent to IEC 62314.2006 "Solid Relay".

The documents of our country that have a consistent correspondence with the international documents referenced in this standard are as follows.

GB/T 2423.1-2008 Environmental testing of electric and electronic products - Part 2. Test methods Test A. Low temperature

(IEC 60068-2-1..2007, IDT)

--- GB/T 2423.2-2008 Environmental testing of electrical and electronic products - Part 2. Test methods Test B. High temperature

(IEC 60068-2-2.2007, IDT)

--- GB/T 2423.3-2016 Environmental testing Part 2. Test methods Test Cab. constant damp heat test (IEC 60068-

2-78.2012, IDT)

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

2009, IDT)

--- GB/T 5169.10-2017 Electrical and electronic products - Fire hazard testing - Part 10. Glowing wire/hot wire basic test method

Glow wire device and general test method (IEC 60695-2-10.2013, IDT)

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

Straight flame test method (IEC 60695-11-10.2013, IDT)

--- GB/T 16935.1-2008 Insulation of equipment in low-voltage systems - Part 1. Principles, requirements and tests

(IEC 60664-1.2007, IDT)

--- GB/T 16935.3-2016 Insulation of equipment in low-voltage systems - Part 3. s.

Pollution protection (IEC 60664-3.2010, IDT)

---GB/T 17196-2017 Safety requirements for flat quick-connect terminals for connecting copper wires to connecting devices (IEC 61210.

2010, MOD)

This standard has made the following editorial changes.

--- Edited changes to the definition of the term "electrical relay".

1 Scope

This standard applies to solid state relays. Solid state relays are special types of electrical relays with or without a single step function

As an electrical control, the state of its output circuit is changed, from the off state to the on state, and vice versa. The standard applicable to this standard

Body relay, its output is AC, the current is not more than 160A, and the rated voltage is not more than 750V.

Note. Solid state relays with DC output circuits are under consideration.

The solid state relays covered by this standard are intended to be assembled for use in other products or equipment. Therefore, it is considered that the solid state relay can be independently

Components used. This standard specifies the basic requirements for the safety and function of solid state relays.

Solid state relays assembled in products or equipment shall comply with the applicable product and/or equipment standards that meet their requirements for use. under

The column is an example of its application.

- General industrial equipment;
- Electrical facilities;
- Motor;
- Electric appliances;
- Office communication;
- Building automation and environmental control;
- Automation and production process control;
- Electrical installation engineering;
- Medical Engineering;
- telecommunications;
- Traffic Engineering;
- Transportation engineering;
- Lighting control.

Solid relays are components rather than stand-alone devices that do not directly perform the functions of a device. Therefore, this standard does not include

Electromagnetic compatibility (EMC) requirements.

Note. This content complies with the requirements of the European EMC Directive.

If the increased requirements are specified due to the application of solid relays, such as electromagnetic compatibility, overcurrent protection, etc., the corresponding IEC standard shall be

The solid state relay is evaluated.

Solid-state switching devices of monolithic integrated structures that fall within the scope of IEC Section 47E Technical Committee are not included in this standard.

IEC 60947 "Low-voltage switchgear and control equipment" developed by IEC Section 17B Technical Committee is not included in this standard.

Semiconductor control devices and contactors.

The qualification test is used to verify whether the solid state relay meets the requirements of this standard.

The purpose of this standard is to specify the following.

- Characteristics of solid relays;
- Solid relays should meet the following requirements.
 - a) work and operating status;
 - b) dielectric insulation properties;
 - c) the degree of protection provided by its outer casing, where applicable;
- Verification inspections that have met the requirements and the test methods used;
- Required with the solid relay or the information given in the manufacturer's documentation.

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 2423.28-2005 Environmental testing of electrical and electronic products - Part 2. Test methods Test T. Soldering (IEC 60068-

2-20. 1979, IDT)

GB/T 2900.63-2003 Electrotechnical terminology basic relay (IEC 60050-444.2002, IDT)

GB/T 19405.1-2003 Surface Mounting Techniques Part 1. Standard Methods for Surface Mount Components (SMDS)

(IEC 61760-1.1998, IDT)

IEC 60038.1983 IEC standard voltages (IEC standardvoltages)