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

GB/T 14048.17-2008

**Low - Voltage switchgear and controlgear - Part 5 - 4 : Control
circuit devices and switching elements - Method of assessing
the performance of low - energy contacts - Special tes**

低压开关设备和控制设备 第5-4部分：控制电路电器和开关元件 小容量触头的性能
评定方法 特殊试验

(English Translation)

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Foreword

"Low-voltage switchgear and control equipment" currently consists of the following 18 sections.

- GB 14048.1 low-voltage switchgear and control equipment Part 1. General;
- GB 14048.2 low-voltage switchgear and control equipment Part 2. Circuit Breaker;
- GB 14048.3 low-voltage switchgear and control equipment - Part 3. Switches, disconnectors, switch and fuse combination Appliances;
- GB 14048.4 low-voltage switchgear and control equipment, electromechanical contactors and motor starters;
- GB 14048.5 low-voltage switchgear and control equipment Part 5-1. Control circuit devices and switching elements - Electromechanical control Electrical circuit;
- GB 14048.6 low-voltage switchgear and control equipment Part 4-2. Contactors and motor starters - AC semiconductor Motor controllers and starters (including soft starter);
- GB/T 14048.7 low-voltage switchgear and control equipment Auxiliary equipment Section 1. Terminal blocks for copper conductors;
- GB/T 14048.8 low-voltage switchgear and control equipment Ancillary equipment

Section 2. Protective conductor terminal blocks for copper conductors Sub-row;

- GB 14048.9 low-voltage switchgear and control equipment Part 6-2. Multiple function equipment (equipment) control and protection switch Electric (equipment) (CPS);
- GB/T 14048.10 Low-voltage switchgear and control equipment, control circuit devices and switching elements - Part 2. close switch;
- GB/T 14048.11 voltage switchgear and control equipment Part 6. Multiple function equipment - Section 1. Automatic transfer switch Appliances;
- GB/T 14048.12 voltage switchgear and control equipment Part 4-3. Contactors and motor starters, non-powered LOADED AC semiconductor controllers and contactors;
- GB/T 14048.13 voltage switchgear and control equipment Part 5-3. Control circuit devices and switching elements in it Proximity Switch (PDF) required to have under fault conditions to determine the function;
- GB/T 14048.14 voltage switchgear and control equipment Part 5-5. Control circuit devices and switching elements having Mechanical latching function electrical emergency braking device;
- GB/T 14048.15 voltage switchgear and control equipment Part 5-6. Control circuit devices and switching elements proximity Sensors and switching amplifiers DC Interface (NAMUR);
- GB/T 14048.16 voltage switchgear and control equipment - Part 8. rotary motor control with built - in thermal protection (PTC) Unit;
- GB/T 14048.17 voltage switchgear and control equipment Part 5-4. Control circuit devices and switching elements of small capacity Special tests evaluating the performance of the amount of contact;
- GB/T 14048.18 voltage switchgear and control equipment Part 7-3. Ancillary fuse terminal blocks Safety requirements.

This part is the "low-voltage switchgear and control equipment" in Section 17.

This section identical with IEC 60947-5-4:2002 "low-voltage switchgear and control equipment Part 5-4. Control circuit devices and open Small-capacity switching element contacts assessing the performance of special test "(in English).

This section of Appendix A normative appendix.

This part is proposed by the China Electrical Equipment Industrial Association.

GB/T 14048.17-2008/IEC 60947-5-4:2002 the low-voltage electrical part by the National Standardization Technical Committee (SAC/TC189) centralized.

This section is responsible for drafting unit. Shanghai Electrical Apparatus Research

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1 Scope and purpose

This section applies to independent contacts using categories under consideration for use as a control circuit switching elements.

This section considers the rated voltage are two cases.

- a) possible contacts for switching loads with electro-erosion, such as a programmable controller input, rated voltage is greater than or equal to 10V (Typically 24V);
- b) negligible electric corrosion situations, such as electronic circuits, the rated voltage is less than 10V (typically 5V).

This section does not apply to a very small capacity measurements used contacts, such as sensors or thermocouple system.

The purpose of this section is to identify a small-capacity contact performance assessment methods, give the following information.

---definition;

General principles --- test method, the test is used to monitor and record each operation contact action;

--- Conventional test equipment defined functional basis;

--- Test preferred value;

--- Specific occasion (such as a PC input switching) the special contact with the test conditions;

--- Test report the information to be given;

Explanations and justifications --- test results.

2 Normative references

The following documents contain provisions which, through reference in this text, constitute provisions of this part. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this section, however, encourage the parties to this part of the research agreement Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 2421-1999 Environmental testing for electric and electronic products - Part 1. General (idt IEC 60068-1. 1988) GB/T 2423 (all parts), Environmental testing for electric and electronic products Part 2. Test methods (IEC 60068-2 (all parts)) GB/T 5080.6-1996 Equipment reliability testing constant failure rate assumption validation (idt IEC 60605-6.

1989) GB 14048.1-2006 Low-voltage switchgear and control equipment Part 1. General (IEC 60947-1:2001, MOD) GB 14048.5-2001 Low-voltage switchgear and control equipment Part 5-1. Control circuit devices and switching elements - Electromechanical Control circuit devices (eqv IEC 60947-5-1:1997) GB/T 15969.2-2008 Programmable Controllers Part 2. Equipment requirements and tests (IEC 61131-2:2007, IDT)

3.1 Terms and Definitions

The following terms and definitions apply to this section.

In this section, as applicable, the term "time interval" can be expressed as "operating cycles." 3.1.1

Note 1: generally assumed as a starting point in the time interval, the product is in a state to perform a required function.

GB/T 14048.17-2008/IEC 60947-5-4:2002