

ICS 29.120.50

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

GB/T 10963.2-2020

Replacing GB/T 10963.2-2008

**Electrical accessories. Circuit-breakers for overcurrent
protection for household and similar installations - Part 2:
Circuit-breakers for AC and DC operation**

Issued on: November 19, 2020

Implemented on: June 1, 2021

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

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Foreword

GB/T 10963 "Overcurrent protective circuit breakers for electrical accessories household and similar places" is divided into the following three parts.

- Part 1.Circuit breakers for AC;
- Part 2.Circuit breakers for AC and DC;
- Part 3.Circuit breakers for DC.

This part is Part 2 of GB/T 10963.

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

This part replaces GB/T 10963.2-2008 "Overcurrent protective circuit breakers for household and similar places Part 2.Used for AC and

Compared with GB/T 10963.2-2008, the main technical changes are as follows.

- Table 1 adds the circuit type of DC circuit breaker power supply;
- 9.2 The ripple or instantaneous value requirements of DC voltage (current) are added;
- In 9.10.3, for circuit breakers of different trip types, the upper limit value passes current to each pole, and the lower limit value passes current to all poles in series;
- Added 9.12.11.4.4 "Single-pole rated making and breaking capacity performance of two-pole circuit breakers";

---In appendix C, 9.15 abnormal heat resistance and flame resistance test are independent of procedure A2, according to the latest 9.7 update test procedure B, add C3

In the small DC current test of 150A and below, the single-pole rated making and breaking capacity performance of the E3 two-pole circuit breaker is increased.

This part uses the redrafting law to amend and adopt IEC 60898-2:2016 "Electrical accessories for household and similar places using overcurrent protection

Circuit Breaker Part 2: Circuit Breakers for AC and DC".

The technical differences between this part and IEC 60898-2:2016 and the reasons are as follows.

---In order to be more in line with the meaning of the original text and consistent with other parts of this series, in the test a row of Table 7, " $t \geq 1h$ " and " $t \geq 2h$ "

Amend to " $t \leq 1h$ " and " $t \leq 2h$ ";

---In order to verify the safety of the product more comprehensively, in "9.11.2", "9.12.11.2.3", "9.12.11.2.4", "9.12.11.3", "9.12.11.4.2" and

In "9.12.11.4.3", the test requirements for wiring in the opposite direction are added for circuit breakers without specified polarity;

---9.12.11.2.4 In order to avoid ambiguity during the test, add "each protection pole of the circuit breaker should be connected to the wiring mode shown in Figure 3

Test in the circuit. Adjust the time constant to a value corresponding to the specified time constant".

This part was proposed by China Electrical Equipment Industry Association.

This part is under the jurisdiction of the National Low Voltage Apparatus Standardization Technical Committee (SAC/TC189).

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1 Scope

Except for the following, Chapter 1 of GB/T 10963.1-2020 is applicable.

Add at the end of paragraph 1.

This part of GB/T 10963 specifies supplementary technical requirements applicable to single-pole and two-pole circuit breakers operating in DC circuits. single

The rated DC voltage of the pole circuit breaker does not exceed 220V, the two poles does not exceed 440V, the rated current does not exceed 125A, and the rated DC short-circuit capacity does not exceed

More than 10000A.

Note. This section applies to circuit breakers that can make and break AC current and can make and break DC current.

Delete paragraphs 11 and 12.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article

Pieces. For undated references, the latest version (including all amendments) applies to this document.

Chapter 2 of GB/T 10963.1-2020 is applicable, adding the following content.

GB/T 10963.1-2020 Electrical accessories for household and similar places with overcurrent protective circuit breakers Part 1.Used for AC

Circuit breaker (IEC 60898-1.2015, IDT)

3 Terms and definitions

Chapter 3 of GB/T 10963.1-2020 is applicable, but amended as follows.

increase.

3.5.10.3

Timeconstant

Expect the time when the DC current rises to 0.63 times the maximum peak current.

Note. $T=L/R$, the unit is milliseconds (ms).

4 categories

Chapter 4 of GB/T 10963.1-2020 is applicable, but amended as follows.

4.2 According to the number of poles

replace.

- Single pole circuit breaker;
- Two pole circuit breaker with two protection poles.

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