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

GB/T 29489-2013

**Inductive load switching for high-voltage alternating current
switchgear and controlgear**

高压交流开关设备和控制设备的感性负载开合

(English Translation)

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Foreword

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

This standard uses redrafted law revision using IEC 62271-110:2009 "high-voltage switchgear and control equipment Part 110. sense Load opening and closing. " this standard and IEC 62271-110:2009 technical differences and their reasons are as follows.

--- In order to comply with the actual situation of China's power grid, in the "1.1" and will

"run frequency 50Hz, 60Hz, with voltage 1000V on "to" run frequency 50Hz, voltage 3kV and above ";

--- In order to maintain the integrity of the standard structure, in Chapter 4 increase in the content of 4.111 to 4.2, 4.4 to 4.104,4.109;

--- In order to maintain the integrity of the standard structure, in Chapter 6 increase in the content of 6.109 to 6.113;

--- Increased in line with China's actual situation of the grid in Table 4 7.2kV, 31.5kV, 40.5kV and 126kV related parameter;

--- Increased in line with China's actual situation of the 126kV grid in Table 5, the relevant parameters of 252kV and 363kV;

--- In order to meet the actual situation of China's power grid, modification of the relevant standard values \u200b\u200b of rated voltage;

--- According to the actual situation of China's power grid will be "72.5kV or less" to "72.5kV and below", "72.5kV and above" to "72.5kV above." the standard proposed by China Electrical Equipment Industrial Association.

This standard by the national high-voltage switch equipment Standardization Technical Committee (SAC/TC65) centralized.

This standard was drafted. Xi'an High Voltage Apparatus Research Institute Co., Ltd., China Electric Power Research Institute, Institute of High Voltage, Hebei Electric Power Research Institute, high-voltage electrical machinery industry product quality inspection center (Shenyang), New Northeast Electric (Shenyang) High Voltage Switchgear Co., Ltd., the high level Group Co., Ltd. Shandong Taikai high-voltage switch, Chint Electric Co., Ltd. Changzhou Pacific Power Equipment (Group) Co., the company, The Institute of Electrical Science, Alstom Grid Technology Center Co., Ltd., Suzhou Alstom high-voltage electrical switch Ltd., Shi Schneider Electric (China) Co., Ltd., ABB Xiamen Switchgear Co. Ltd., ABB (China) Co., Ltd. Pressure Technology Center.

1.1 Scope

This standard applies to indoor or outdoor installation, the operating frequency of 50Hz, and above 3000V voltage systems and are used for inductive Load current switching of high voltage AC switchgear and control equipment.

Note 1: This standard mainly has the inductive load open high voltage AC circuit breaker binding capacity were prepared.

Note 2: This standard also applies to a circuit breaker GB 1984-2003 for the opening and closing motor current and high voltage shunt reactor current for GB/T 14808 is used to cover the opening and closing of the high-pressure high-voltage current of the motor contactor.

This standard does not consider the opening and closing load transformer, ie breaking transformer magnetizing current. The following reasons.

a) due to the nonlinear transformer core in the laboratory can not co-linear element off the transformer magnetizing current to establish the correct mode type. Using available transformer (such as test transformer) test conducted only test transformer effective and do not represent the Other transformer;

b) As the IEC 62271-306 are described, generally characteristic of the way compared to other inductive current switching mode less harsh. test Into account the resurgence of the resonant frequency circuit breaker and transformer windings may arise, it should be noted that the approach may within the transformer windings Serious over-voltage.

Near the fault zone, step-current closing and breaking and capacitive current switching does not apply to open merger-linked reactors and motor circuit breaker Device. Thus, these methods are not included in this standard.

Unless otherwise specified, GB 1984-2003 1.1 apply.

1.2 Normative references

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

GB 1984-2003 high voltage AC circuit breaker (IEC 62271-100:2001, MOD) GB/T 2900.20-1994 Electrotechnical terminology voltage switchgear (IEC 60050-411. 1984, NEQ) GB/T 11022-2011 high-voltage switchgear and control equipment standard common technical requirements (IEC 62271-1:2008, MOD) GB/T 14808 AC high voltage contactors and contactor-based motor starter (GB/T 14808-2001, IEC 60470.

1999, EQV)

IEC 62271-306 high voltage switchgear and control equipment Part 306. IEC 62271-1, IEC 62271-100 and other post CIRCUIT BREAKER related application guidelines (17A/936/CD) IEC 62271-310 high voltage switchgear and control equipment Part 310. Rated voltage of 72.5kV and above electrical circuit breaker life Life test

2 Normal and special service conditions

GB/T 11022-2011 Chapter 2 apply.