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

GB/T 28810-2012

**High-voltage switchgear and controlgear -- The use of
electronic and associated technologies in auxiliary equipment
of switchgear and controlgear**

高压开关设备和控制设备 电子及其相关技术在开关设备和控制设备的辅助设备中的
应用

(English Translation)

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Table of Contents

- Preface
- 1 Scope
- 2 Normative references
- 3 Terms and definitions
- 4 Design and Structure
 - 4.1 Overview
 - 4.2 System structure
 - 4.3 Transmitters and actuators

Foreword

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

This revised standard adopts IEC 62063:1999 "high-voltage switchgear and control equipment, electronic and related technologies in the switchgear and control Auxiliary equipment manufacturing equipment in the application. " this standard and IEC 62063:1999 are the main differences.

--- The IEC 62063:1999 in Part 4 "switch and control equipment, application trends" as the appendix;

--- The IEC 62063:1999 in Part 5, "Technology Trends" to "design and structure";

--- Added "if necessary, intelligent electronic devices in switchgear and high-voltage switching devices together with associated test";

--- Added "interface standard high-voltage switchgear and control equipment, see GB/T 28811 (IEC 62271-3)";

--- Ideal switching device to increase the basic functions of an example. Action counters and SF6 density monitoring;

--- Non-ideal switching device to remove the basic functions Example. Action counters and SF6 gas density monitoring the pole creepage distance more Instead insulated;

--- Remove the Fieldbus constraints;

--- Maintenance of trend removed. additional factors on financial constraints and lack of expertise of personnel;

--- In industrial applications section of the transmitter clear Transmitters for pressure and

temperature in parentheses hydraulic fluid to the hydraulic mechanism;

--- Delete content on the 7.2 "TC57 has begun drafting criteria for the interface areas".

The standard proposed by China Electrical Equipment Industrial Association.

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

1.1 Scope and objectives

This standard provides for high-voltage switchgear and control equipment relevant national standards to introduce advanced technology, the basic guidelines. These requirements Advanced technology allows users to switch the device to obtain the maximum benefits from the electronic device.

This standard defines the technology allows all associated with the switching and control equipment, auxiliary equipment or part of an electronic device. The standard Registration introduced new provisions is to cover these technologies. It also defines the functions should ensure different levels, and the corresponding definition of Article Member, it will.

--- To provide users with the selected technology-independent operational safety assurance. This requires, for example, in the case of the transmitter case, there should be Involving accuracy, response time terms, testability and so on.

--- Allow the manufacturers through their own unique features technical assurance requirements. You can choose to use or not to use optical fiber, digital Connection or traditional connection communication networks.

--- If necessary, intelligent electronic devices in switchgear and high-voltage switching devices together with associated test.

--- Interface standard voltage switchgear and control equipment, see GB/T 28811.

1.2 New concept

Switching equipment from two aspects to consider.

--- A device that is part of the high-voltage switching equipment for high voltage insulation, the carrier and the opening and closing;

--- Auxiliary equipment that is part of the low-voltage switchgear, used to control and monitor the main element.

Using conventional techniques, usually two parts by a switching device provided by the manufacturer, which is the usual boundaries of the terminal block.

The use of electronic technology to cause significant changes in the following areas.

--- Position of the auxiliary equipment is not necessarily limited to the corresponding switch devices, and can be placed in any location, local control from the switching device Substation cabinet to the control room. A demarcation devices and auxiliary equipment is no longer a position close to the local control cabinet physically.

Different elements --- auxiliary equipment can be provided by a different manufacturer.

--- Use of electronic technology of distributed architecture, components and microprocessor-based digital communications introduces a new concept in terms of credibility.

This will lead to changes in maintenance procedures switching device and the user operates.

Then, in case of failure inside the substation, there have been division of responsibilities. The standard recommendation of the relevant criteria repair Change to clarify a responsibility for equipment and auxiliary equipment among manufacturers.

1.3 This standard configuration

This standard consists of three parts.

Part 1 (Chapters 1 - 3) tells the scope of this standard, the reference standard definitions and terminology; (Chapter 4) Part 2 focuses on the system System design, installation, testing and other aspects of technology and results; Part 3 (Chapter 5, Chapter 6) recommended use of new technologies in a number of substations Standards and recommendations for appropriate changes to adapt to the new situation.