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Technical code of cabinet (panel) for protection and
automation equipments of electric power system

电力系统继电保护及自动化设备柜（屏）

工程技术规范

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**Technical code of cabinet (panel) for protection and
automation equipments of electric power system**

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Announcement about the publishment of national standards *Technical Code of Cabinet (Panel) for Protection and Automation Equipments of Electric Power System*

Hereby approves the *Technical Code of Cabinet (Panel) for Protection and Automation Equipments of Electric Power System* as the national standard, numbered GB/T50479-2011, being implemented since June 1, 2012.

The Code is published and distributed by China Planning Press, which was organized by Standard Rating Research Institute of our department.

**Ministry of Housing and Urban-rural
Development of the People's Republic of China**

July 26, 2012

Foreword

This specification is prepared according to the requirements of the former *Notice on Printing and Distributing the Preparation and Modification (The Second Batch) of the Engineering Construction Standards in 2005* (JBH [2005] 124) of the Ministry of Construction; it is prepared jointly by Nanjing Automation Co., Ltd of State power, State Grid Electric Power Research Institute, Nanjing NR Electric Co., Ltd, Beijing Sifang Automation Co., Ltd and China Electric Power Research Institute.

During the preparation of this specification, the drafting group has investigated and researched the production and use of the protective relaying and automation equipment cabinet (panel) of our nation's electric system; they have compared it with the relevant international standard and foreign technical standards; they have discussed, modified and perfected it on basis of soliciting opinions from all sides; finally they made the specification being checked and approved.

This specification is divided into four chapters. It's main content includes: General Provisions, General Requirements, Assembly and Installations, Project Handover and Acceptance

This specification shall be managed and explained by Ministry Of Housing and Urban-rural; the China Electric Power Enterprise Federation Standardization Center shall be in charge of the current management; the Nanjing Automation co., LTD of State Power shall be in charge of the interpretation of the specific technical content. During the implementation of this specification, each unit shall seriously sum up experience and accumulate data on basis of the engineering practice; each organization shall feedback the opinions and suggestions to Nanjing Automation Co., Ltd. of State Power(address: No.38, Xinmofan road, Nanjing, Jiangsu, post code 210003) for the later reference and modification.

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1 General provisions

1.0.1 In order to unify the technical management and the requirements of design, installation, debugging and acceptance of power system relay protection and automation equipment cabinet (panel) (hereinafter referred to as cabinet (panel)), and to improve the quality of installation, debugging and running level of relay protection and automation equipment cabinet (panel), hereby we prepare this specification.

1.0.2 This specification applies to the model selection, installation, testing and acceptance of power system relay protection and automation equipments cabinet (panel).

1.0.3 Except for complying with this specification, the model selection, installation, testing and acceptance of power system relay protection and automation equipments cabinet (panel) should also be consistent with the specifications of the national existing relevant standard.

2 General requirement

2.1 Environmental condition

2.1.1 The normal working atmospheric conditions of the cabinet (panel) shall meet the following requirements:

1 The environmental temperature shall be compliant with the following regulations:

1) Indoor: -5 °C - +40 °C or -10 °C - +55 °C;

2) Outdoor: -25 °C - +55 °C;

2 Relative humidity: 5% - 95%;

3 Atmospheric pressure: 70kPa - 101kPa.

2.1.2 Mechanical vibration of the installation site should not exceed level 1 severity provisioned by the current national standard *Electrical Relay Part 21: Part 1 of Vibration, Impact, Collision and Seismic Tests Measuring the Relays and Protection Devices: Severity of the Vibration Test (Sine)* GB/T11287, and it shall not exceed the impact and collision of the level 1 severity which is provisioned by the current national standard *Shock and Collision Test Measuring the Relays and Protection Devices* GB/T14537 either.

2.1.3 The ground resistance of the installation site shall comply with the current national standard *Electronic Computer Site General Specification* GB/T2887; also, it shall comply with current industry standards *Electronic Equipment Lightning Protection Technical Guidance* DL/T381.

2.1.4 The installation site should meet the Class B safety requirements of the current national standard *Safety Requirements for Computing Station Field* GB9361.

2.2 Electrical rating

2.2.1 AC circuit rating can be selected from the following values:

1 AC voltage can be $100/\sqrt{3}$ V, 100V;

2 AC current can be 1A, 5A;

3 Rated frequency can be 50Hz.

2.2.2 Working power rating can be selected from the following values:

1 DC supply voltage can be 48V, 110V and 220V;

2 AC supply voltage can be 220V.

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