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

GB/T 2900.16-2025

Replacing GB/T 2900.16-1996

Electrotechnical terminology - Power capacitors

电工术语 电力电容器

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. This document is Part 16 of the "Electrical Engineering Terminology". The "Electrical Engineering Terminology" has been published in over 100 parts; the "Electrical Equipment" category includes.

---Electrical engineering terminology. carbon dioxide (GB/T 2900.7);

---Electrical engineering terminology. Insulator (GB/T 2900.8);

---Electrical terminology. Cables (GB/T 2900.10);

---Electrical engineering terminology. Power capacitors (GB/T 2900.16);

---Electrical terminology for measuring relays and protective devices (GB/T 2900.17);

---Electrical terminology. Low-voltage electrical appliances (GB/T 2900.18);

---Electrical engineering terminology. High-voltage switchgear and controlgear (GB/T 2900.20);

---Electrical engineering terminology. Rotating electrical machines (GB/T 2900.25);

- Electrical engineering terminology. Small power electric motor (GB/T 2900.27);
- Electrical engineering terminology. Explosive atmosphere (GB/T 2900.35);
- Electrical Terminology. Wires and Cables, Specialized Equipment (GB/T 2900.40);
- Electrical engineering terminology. primary cells and storage batteries (GB/T 2900.41);

1 Scope

GB/T 2900.16-2025 is the Chinese national standard covering the vocabulary of power capacitors - the shunt and series units, the rated output and the capacitance tolerance, the internal fuses and the discharge device, the self-healing film and the losses, defined for the whole family of standards that use them. Part 16 of the electrotechnical terminology series. It replaces GB/T 2900.16-1996, a terminology twenty-nine years old. Issued on 31 October 2025, it has been in force since 31 October 2025, replacing GB/T 2900.16-1996.

This document defines the basic terminology for power capacitors. This document applies to all areas of power capacitor technology.

2 Normative references

This document has no normative references.

3.1 Classification by Use

3.1.1 capacitor A device with two terminals whose characteristics are essentially characterized by capacitance.

Note. In this document, the terms "capacitor unit", "capacitor bank", "capacitor device" or different categories of capacitors are used when it is not necessary to emphasize them.

3.1.2 power capacitor Capacitors used in power systems.

3.1.3 parallel capacitor A capacitor connected in parallel in a power system, primarily used to compensate for inductive reactive power to improve the power factor.

3.1.4 series capacitor A capacitor connected in series in a power line, primarily used to compensate for the inductive reactance of the power line.

3.1.5 It is connected to the auxiliary winding of the motor to change the phase of the motor current, and is disconnected from the circuit once the motor is running normally. Power capacitors.

3.1.6 A power capacitor connected to the auxiliary winding of a motor to help start the motor and improve torque during operation.

Note. The running capacitor is typically permanently connected to the motor windings and

remains in the circuit throughout the motor's operation. During startup, if the motor...
Connecting the running capacitor and the starting capacitor in parallel will help start the motor.

3.1.7 filter capacitor Capacitors used in conjunction with other components are primarily used to reduce system harmonics.

5.12 Versions 5.13, 7.6, 7.7, 7.8, 7.9, 7.10, 7.11, 7.12, 7.13, 7.18, 7.21, and

7.24 of the.1996 edition; versions 2.1.1, 2.1.5, and

2.1.6 of the.1996 edition. 2.1.9, 2.1.10, 2.1.14, 2.2.4, 2.2.10, 2.2.11, 2.2.12, 2.2.15, 2.2.17, 2.3.9, 2.3.15, 2.3.30, 2.3.35 3.1.1, 3.1.6, 3.1.7, 3.1.15, 4.9, 4.10, 4.11, 4.12, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.18 (6.21, 6.22)

b) Added DC filter capacitors, AC filter capacitors, neutral bus impulse capacitors, transient recovery voltage capacitors, and TRV capacitors. Capacitors, power capacitors for induction heating devices, protective capacitors, AC capacitors, damping capacitors, absorption capacitors, supercapacitors Capacitors, electrochemical capacitors, DC-supported capacitors, self-healing metallized dielectric capacitors, box-type capacitors, capacitor towers, Bipolar capacitors, membrane capacitors, double-layer capacitors, hybrid supercapacitors, aqueous supercapacitors, organic supercapacitors Level capacitor, model capacitor, non-solid electrolyte aluminum electrolytic capacitor, steady state, on-column capacitance compensation, three-phase symmetry compensation. Phase compensation, mass power density, ripple voltage, reverse voltage (for polarized capacitors only), rated ripple current, minimum storage temperature Temperature, maximum storage temperature, flame retardancy, spontaneous combustion, non-cyclic impulse voltage, equivalent series inductance, thermal balance, thermal time constant, noise Sound, sound pressure, sound power, sound pressure level, background noise, synthetic sound pressure level, swing current, stored energy, rated energy, mass energy density Temperature, volumetric energy density, voltage holding capability, overpressure detector, overheat isolator, pressure relief structure, voltage equalizing resistor, outgoing bushing, Metallized isolation design, special non-metallized isolation design, internal casing, vacuum casting, edge reinforcement, thermal polymerization, partial discharge testing, sealing Sexual testing, aging testing, destructive testing, overvoltage protection (capacitor devices), overcurrent protection, harmonic protection, back-to-back switching. (See 3.1.8~3.1.10, 3.1.15, 3.1.16, 3.1.18, 3.1.20, 3.1.27~3.1.29, 3.2.12, 3.2.19~3.2.28, 3.3.15) 3.3.39~3.3.41, 3.3.43~3.3.66, 4.1.7, 4.1.8, 4.1.19~4.1.23, 4.2.5, 5.9, 5.14, 5.15, 6.13~6.16 (July 22, 23, 26, 31). Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the National Technical Committee on Standardization of Electrical Terminology (SAC/TC232). This document was prepared by the National Technical Committee on Standardization of Electrical Terminology (SAC/TC232) and the National Technical

Committee on Standardization of Power Capacitors. (SAC/TC45) are jointly under the jurisdiction of the State Administration of Taxation. This document was drafted by: Xi'an High Voltage Apparatus Research Institute Co., Ltd., and State Grid Heilongjiang Electric Power Research Institute. Institute, China Machinery Productivity Promotion Center Co., Ltd., Anhui Saif Electronics Co., Ltd., China Electric Power Research Institute Co., Ltd., Changxing Huaqiang Electric Subsidiary Co., Ltd., Delixi Electric Co., Ltd., Guangdong Jiewei Electronics Co., Ltd., Ningbo Hairong Electric Co., Ltd., Shengye Electric Co., Ltd. Limited Liability Company, Shenzhen Sanhe Electric Technology Co., Ltd., Wuxi Saijing Power Capacitor Co., Ltd., State Grid Zhejiang Electric Power Co., Ltd. Xing Power Supply Company, State Grid Anhui Electric Power Research Institute, Xi'an Hitachi Energy Power Capacitor Co., Ltd., China Machinery Research Institute Zhun Technology Research Institute (Beijing) Co., Ltd., Shaoxing Shangyu Power Capacitor Co., Ltd., Xi'an Xidian Power Capacitor Co., Ltd. Fengbin Electronic Technology Co., Ltd., Shenzhen Power Supply Bureau Co., Ltd., Zhejiang Chuangwei Electric Technology Co., Ltd., China Power Construction Group Chongqing Engineering Cheng Co., Ltd., Anhui Huwei New Energy Co., Ltd., the Fifth Research Institute of Electronics of the Ministry of Industry and Information Technology, and Aibo Baiyun Electric Technology (Yangzhou) Co., Ltd. Limited Company, Wuxi Chenrui New Energy Technology Co., Ltd., China Southern Power Grid Co., Ltd. Ultra-High Voltage Transmission Company Electric Power Research Institute, State Grid Electric Power Research Institute Wuhan NARI Co., Ltd., Kunshan Liantao Electronics Co., Ltd., Hubei Jinghao Electronics Technology Co., Ltd., China Electric Power Fujian Construction Group Engineering Co., Ltd., Hunan Aihua Group Co., Ltd., Xinxiang Wanxin Electric Co., Ltd., and Herong Electric Co., Ltd. The company, Xiamen Farad Electronics Co., Ltd., and Shide Electric Group Co., Ltd. This document was drafted by: He Manchao, Wang Lei, Li Jing, Peng Yanghan, Tang Zebo, Li Chaochao, Lei Xiaoyan, Tao Xiansheng, Huang Shunda, and Tong Kefeng. Du Baoyu, Lan Shaohan, Liu Shuiping, Guo Qingwen, Ren Chunyang, Jia Hua, Lü Tao, Lu Minglin, Xie Zhengtang, Chen Xiaoyu, Qu Limin, Qin Shaorui, Zhao Xin Liu Wanzhi, Chen Baifu, Song Yuchen, Fu Zhongxing, Chen Shang, Hu Jinchang, Cai Jun, He Yuping, Wang Runshen, Zhao Faqiang, Xu Huihong, Ye Jianhui, Cao Jishuang Yu Min, Wang Yuandong, Zhang Changhong, Liu Weikang, Liu Bo, Liu Nian, Zheng Tianyun, Lin Lida, Xie Chong, Ke Yun, Zhang Hailong, and Li Qinghua. The release history of this document and the document it replaces is as follows:

---First published in.1996 as GB/T 2900.16-1996;

---This is the first revision.

GB/T 2900 Electrical Engineering Terminology is divided into nine categories. (1) General concepts, (2) Materials, (3) Measurement and automatic control, (4) Electrical equipment, (5) Electricity Sub-equipment, (6) power generation, transmission and distribution, (7) telecommunications, (8) specific applications, (9) standardization and related activities. This document categorizes electrical equipment as Class IV and provides general, fundamental terminology for power capacitors. It can serve as a reference for the formulation and