



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

GB/T 2099.1-2021

**Plugs and socket-outlets for household and similar purposes -
Part 1: General requirements**

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Foreword

This document was drafted in accordance with the rules provided in GB/T 1.1-2020 Directives

for Standardization - Part 1.Rules for the Structure and Drafting of Standardizing Documents.

This document is Part 1 of GB/T 2099 Plugs and Socket-outlets for Household and Similar Purposes. GB/T 2099 has issued the following parts.

---Part 1.General Requirements;

---Part 2.Particular Requirements.

? particular requirements for socket-outlets for appliances;

? particular requirements for converts;

? particular requirements for switched socket-outlets without interlock for fixed

installations;

? particular requirements for switched socket-outlets with interlock for fixed

installations;

? particular requirements for fused plugs;

? particular requirements for cord extension sets;

? particular requirements for plugs and socket-outlets for SELV;

? particular requirements for socket-outlets for information.

This document serves as a replacement of GB/T 2099.1-2008 Plugs and Socket-outlets for Household and Similar Purposes - Part 1. General Requirements. In comparison with GB/T 2099.1-2008, apart from structural adjustments and editorial modifications, the main technical

changes are as follows.

--The ambient temperature of product use is modified (see Chapter 1; Chapter 1 of Version 2008);

---Some normative references are modified (see Chapter 2; Chapter 2 of Version 2008);

---The definitions of 3.1 plug, 3.2 socket-outlet, 3.4 portable socket-outlet, 3.16 screw-type terminal, 3.33 main part are modified; the definitions of 3.34 grommet, 3.35 entry membrane, 3.36 protecting membrane, 3.37 tool are added; in accordance with GB/T 2099.2-2012, the definition of 3.6 is modified (see Chapter 3; Chapter 3 of Version 2008);

---The torque applied to the fixing screws of terminals, covers and cover plates is added (see 5.2);

---The preferred combinations of types and ratings are modified; NOTE 1 is modified; NOTE 2 and NOTE 3 are added (see Table 1; Table 1 of Version 2008);

---6.3 of GB/T 2099.1-2008 is deleted (see 6.3 of Version 2008);

---The accessories classification in accordance with GB/T 4208-2017 is modified in 7.1.1 and 7.1.2 (see 7.1.1 and 7.1.2; 7.1.1 and 7.1.2 of Version 2008);

---The phrase "main part" is deleted from the NOTE in 7.2.4 (see 7.2.4 of Version 2008);

---The classification of plugs for Class 0 equipment is deleted (see 7.3 of Version 2008);

---The requirements for "symbols of neutral pole, earthed pole and live pole" are deleted;

the requirements for the degree of protection of fixed socket-outlets are added; the requirements of marking the serial No. of this Part are added (see 8.1 of Version 2008);

---The marking requirements that screwless terminals are only suitable for connecting rigid conductors are added (see 8.3);

---The marking requirements for products with an IP code are modified (see 8.6; 8.6 of Version 2008);

---The conditions for the visual inspection of the markings are added; the test method of rubbing the markings is modified (see 8.8);

---The expression "the existing plug of the present national system" is added; the requirements for plugs for Class 0 equipment are deleted (see 9.2);

---The first paragraph of 10.1 clarifies the requirements for fixed socket-outlets, plugs when engaged and portable socket-outlets; the description of checking the "partial engagement of the plug" is deleted from the second paragraph (see 10.1; 10.1 of Version 2008);

---The "base" is modified into "main part" (see 10.2, 13.7, 17.2.1, Chapter 24, 26.1 and Table 24; 10.2, 13.7, 17.2.1, Chapter 24, 26.1 and Table 24 of Version 2008);

---"metal cover and cover plate" is modified into "accessible metal part" (see 10.2.3; 10.2.1 and 10.2.2 of Version 2008);

---The test and inspection of 10.2 is added (see 10.4);

---The design requirements for the shutters are added; shutters shall be so designed that a plug is inserted with the same movement in a socket-outlet with shutters as in a socket-outlet without shutters (see 10.5);

---In accordance with the structural characteristics of Chinese socket-outlets, the test method is deleted (see 10.6 of Version 2008);

---The requirements for the protection against electric shock of socket-outlets with or without lid are clarified; the NOTE of socket-outlets without a shutter is added (see 10.7);

---The description of additional external earthing terminals for the fixed socket-outlets is deleted (see 11.2 of Version 2008);

---The current and type of accessories are modified (see Table 3; Table 3 of Version 2008);

- "during wire insertion" is deleted after the first dash of 12.3.7, and "during the connection" is added after the second dash (see 12.3.7 of Version 2008);
- The measurement cycle of voltage drop of screwless terminals is modified in 12.3.11 b) (see 12.3.11; 12.3.11 of Version 2008);
- The requirements for the parts of socket contact assemblies are added (see 13.1);
- The material and test requirements for the socket contact are added (see 13.2);
- The structural requirements for the socket-outlets are added, and the test method for the connection and / or disconnection device of the screwless terminals is added (see 13.4);
- The situation that drain holes and small gaps are neglected provided they do not compromise the declared IP rating is clarified (see 13.9);
- "IPX4 and IPX5" is modified into "IPX4 to IPX6" (see 13.16; 13.16 of Version 2008);
- The requirements for the contacts are modified (see 13.18; 13.18 of Version 2008);
- The parameters. rated current and nominal cross-sectional areas of conductors are modified (see Table 14; Table 14 of Version 2008);
- The requirements for the pins and contacts of portable accessories are added (see 14.3);
- It is clarified that this clause is a requirement for rewirable portable socket-outlets; the requirements for phase socket-outlets are added (see 14.4);
- The material and test requirements for socket-contacts and pins are added (see 14.6);
- The requirements for components incorporated in accessories are added (see 14.22);
- The requirements for rewirable portable socket-outlets after their rear part has been fixed are added (see 14.26);
- The test conditions for accessories having a lid are modified and improved (see 16.1; 16.1 of Version 2008);
- The requirements for accessories with 6 as the first characteristic numeral are added (see 16.2.2.3);
- The method and requirements for the temperature rise test in Chapter 19 are modified (see Chapter 19; Chapter 19 of Version 2008);
- The NOTE of the dimensions of connecting cables for portable socket-outlets is added to Table 17 and Table 19 (see Table 17 and Table 19);