



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

GB/T 2099.3-2022

**Plugs and socket-outlets for household and similar purposes -
Part 2-5: Particular requirements for adaptors**

Issued on: October 12, 2022

Implemented on: May 1, 2023

Issued by: SAMR; SAC

Table of Contents

Foreword...	4
Introduction...	10
1 Scope...	12
2 Normative References...	12
3 Terms and Definitions...	13
4 General Requirements...	15
5 General Description Regarding Tests...	16
6 Ratings...	16
7 Classification...	16
8 Markings...	16
9 Dimension Inspection...	18
10 Protection against Electric Shock...	18
11 Grounding Measures...	19
12 Terminal and Termination...	19
13 Construction of Fixed Socket-outlets...	20
14 Construction of Plugs and Movable Socket-outlets...	20
15 Interlocking Socket-outlets...	23
16 Aging Resistance, Protection Provided by Enclosures and Moisture-proof...	24
17 Insulation Resistance and Electrical Strength...	24
18 Operation of Grounding Contacts...	25
19 Temperature Rise...	25
20 Breaking Capacity...	28
21 Normal Operation...	29
22 Force Required to Pull out the Plug...	30
23 Flexible Cables and Their Connection...	33
24 Mechanical Strength...	35
25 Heat Resistance...	36
26 Screws, Current-carrying Components and Their Connections...	36
27 Creepage Distances, Clearances and Distances through Sealing Compound...	36
28 Resistance of Insulating Materials to Abnormal Heat, Fire and Tracking...	37
29 Resistance to Rusting...	38
30 Additional Test on Pins with Insulating Sheath...	38

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 2-5 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 adaptors;

? 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 2099.3-2015 Plugs and Socket-outlets for Household and Similar Purposes - Part 2-5.Particular Requirements for Adaptors. In comparison with GB/T 2099.3-2015, apart from structural adjustments and editorial modifications, the main technical changes are as follows.

--The scope of application is added to this document (see Chapter 1);

---The definitions 3.25 rated voltage, 3.26 rate current, 3.101 adaptor, 3.103 polarized adaptor, 3.105 multi-way adaptor, 3.108 intermediate adaptor, 3.109 rewirable intermediate adaptor, 3.110 non-rewirable intermediate adaptor are modified; the definitions 3.104 single-way adaptor, 3.106 travel adaptor, 3.107 travel adaptor with

movable pins, 3.111 adaptor with cable outlet and 3.112 rated power are added; the terms and definitions of cord extension set, external cable and conversion adaptor are deleted, and the serial numbers of the definitions are adjusted (see 3.25, 3.26, 3.101, 3.103, 3.105, 3.108, 3.109 and 3.110; 3.12, 3.105 and 3.109 of Version 2015);

---The product scope included in the "adaptors" is added (see Chapter 5);

---The requirements for the rated voltage of the adaptors are modified (see 6.101);

---The requirements for the rated current of the adaptors are modified (see 6.102);

---The requirements for the rated power of the adaptors are added, and the requirements for the minimum rating of the fused adaptors are deleted (see 6.103; 6.103 of Version 2015);

---The requirements for the rated current of each socket-outlet of the adaptors and the rated current of the intermediate adaptors with integrated control device are deleted (see

6.104 and 6.105 of Version 2015);

---The content of classification is modified (see Chapter 7);

---The examples of markings are modified; the requirements for power calculation are deleted; the requirement that the markings of multi-way adaptors cannot be on the mating surface of the socket-outlet is deleted; warning symbols and words not to plug one adaptor into another adaptor are added; warning words regarding the rated power of multi-way adaptors are added (see 8.1; 8.1 of Version 2015);

---The symbol "watt" is added (see 8.2);

---The inspection requirements for "partially mated" are deleted (see 10.1 of Version 2015);

---The probe test requirements for the combination jack of the adaptors with a shutter when one plug is plugged-in and the remaining jacks are not plugged-in (see 10.5);

---The requirements for protection against electric shock for the fused adaptors are modified (see 10.101; 10.101 of Version 2015);

---The terminal requirements for the adaptors with cable outlet are added (see 12.1.2);

---The general requirements for the adaptors construction are modified (see 14.1; 14.1 of Version 2015);

---The structural requirements for adaptor pins or contacts are modified (see 14.3; 14.3 of Version 2015);

---The requirement that the phase wire bushing shall be locked is added (see 14.4);

---The requirements for flexible cord fixing parts of the adaptors with cable outlet are added (see 14.11);

---The requirements for additional torque test are modified; a description of the axis at 8 mm (for the socket-outlet described in Figure 2 of GB/T 1002-2021) or 10 mm (for the socket-outlet described in Figure 4 of GB/T 1002-2021) from the back of the socket-outlet mating surface is added (see 14.23);

---14.104 and 14.105 of GB/T 2099.3-2015 are modified into 14.103 and 14.104 of this document (see 14.103 and 14.104; 14.104 and 14.105 of Version 2015);

---The requirement that the fused adaptors shall also comply with GB/T 9364.2 and GB/T

9364.3 is added (see 14.104);

---The requirements for the appearance of the adaptors are added (see 14.105);

---The requirements for the plug plugged into the socket-outlet part of the adaptors are added (see 14.106);

---In accordance with Chinese socket-outlet construction applied to the adaptors in China, and the adjustment of GB/T 1002-2021, the requirements for the rated current of the socket-outlet part in 14.106 are added, and the requirements for the shutter in 14.106 are modified (see 14.107; 14.106 of Version 2015);

---The requirements for the aging resistance of the adaptors are modified (see 16.1; Chapter

16 of Version 2015);

---The test conditions and requirements for insulation resistance are modified (see 17.2.2;

17.1.1 of Version 2015);

---The requirements for the temperature rise of the adaptors are modified (see Chapter 19; Chapter 19 of Version 2015);

---The test voltage is modified; the test method for the adaptors with assembled