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

GB/T 9536-2012

**Electromechanical switches for use in electrical and electronic
equipment - Part 1: Generic specification**
(English Translation)

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Table of Contents

Preface
Introduction
1 Scope
2 Normative references
3 Terms and definitions and units and symbols
3.1 Terms and Definitions
3.2 Units and symbols
4 Test and measurement procedures
4.1 General requirements
4.2 Standard atmospheric conditions
4.3 General inspection
4.4 Resistance Measurement
4.5 Withstand voltage
4.6 Fever
4.7 Dynamic stress
4.8 Mechanical strength
4.9 Mechanical durability
4.10 Electrical durability
4.11 Overload
4.12 Environmental testing
4.13 Soldering
4.14 Panel seal
4.15 Housing seal
4.16 Resistance to liquids - Immersion in cleaning agents (marking)
4.17 Fire hazard
4.18 Capacitor
4.19 Lighting
4.20 Soldering of surface mounted switches
4.21 Mechanical strength (surface mounted switch)
5 Optimal value
6 Logo
References

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is part 1 of GB/T 9536 "Electromechanical switches for electrical and electronic equipment". GB/T 9536 has been published for the following part.

- Part 2: Sectional specification for rotary switches (GB/T 17209-1998);
- Part 2-1. Rotary switch section specification Part 1 blank detail specification (GB/T 17210-1998);
- Part 3: Sectional specification for in-line packaged switches (GB/T 15461-1995);
- Part 3-1. Blank detail specification for in-line packaged switches (GB/T 15462-1995);
- Part 4: Sectional specification for toggle switches (GB/T 18496-2001);
- Part 4-1. Blank detail specification for toggle switches (GB/T 18496.2-2005);
- Part 5: Sectional specification for push button switches (GB/T 16514-1996);
- Part 5-1. Blank detail specification for push button switches (GB/T 16514.2-2005);
- Part 6: Sectional specification for micro switches (GB/T 13419-1998);
- Part 6-1. Micro switch section specification Part 1: Blank detail specification (GB/T 13420-1998).

This document replaces GB/T 9536-2012 "Electromechanical switches for electronic equipment Part 1: General specification" and is compatible with GB/T 9536-2012 Compared with the previous version, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- Deleted the quality assessment procedure (see Chapter 3 of the 2012 edition);
- Added the terms and definitions of "contact disconnection (gap)", "contact group", "bidirectional", "unidirectional" and "instantaneous" (see 3.1.6, 3.1.7, 3.1.10, 3.1.21, 3.1.22);
- Changed the term "(switch) pole" and unified specific vocabulary (see 3.1.20, 2.3.14 of the 2012 edition);
- Added terms and definitions such as push button switches, and unified common names (see 3.1.27, 3.1.28, 3.1.29);
- Increased recovery force (see 4.3.6.3);
- Increased stroke (movement of the actuator) (see 4.3.6.4);

- Change "dielectric strength" to "voltage withstand" (see 4.5, 4.5 of the 2012 edition);
- Added "and the minimum length of the intermediate value of the cross-sectional area specified in Table 4 of GB/T 15092.1-2020" [see 4.6.2f)];
- Added "single-pole switch should be on the L side of the power phase line to disconnect the test circuit" [see 4.11.2.2b)];
- Added salt spray (see 4.12.10);
- Added the marking on the packaging (see 6.2);
- Added some references related to GB/T 15092.1-2020 (see 4.3.2.1, 4.6.2, 4.10.1.2, 4.11.2.2, 4.12.4.2, 5.2);
- Deleted the minimum wire length and recommended corrosion test method (see Table 1 and Table 3 of the 2012 edition);
- Added climate sequence (see Table 2), residual cycle (see Table 3), H₂S concentration (see Table 4), test temperature (see Table 5), test duration Duration (see Table 6), SO₂ concentration (see Table 7), test temperature (see Table 8), test duration (see Table 9);
- Added the measurement direction of operating force and torque (see Figure 1), examples of measurement points specified in detailed specifications (see Figure 2), low voltage and Flow method (DC) (see Figure 5), low voltage and current method (AC) (see Figure 6), specified current method (DC) (see Figure 7), specified current Method (communication) (see Figure 8), the composition of a cycle (see Figure 10), and the composition of the test procedure cycle (see Figure 11).

This document modifies and adopts IEC 61020-1:2019 "Electromechanical switches for electrical and electronic equipment Part 1: General specification".

The technical differences between this document and IEC 61020-1:2019 and their reasons are as follows.

--- Regarding normative references, this document has made adjustments with technical differences to adapt to my country's technical conditions.

as follows.

- GB/T 2423.1 replaces IEC 60068-2-1 (see 4.12.3.2, 4.21.3.2);
- GB/T 2423.2 replaces IEC 60068-2-2 (see 4.12.2.2);
- GB/T 2423.3 replaces IEC 60068-2-78 (see 4.12.4.2);
- Use GB/T 2423.5 instead of IEC 60068-2-27 (see 4.7.1.2);
- Use GB/T 2423.10 instead of IEC 60068-2-6 (see 4.7.2.2);
- GB/T 2423.16 replaces IEC 60068-2-10 (see 4.12.7.2);

- GB/T 2423.17 replaces IEC 60068-2-11 (see 4.12.10.2);
 - GB/T 2423.19 replaces IEC 60068-2-42 (see 4.12.8.3.2);
 - GB/T 2423.20 replaces IEC 60068-2-43 (see 4.12.8.2.2);
 - Use GB/T 2423.21 instead of IEC 60068-2-13 (see 4.5.2.2);
 - GB/T 2423.22 replaces IEC 60068-2-14 (see 4.12.6.2);
 - GB/T 2423.23 replaces IEC 60068-2-17 (see 4.15.2.2, 4.15.3.2);
 - GB/T 2423.30 replaces IEC 60068-2-45 (see 4.16.2);
 - GB/T 2423.52 replaces IEC 60068-2-77 (see 4.21.4.2);
 - GB/T 2423.60 replaces IEC 60068-2-21 (see 4.8.3.2, 4.8.4.2, 4.21.1.2);
 - Use GB/T 2424.11 instead of IEC 60068-2-49 (see 4.12.8.3.2);
 - GB/T 2424.12 replaces IEC 60068-2-46 (see 4.12.8.2.2);
 - GB/T 4208 replaces IEC 60529 (see 4.12.9.3, 4.14.2.2, 4.14.3.2, 4.14.4.2, 4.14.5.2);
 - Use GB/T 4728.13 to replace IEC 60617 database (see 3.2);
 - Use GB/T 4798.3 to replace IEC 60721-3-3 (see Table 4 and Table 7);
 - GB/T 15092.1-2020 replaces IEC 61058-1:2016 (see 4.3.2.1, 4.6.2, 4.10.1.2, 4.11.2.2, 5.2).
- Added the terms and definitions of "contact disconnection (gap)", "contact group", "bidirectional", "unidirectional" and "instantaneous action", which are consistent with GB/T 15092.1-Coordination and consistency are required in 2020.
- Added 4.6.2f) wire size requirements, which are consistent with the requirements of Chapter 16 of GB/T 15092.1-2020.
- In 4.11.1.2c), the "off" time "75 5 0%" in IEC 61020-1:2019 is changed to "75 0-5%", which is consistent with GB/T 9536-2012 remains consistent.
- In 4.11.2.2b) "The single-pole switch shall disconnect the test circuit on the L side of the power phase line", the phrase "on the L side of the power phase line" is added, which is consistent with it is consistent with GB/T 9536-2012.
- 4.12.4 The severity levels of temperature and relative humidity in steady-state damp heat are changed to be consistent with 14.3c) in GB/T 15092.1-2020.
- This is mainly because some areas in my country have a humid tropical climate and that all electrical and electronic products in my country are tested for moisture resistance at $(40\pm 2)^{\circ}\text{C}$.
- This is different from the IEC standard's requirement of "any suitable temperature value (t)