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CQC

PRODUCT SAFETY CERTIFICATION RULES

CQC11-462195-2011

Safety Certification Rules for Connecting Devices for Low-voltage Circuits for Household and Similar Purposes

家用和类似用途低压电路用的连接器件安全认证规则

Issued on: December 12, 2011

Implemented on: December 12, 2011

China Quality Certification Center

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1. Scope of application

This Rules applies to connecting devices as separate units for household and similar purposes. The AC rated voltage of these connecting devices shall not exceed 1000V. The frequency is not greater than 1000Hz. The DC rated voltage shall not exceed 1500V. It shall be able to connect two or more hard copper wires (solid or stranded) or soft copper wires with a cross-sectional area of $0.2\text{mm}^2 \sim 35\text{mm}^2$ (including 35mm^2) or corresponding AWG wire gauge electrically. These hard or soft copper wires shall meet the requirements of GB/T 3956-2008 or GB/T 18213-2000.

The products include:

- a. Connecting devices with threaded clamps
- b. Connecting devices with threadless clamps
- c. Connecting devices with piercing insulation clamps
- d. Twist connecting devices
- e. Connecting boxes and enclosures (this part applies to connecting boxes that are terminated and/or tapped)

NOTE: This Rules does not apply to products with separate flat quick-connect terminals.

2. Certification mode

CQC safety certification mode for connecting devices for household and similar purposes is:

Mode 1: Type test + initial factory inspection + after-certification supervision

The basic steps of certification include:

- a. Certification application.
- b. Type test.
- c. Initial factory inspection.
- d. Evaluation and approval of certification results.
- e. After-certification supervision.

Mode 2: Type test + after-certification supervision

The basic steps of certification include:

- a. Certification application.
- b. Type test.
- c. Evaluation and approval of certification results.
- d. After-certification supervision.

For manufacturers holding product certification certificates issued by CQC (such as safety certification, energy-saving certification), Mode 2 can be used for certification. Other manufacturers shall adopt Mode 1.

3. Certification application

3.1 Division of certification units

In principle, carry out certification unit division according to the type, structure, material, rated connection capacity, rated insulation voltage, protection against electric shock, maximum operating ambient temperature, protection against water and solid matter ingress of clamps for connecting devices.

The connecting devices, of which the type, structure, material, protection against electric shock, maximum operating ambient temperature, protection against water and solid objects entering the clamps of the connecting device are the same but the rated connection capacity and rated insulation voltage are different, can be divided as the same unit.

Products from different production sites are regarded as different application units. Products from different manufacturers are considered as different application units. The type test of products with the same specification and model can be carried out on samples from one factory.

3.2 Materials submitted for certification application

3.2.1 Application materials

- a. Formal application form (print after filling in the application form online or download a blank application form and fill in).
- b. Factory inspection questionnaire (when applying for the first time).
- c. Description of connecting devices for household and similar purposes (CQC11-462195.01-2011).

3.2.2 Proof materials

- 4) 51~114 twisted connecting devices, and 27~72 coverage samples (the specific quantity depends on the sample situation, and the sample is sent according to the requirements of Table 101 in the standard);
- 5) 10 connecting box and enclosure type test samples, and 3 coverage samples;
- 6) For connecting devices with flat quick-connect terminals, on the basis of meeting the sample submission requirements in Articles 1~5, additional samples containing at least 12 integral blade terminals shall be sent.

4.1.3 Disposal of samples and materials

After the test is completed and the test report is issued, the relevant materials are kept by the testing agency, and the samples are disposed of in accordance with the relevant CQC regulations.

4.2 Type test

4.2.1 Standards

GB/T 13140.1-2008 "Connecting devices for low-voltage circuits for household and similar purposes - Part 1: General requirements"

GB/T 13140.2-2008 "Connecting devices for low voltage circuits for household and similar purposes - Part 2: Particular requirements for connecting devices as separate entities with screw-type clamping units"

GB/T 13140.3-2008 "Connecting devices for low voltage circuits for household and similar purposes - Part 2: Particular requirements for connecting devices as separate entities with screwless-type clamping units"

GB/T 13140.4-2008 "Connecting devices for low voltage circuits for household and similar purposes - Part 2: Particular requirements for connecting devices as separate entities with insulation piercing clamping units"

GB/T 13140.5-2008 "Connecting devices for low-voltage circuits for household and similar purposes - Part 2: Particular requirements for twist-on connecting devices"

GB/T 17466.1-2019 "Boxes and enclosures for electrical accessories for household and similar fixed electrical installations - Part 1: General requirements"

GB/T 17466.22-2022 "Boxes and enclosures for electrical accessories for household and similar fixed electrical installations - Part 22: Particular requirements for connecting boxes and enclosures"

GB/T 17196-2017 "Connecting devices - Flat quick-connect terminations for electrical copper conductors - Safety requirements"

4.2.2 Test items and requirements

The product inspection items are all applicable items specified in the standards listed in 4.2.1. For connecting devices with flat quick-connect terminals, relevant items shall be tested for integral inserts according to GB/T 17196-2017.

4.2.3 Test methods

Inspect according to the testing methods and/or standards stipulated and/or quoted in the standards listed in 4.2.1.

4.2.4 Time limit of type test

Generally, it is 30 working days, counting from receipt of samples and completion of confirmation. The time for rectification and re-inspection due to failed test items is not included in the calculation.

4.2.5 Determination

The type test shall meet the requirements of product standards. When some of the type test items fail, the applicant is allowed to make rectification. The rectification shall be completed within the time limit specified by the certification body (calculated from the date of notification of failure of the type test). If the rectification is not completed on time, the applicant shall be deemed to have given up the application. The applicant may also terminate the application voluntarily.

If any one item does not meet the standard requirements after rectification, it is determined that the certification unit product does not meet the certification requirements.

4.2.6 Type test report

The testing agency designated by CQC tests the samples and issues a test report in the specified format. After the certification is approved, the testing agency is responsible for sending a test report to the applicant.

4.3 Requirements for critical components and parts

See Annex 2 "Product description of connecting devices for household and similar purposes" for critical components and parts. To ensure the consistency of certified products, when the technical parameters, specifications, models and manufacturers of critical components and parts change, the certificate holder shall submit a change application in time and send samples for testing. They

If the conclusion of the factory inspection is Not-PASS, the inspection team shall report directly to CQC. If there are non-conformities in the factory inspection, the factory shall complete the rectification within the specified period, and CQC shall take appropriate measures to verify the results of the rectification. If the rectification fails to be completed on time or is Not-Pass, the factory inspection will fail.

6. Evaluation, approval and time limit of certification results

6.1 Evaluation and approval of certification results

CQC organizes a comprehensive evaluation of the results of type test and factory inspection. After passing the evaluation, the applicant is issued a product certification certificate, and a certificate is issued for each certification unit.

6.2 Time limit of certification

After the completion of type test and factory inspection, the applicant shall be issued a certification certificate within 30 days if it meets the certification requirements.

6.3 Certification termination

When the type test fails or the factory inspection fails, CQC makes a decision of failure and terminates the certification. If the applicant wants to continue to apply for certification after the certification is terminated, the applicant must re-apply for certification.

7. After-certification supervision

7.1 Supervision-inspection time

7.1.1 Frequency of certification supervision-inspection

Generally, annual supervision shall be arranged within 12 months after the initial factory inspection (for enterprises adopting certification Mode 2, annual supervision can be arranged within 6 months after certification). The interval between each annual supervisory inspection shall not exceed 12 months. If Mode 2 is adopted to implement certification, the content of the first supervision-inspection is the same as that of the initial factory inspection. CQC can adjust the timing of supervision-inspection on an annual basis according to the actual situation of product production. Increase the frequency of supervision if one of

the following occurs:

- 1) The certified product has serious quality problems or the user has submitted a serious complaint, which have been verified that it is the responsibility of the certificate holder;
- 2) When CQC has sufficient reasons to question the compliance of the certified product with the certification standards;
- 3) When there is sufficient information to indicate that the conformity or consistency of the product may be affected by changes in the organization, production conditions, quality management system, etc. of the producer or production factory.

7.1.2 Number of man-days of supervision-inspection (see Table 2)

7.2 Contents of supervision-inspection

CQC supervises and inspects factories according to CQC/F 001-2009 "CQC Mark Certification Factory Quality Assurance Ability Requirements". Articles 3, 4, 5, 9 and the use of CQC marks and certification certificates are mandatory items for each supervision-inspection.

The contents of the consistency inspection of certified products is basically the same as the contents of the product consistency inspection during the initial factory inspection.

Check the product quality inspection in accordance with Table 1 "Factory quality control testing requirements for certification of connecting devices for household and similar purposes".

7.3 Conclusion of supervision-inspection

The inspection team is responsible for reporting the conclusion of the supervision-inspection. If the conclusion of the supervision-inspection is Not-PASS, the inspection team shall report directly to CQC. If there are non-conformities in the supervision-inspection, the factory shall complete the rectification within the specified period, and CQC shall take appropriate measures to verify the results of the rectification. If the rectification fails to be completed on time or is Not-Pass, the supervision-inspection will fail.

7.4 Supervisory sampling inspection

When necessary, carry out supervisory sampling inspection on certified products. Samples shall be randomly selected from qualified products produced by the factory (including production lines, warehouses, markets). Each production plant (site) must be sampled for each certificate. The sample

8.1.2.2 Evaluation and approval of changes

CQC evaluates the content of changes and the materials provided to determine if changes can be made. If tests and/or factory inspections need to be scheduled, changes can only be made after passing the tests and/or factory inspections. In principle, the evaluation of changes shall be based on the certified products that were subjected to type test originally. Tests and factory inspections shall be carried out in accordance with the relevant CQC regulations.

Approve changes to those that meet the requirements. If a new certificate is issued, the serial number and approval date of the new certificate will remain unchanged. Indicate the renewal date.

8.2 Extension of products covered by certification certificate

8.2.1 Extension procedures

If the certificate holder needs to increase the product certification scope that is the same certification unit with the certified product, it shall start from the certification application and explain the expansion requirements. CQC checks the consistency of the extended products with the original certified products, confirms the effectiveness of the original certification results on the extended products, performs supplementary tests or factory inspections on differences and/or extended scope, and issues a certification certificate separately or renews the certification certificate according to the requirements of the certificate holder.

In principle, the evaluation of extensions shall be based on the certified products that were subjected to type test originally.

8.2.2 Sample requirements

The certificate holder shall first provide relevant technical materials of the extended product. When samples are required to be sending, the certificate holder shall select samples for verification or difference test in accordance with the requirements of Clause 4 of this Rules.

8.3 Suspension, resumption, cancellation and withdrawal of certification certificate

The use of certificates shall comply with the requirements of the related certificate management regulations of CQC. When the certificate holder violates the relevant provisions of the certification or the certified product fails to meet the certification requirements, CQC will suspend, cancel and withdraw the certification certificate accordingly, and announce the results. Certificate

holders can apply to CQC to suspend or cancel their certification certificates.

During the suspension of the certificate, if the certificate holder needs to resume the certification certificate, he shall apply to CQC for resumption within the specified suspension period, and CQC will resume it in accordance with relevant regulations. Otherwise, CQC will cancel or withdraw the suspended certification.

9. Use of certification mark

9.1 Mark style permitted to use

The certified products are allowed to use the following certification mark:



A distorted mark is not allowed.

9.2 Application method

If a mark is applied, the certificate holder shall use the certification mark in accordance with the provisions of the "General Requirements for Product Certification Logos (Marks)". The certification mark can be applied to the product body, nameplate or instruction manual, and packaging.

10. Charge

Certification fees shall be charged in accordance with relevant CQC regulations.

11. Certification responsibility

CQC is responsible for the certification conclusions it makes. Laboratories shall be responsible for test results and test reports.

The certification body and the factory inspectors appointed by it shall be responsible for the factory inspection conclusions.

The certification principal shall be responsible for the authenticity and legality of the entrustment materials and samples submitted by him.

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