



IECEE OPERATIONAL DOCUMENT

IEC System of Conformity Assessment Schemes for Electrotechnical Equipment and Components (IECEE System)

IECEE Test Certificates





THIS PUBLICATION IS COPYRIGHT PROTECTED

Copyright © 2020 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigendum or an amendment might have been published.

IEC publications search

webstore.iec.ch/advsearchform

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee,...). It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and once a month by email.

IEC Customer Service Centre - webstore.iec.ch/csc

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: sales@iec.ch.

Electropedia - www.electropedia.org

The world's leading online dictionary on electrotechnology, containing more than 22 000 terminological entries in English and French, with equivalent terms in 16 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

IEC Glossary - std.iec.ch/glossary

67 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

CONTENTS

1	Scope	5
2	General requirements	5
3	Changes to Issued CB Test Certificates	5
4	Listing Product Standards	6
5	Reference of Component Standards in the Test Certificate	6
6	Products Tested Against Multiple Standards	7
7	Reporting under “Additional Information”	7
8	Product Families, Family Ranges or Series of Products, Models / Type Ref	7
9	Maximum contents of Test Certificates	7
10	Exceptional Case Requirements	8
11	Customer’s Testing Facility (CTF)	9
12	Additional Considerations for Certificate of Conformity - Industrial Cyber Security Capability .	9
13	Test Certificate Templates:	10

FOREWORD

Document Owner

WG 29 “Certification”

History of changes

Revision Date	Brief summary of changes
2018-08-10	Changes based on CMC 56/2018 recommendation A2 (CMC/1936/RCMC).
2018-06-21	Adding of clause 10.5 e) as per CMC decision 49/2018 Adding of new clause 10.8 as per CMC decision 72/2018
2018-03-20	Small changes of clause 11.4, adding of a new clause 11.5.2 Removal of clause 3.7, changes in clause 4.1 in regards of listed standards on IECEE TC, minor changes in clause 10.1, adding of clause 10.6 in respect of Brand name protection. Adding of new clause 11 in regards of CTF. Change of the wording in clause 4.3 in regards of EMC Changes of clause 7.1 Added clause 10.7 in regards of Batteries certification requirements
2017-03-09	Modification of the following clauses due to the introduction of a cyber security certificate: new 2.3, new 11, renumbering of previous clause 11 to 12. Addition of new Annex 5. Plus including the PAC decision 1798 into new clause 4.5
2016-06-01	Inclusion of various CMC and PAC decisions taken in the past: AAG/547/DSH, PAC/1619/DSH, PAC 1798c), ACAG/1266/DSH, ACAG-PDSH 837, ACAG/1004/DSH, recommendation A7 from the 2015 WG 9 report to CMC, see CMC decision 41/2015, CMC 29.2/2004, CMC Decision 072/2011, PAC/24-2014/DSH, PAC/45-2015/DSH, PAC/22-2012/DSH (Previously 2023), AAG / 527, PAC Decision 65/2015, Decision Misc. 1 Geneva 2007, CMC Decisions, CMC_16a/2009, CMC_005/2012 on Production Line Testing, PAC_ACAG1397DSH, CMC_19c/2005 (Shanghai), PAC/36-2012/DSH, PAC/26-2014/DSH, PAC/37-2015/DSH, The PAC recommended that CMC revise CMC Decision 19/05, CMC Decision 30/2000, Removal of redundant information. Harmonization of terminology Removal of French language from certificate templates
2019-06-05	Corrected clause reference in clause 2.3. Removed all requirements related to FCS and HSTS and removed related certificates. Corrected in clauses 10.5 and 10.6 “brand names” to only “brands”. Added “Brand” on CBTC template.

Revision Date	Brief summary of changes
2020-06-03	Extract of Certification templates under clause 13 to be published as separate OD-2037-F1, F2 and F3 documents, text modified on bullet 1 clause 10.1, added bullet point under 7.1, add a new subclause 8.3 in regards of models, added bullet point under 12.4, updating of clause 10.7, adding a subclause 6.3, small changes to clause 12.1 and 12.2
2020-10-16	Editorial revision to correct wrong reference in 3.2

Effective date	Next maintenance due date
2021-01-01	2024-01-01

1 Scope

This document provides the framework to ensure that all National Certification Bodies issue IECEE deliverables in a consistent manner.

2 General requirements

2.1 Reference Numbers of the Test Certificates

The reference numbers should begin with the reference letters according to ISO of the relevant countries (AT for Austria, BE for Belgium, etc.). The numbers should be running continuously year after year. The year of issue should not be mentioned in the reference number.

In member countries with several Issuing and Recognizing NCBs the issuing NCB shall be indicated within the Test Certificate number.

2.2 Signature requirements

In addition to identifying the printed name of the signatory, CB Test Certificates shall always be signed by the authorized person(s). Electronic signatures are acceptable provided there is a provision to track who is the signatory. Providing just a printed name does not fulfil the accepted understanding of an electronic signature.

2.3 Certificate of Conformity – Industrial Cyber Security Capability

Additional considerations specific to the Certificate of Conformity – Industrial Cyber Security Capability Scheme can be found in Clause 12 that supersedes the requirements of Clauses 4, 5, 6, 7, 9 and 10 except as specified below.

2.3.1 In all references, “Product” refers to product, process or solution.

2.3.2 Replace “CB Test Certificate” with “Certificate of Conformity – Industrial Cyber Security Capability”.

2.3.3 Clauses 3.6 and 3.7 do not apply.

3 Changes to Issued CB Test Certificates

3.1 New edition or amendment of applied standard(s).

A new CB Test Certificate shall be issued with a new CB Test Certificate number. The CB Test Report matching the new edition of the standard shall be attached.

3.2 Technical modifications to products covered by CB Test Certificates.

Technical modifications to products always require either an Amendment Test Report (See OD 2020, clause 5) or a new complete Test Report (See OD 2020, clause 5.2.1).

Technical modifications to products are limited to three after which a new CB Test Certificate and new complete Test Report shall be issued.

The CB Test Certificate shall identify the nature of such technical modification under "Additional Information." The CB Test Certificate number shall identify that technical modification was made to the product by adding a suffix (i.e. M1, M2, and M3).

The amended CB Test Certificates shall include the original issue date and revision date.

3.3 Certificates requiring changes due to misprints and changes to names or addresses and similar.

There is unlimited number of changes allowed in this case.

A short description concerning the reason for the change shall be added in the “Additional Information.” The CB Test Certificate shall be re-issued with the same Certificate number but the letter A shall be added after the Certificate number (i.e. A1, A2, A3, etc...) depending on how many changes have been made to the original Certificate.

The original issue date of the certificate and the date of the change shall be included on the Certificate.

An Amendment Test Report according to OD 2020, Part 5 shall be attached to the reissued Certificate, when necessary.

3.4 As an alternative to corrections to the CB Test Certificates addressed in 3.3, for minor changes, such as simple misprints, an addendum sheet correctly signed may be used.

3.5 In special cases, the requirements of ISO/IEC 17065 regarding tracking and document control can be applied in lieu of the procedure described in 3.1 and 3.4.

3.6 Adding additional factories to previously issued CB Test Certificates is dealt with as an administrative modification.

4 Listing Product Standards

4.1 The Test Certificate shall list only the Product Standard(s), within the scope of the IECEE and the issuing NCB, against which the product has been assessed (tested and evaluated) and with which compliance has been determined.

4.2 A CBTC can only be issued when all relevant tests from the (vertical) standard applicable to a specific component/end-product have been conducted as opposed to horizontal (e.g. IEC 60529) standards that are called up by a vertical standard (e.g. IEC 60335-1). Consequently:

- no stand-alone CBTC shall be issued based exclusively on IEC 60529 requirements, and
- no stand-alone CBTC for a component (e.g. for thermal motor protector) based exclusively on requirements included in the vertical standard(s) (e.g. IEC 60335-1) for that component as opposed to CBTC based on relevant standard (e.g. IEC 60730-1 and -2-2) unless specifically allowed by CMC Decision or as specified in clause 10 of this OD.
- no stand-alone CBTC shall be issued exclusively for the Functional Safety of components in the scope of IEC 60947-5-3, IEC 60947-5-5, and IEC 61800-5-2.

4.3 When the end-product standard contains EMC requirements (e.g. IEC 60730-1), a CB Test Certificate can't be issued for only the EMC section of the safety standard.

4.4 CB Test Certificates are not required to mention Corrigendum in the field titled “A sample of the product was tested and found to be in conformity with”.

4.5 CB Test Certificates shall have only one edition of a Part 1 standard.

5 Reference of Component Standards in the Test Certificate

5.1 Component Standards referenced in product standards shall **not** be identified (itemized) in the Test Certificate.

6 Products Tested Against Multiple Standards

6.1 In cases where multiple product standards, such as IEC 60335-1, IEC 60335-2-7 and IEC 60335-2-11, are applicable to the product(s) covered, all shall be evaluated and listed on the CBTC.

6.2 CB Test Certificates for EMC are normally stand-alone certificates when testing is done according to a dedicated EMC standard. When the safety standard also calls for EMC testing, the EMC standard is to be included on the CBTC together with the safety standard.

6.3 When CBTC's are issued based of the 62368-1 hybrid TRF, one CBTC need to be issued per standard.

7 Reporting under “Additional Information”

7.1 The following are acceptable and some requirements to uses of the Additional Information field on the CB Test Certificate.

- If the product is tested and evaluated in accordance with a horizontal standard for a more stringent requirement than is contained in the Product Standard, this information may be reported in the “Additional Information” of the Test Certificate.
- Summarization product changes related to Amendment or Modification Certificates.
- Identification of certificates being replaced or superseded.
- General product information related to detailed family model differences.
- Clarifying general information related to the certificate or the product specifications related to ratings, etc.
- If a product has no applicable part-2 and is only certified per a part 1 standard, the following text need to be added under CBTC Additional Information: “only the requirements of (e.g. IEC 60335-1), as documented in the accompanying test report, have been addressed”

8 Product Families, Family Ranges or Series of Products, Models / Type Ref

8.1 A product family can be defined by the maximum configuration, a list of components/sub-assemblies plus a description of how the models are constructed from the maximum configuration and list. All models which are included in the family typically have a common design, construction, parts, or assemblies essential to ensure conformity with applicable requirements. For the same products, there may be differences in defined product families that are contingent upon the nature or type of compliance criteria applied (e.g. safety, EMC, performance, efficacy, etc.).

8.2 If a product standard defined a product family, in the context of the specific standard, this definition takes precedence.

8.3 A CBTC need to have all of the certified models stated on the CBTC, not allowed to state “See CBTR”. If there is not sufficient space on first page of the CBTC for all certified models, it is allowed to state “see page 2” and list the models under additional information of the CBTC.

9 Maximum contents of Test Certificates

9.1 A Test Certificate shall in general not contain more items or types of equipment than specified below:

Accessories: There shall only be one type in each certificate, for instance a single pole and a double pole switch should not be in the same Test Certificate.

Appliances: There shall only be one appliance in each Test Certificate, for instance a drill of 150 W and a drill of 300 W should not be in the same Test Certificate. However, Test Certificates e.g. for room heaters of the same shape but of a length varying in accordance with the wattage (x watts per meter of the length of the room heater) may include a whole series of room heaters.

General: Only equipment applied for at the same time can be in one Test Certificate.

10 Exceptional Case Requirements

10.1 A standalone CBTC can be issued for the following products:

- Component power supplies evaluated to IEC 60601-1:2005, 3rd Edition and IEC 60601-1:2005, 3rd Edition with Amendment 1. Where the Risk Management Process, as required by IEC 60601-1 is not performed, the additional information field of the CBTC shall clearly indicate “The risk management requirements of the standard were not addressed.”
- Products evaluated to the IEC 62471 series only when the additional information field of the CBTC clearly indicates “Only photobiological hazards have been addressed.”
- Products evaluated only to IEC 60825-1, IEC 60825-2 and IEC 60825-12 when the additional information field of the CBTC clearly indicates “Only hazards resulting from laser radiation have been addressed.”
- Controls for products which can be fully integrated into an end-product with simple tools and no need for subassembly or electronic device manipulation, such as with electronic controls for whirlpool baths.

10.2 When the reference standard IEC TR 62471-2 is used, it should not be listed in the standards section of the CBTC. It may, however, be listed in the additional information field of the CB Test Certificate and the summary section of the Test Report.

10.3 A CBTC can be issued for a Part 1 only, provided there is no Part 2 for the relevant product. Once the relevant Part 2 standard is published, the original Certificate and Test Report shall be withdrawn, and retesting done to include Part 2.

10.4 Where a standard contains requirements related to production line testing, these requirements can be excluded from the type tests and from the CB Test Report. A CBTC can be issued in this case, as long as, the certificate contains a statement that third-party on-site verification on the production line testing was excluded. (Example: CBTC issued based on IEC 62035 without clause 7).

10.4 Where a standard contains requirements related to production line testing, these requirements can be excluded from the type tests and from the CB Test Report. A CBTC can be issued in this case, as long as, the certificate contains a statement that third-party on-site verification on the production line testing was excluded. (Example: CBTC issued based on IEC 62035 without clause 7).

10.5 Only one trade mark or brand can be included on the CBTC with the understanding that:

- a) It applies to brands owned by others than the corporate family of the Manufacturer identified on the CB Test Certificate.
- b) If the applicant includes a trademark or brand with their CB Test Certificate application, or it is otherwise known that a trademark or a brand will be used on the product, it shall be declared on the CB Test Certificate. If none is declared, there is no obligation to list it in the CB Test Certificate.
- c) If there are multiple trademarks or brands, a separate CB Test Certificate is required for each trademark or brand.
- d) It is permitted to have multiple brands or trademarks covered in a single CB Test Report.
- e) It is permitted to have multiple brands or trademarks covered in a single CB Test Certificate if the brands or trademarks are owned by the corporate family of the Manufacturer identified on the CB Test Certificate.

10.6 Brand and trademarks protection.

When issuing a CBTC including a brand or trademark owned by a party other than the applicant, an authorization shall be obtained from the brand or trademark owner. Also see clause 4.1.2 in IECEE 02.

10.7 Lithium, Ni-Cd, and Ni-MH Secondary (rechargeable) batteries and cells for portable systems shall fulfil the requirements of the end-product standard, including the requirements of any IEC battery or battery cell standard specified in the end-product standard.

Where an IEC TC has not included specific technical guidance or specific battery requirements in their end-product standard, then Lithium, Ni-Cd, and Ni-MH Secondary (rechargeable) batteries and cells for portable systems shall comply with IEC62133-1 (Nickel) or IEC62133-2 (Lithium).

A stand-alone CBTC for a battery/battery charger combination (or system) is possible provided all relevant requirements for the charger have also been addressed.

10.8 For GMEE program (Product Category E3), only one Efficiency Class (IE-code) can be included on the CB Test Certificate.

10.9 For CBTCs related to Functional Safety (see also Clause 4.2), the ratings shall include the Risk Reduction Level (e.g. – SIL, PL).

11 Customer's Testing Facility (CTF)

11.1 CTF testing has to be documented on the CB Certificate under "Customer's Testing Facility (CTF) Stage used". Once a certificate is issued on data generated by a CTF, all subsequent certificates are considered to also be issued on data generated by the CTF. The CTF Stage shall continue to be documented on the CBTC. The only exception would be if all prior CTF data on which the current CBTC is based upon has been retested by the CBTL

12 Additional Considerations for Certificate of Conformity - Industrial Cyber Security Capability

12.1 Type

"Type" is used to indicate the type of certificate as defined in OD-2061, clause 3.2, as a combination of the certificate coverage (applicant role, product, process, solution) and the type of scenario (Capability Assessment, Application of Capabilities Assessment). Valid values for "Type":

- Product Capability Assessment
- Process Capability Assessment
- Solution Capability Assessment
- Product Application of Capabilities Assessment
- Process Application of Capabilities Assessment
- Solution Application of Capabilities Assessment

12.2 Certificate Coverage

The name and version of the product or solution to which the assessed capabilities (see OD 2061, clause 3.2) apply. For product and process certifications, defined if integrator or maintenance service provider and the name of the primary control system product. For solution certifications, the name assigned to the solution. Separate certificates will be issued for each service provider role

Note The solution is the primary control system product installed at the site.

12.3 Standard

The Certificate shall list only the Standard(s) against which the product has been assessed (evaluated). Each standard will be specified by its IEC document number and its year of publication (e.g. IEC 62443-2-4:2015).

12.4 Requirements Assessed / Total Requirements

"Requirements Assessed" represents the highest level of organization for the requirements of an IEC 62443 standard:

- IEC 62443-2-4, Summary Levels (clause 5.5.3)

- IEC 62443-4-1, Practices (clauses 5 through 12)
- IEC 62443-3-3, Foundational (clauses 5 through 11)
- IEC 62443-4-2, Foundational (clauses 5 through 11)

On the certificate, specify the Requirements Assessed (Summary Level, Practice, Foundational) from the applicable standard and immediately following, the ratio of requirements applied to the total number of requirements, including requirements enhancements, specified for the designated Requirements Assessed. Place the ratio in parentheses and separate the Requirements Assessed by commas.

Generic example:

“Requirements Assessed “X” (3/9), Requirements Assessed “Y” (5/7)” means that three requirements out of nine were met for Requirements Assessed “X”, and five of seven were met for Requirements Assessed “Y”.

Specific example:

For IEC 62443-2-4, suppose that the applicant met:

- three requirements in the “Solution Staffing” Summary Level, which contains eleven requirements and requirements enhancements (SP.01.01 – SP.01.07), and
- four requirements in the “Patch Management” Summary Level, which contains twelve requirements and requirements enhancements (SP.11.01 – SP.11.06).

The Requirements Assessed entry on the certificate would read:

Requirements Assessed: Solution Staffing (3/11), Patch Management (4/12)

12.5 Additional Information

12.5.1 When a reference to an IEC Technical Report is used, it should not be listed in the standard section of the certificate. It may, however, be listed in the additional information field of the Certificate and/or the summary section of the Test Report.

12.5.2 When a reference to another Certificate of Conformity is used in conjunction with this Certificate of Conformity, a reference to the other Certificate of Conformity may be recorded in this Additional Information field and/or the summary section of the Test Report.

For example, if an Application of Capability Certificate of Conformity for IEC 62443-4-1 is used in conjunction with a Product Certificate of Conformity for IEC 62443-4-2, then the reference to the Application of Capability Certificate of Conformity for IEC 62443-4-1 may be recorded in this Additional Information field on the Product Certificate of Conformity for IEC 62443-4-2. This reference may also (or alternatively) be recorded in the summary section of the Test Report.

Similarly, this Additional Information field in the Application of Capability Certificate of Conformity for IEC 62443-4-1 may be used to record the reference to the Product Certificate of Conformity for IEC 62443-4-2. This reference may also (or alternatively) be recorded in the summary section of the Test Report.

13 Test Certificate Templates:

General: Electronic copies of Test Certificates created based on approved certificate templates can be used alternatively to signed paper copies.

Form Name	Form Number	Publication date/Effective date	Brief summary of changes	Next maintenance due date	Edition
CB Test Certificate (CBTC)	OD-2037-F1	2020-06-03	New publication	2023-06-03	1.0
E3 Statement of Test Results	OD-2037-F2	2020-06-03	New publication	2023-06-03	1.0
Certificate of Conformity – Industrial Cyber Security Capability	OD-2037-F3	2020-06-03	New publication	2023-06-03	1.0

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

3 rue de Varembé
PO Box 131
CH-1211 Geneva 20
Switzerland

T +41 22 919 0211
info@iec.ch
www.iec.ch

IEC SYSTEM OF CONFORMITY ASSESSMENT
SCHEMES FOR ELECTROTECHNICAL
EQUIPMENT AND COMPONENTS (IECEE SYSTEM)

IECEE Secretariat c/o IEC
3 rue de Varembé
PO Box 131
CH-1211 Geneva 20
Switzerland

T +41 22 919 0211
secretariat@iecee.org
www.iecee.org