



# **IECEE OPERATIONAL DOCUMENT**

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

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**Acceptance of Components within the IECEE and Component Acceptance Matrix**





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

Tel.: +41 22 919 02 11  
Fax: +41 22 919 03 00  
[info@iec.ch](mailto:info@iec.ch)  
[www.iec.ch](http://www.iec.ch)

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## FOREWORD

### Document Owner

CMC WG 5 “Acceptance of Components within the IECEE and Component Acceptance Matrix”

### History of changes

| Date       | Brief summary of changes  |
|------------|---|
| 2017-03-15 | Adding of disclaimer, adding of this foreword including History of changes, clause 4,4 is modified and 4,5 is added to reflect the PAC decision (15/2014) |

| Effective date | Target revision date |
|----------------|----------------------|
| 2017-05-17     | 2020-05-17           |

## Introduction

This operational document contains definitions and basic principles for acceptance of components within the IECEE. The intended implementation of this document is to enhance the common understanding among the National Certification Bodies (NCBs) participating in the Schemes of the various component acceptance scenarios encountered by the members, as well as, to establish a minimum proof of component compliance with the applicable acceptance criteria expected in the CB Test Reports. Any differences between the requirements in this operational document and corresponding requirements of the NCB shall be clearly identified and published in the CB Bulletin and in the Component Acceptance Matrix.

The Component Acceptance Matrix (CAM) is part of the component acceptance process. It was prepared to provide information on the level of harmonization with the IEC standards among the participating countries. The database should also assist the National Certification Bodies and CB Testing Laboratories in the compilation of the CB Test Reports by making the requirements for components more transparent.

Today, IECEE has two procedures in dealing with acceptance of components in the end products. This Operational Document describes “generic” approach to component acceptance. Component acceptance declarations prepared by the NCBs are a tool for improving component acceptance under the “generic” approach.

## 1 Scope

This document describes component related situations and decisions in the process of issuing and accepting CB Test Reports and Certificates for end products. It also provides requirements and clarifications for the use of Component Acceptance Matrix.

## 2 Definitions

### 2.1 Component

For the purpose of this document a component has been defined as follows:

Component – a part or a subassembly intended to be installed into an end product in a factory by the end-product manufacturer. Some examples are: switches for appliances, capacitors, filters, fuseholders, build-in power supply, internal CD Rom or hard drive, and similar.

### 2.2 Harmonized standard

For the purpose of this document a harmonized standard issued by a national (e.g. DIN, ANSI, SCC, BSI) or regional (e.g. CENELEC) body has been defined as follows:

Harmonized standard –means a standard that is nationally recognized as a standard harmonized with IEC and for which there are published and readily available National or Regional Differences from the IEC requirements.

### 2.3 National standard technically equivalent to IEC standard

For the purpose of this document, the term “technically equivalent standard” means that even though the national standard is not officially declared as harmonized with the IEC requirements, all parameters have either the same or more stringent requirements as declared by the NCB (in cooperation with the Member Body, as applicable).

Note: Any national differences that need to be addresses for full compatibility of both standards are clearly identified by the NCB claiming technical equivalency of the national standard.

### 2.4 Component Acceptance Matrix (CAM)

CAM is a database containing compilation of IECEE component acceptance practices by the NCBs participating in the IECEE.

## **2.5 Certification documentation**

For the purpose of this document, a certificate, a license, or similar evidence of certification are considered equivalent. See clause 7.1.

## **3 General Principles**

3.1. Components shall comply with the relevant requirements of the applicable component standards and the component requirements of the end-product standard.

3.2. NCBs in countries that have not yet harmonized their component standards with IEC standards are strongly recommended to develop procedures permitting the acceptance of tests based on IEC component standards or on national component standards of the accepting NCB.

3.3. All component related differences in requirements and acceptance practices shall be declared by the NCBs (in cooperation with the Member Body) in the CB Bulletin and in the CAM.

## **4 Potential situations for component requirements**

The following four cases can be identified:

**4.1** There is an existing IEC standard for the component;

**4.2** There is no IEC standard but there is a regional or national standard for the component;

**4.3** No component requirements exist;

**4.4** The end-product standard contains additional component requirements.

**4.5** The end-product standard contains all applicable component requirements.

## **5 Component acceptance situations**

The existence of an IEC standard for a component is the most desired situation, however, IEC standards do not exist for all components. The following outlines procedures for the acceptance of components for the situations identified above.

### **5.1 Existing IEC Component Standard**

Two potential situations were identified as outlined in 5.1.1 and 5.1.2 below:

#### **5.1.1 Component with CB Test Certificate**

Where a component is provided with its own valid CB Test Certificate accompanied by the Test Report or information describing the conditions of component acceptability the following acceptance situations shall be considered:

##### **5.1.1.1 No National Differences for component declared by the NCB**

Component shall be accepted by the receiving NCB without further evaluation if no additional component requirements are specified in the end-product standard, otherwise, see 5.1.1.3.

##### **5.1.1.2 Recognizing NCB has declared National Differences for component**

###### **5.1.1.2.1 National Differences have been addressed by an NCB**

Component shall be accepted by the receiving NCB without further evaluation if no additional component requirements are specified in the end-product standard, otherwise, see 5.1.1.3.

###### **5.1.1.2.2 National Differences have not been addressed by an NCB**

Component shall be accepted by the receiving NCB after additional satisfactory evaluation to address the National Differences; see 5.1.1.3 to address additional component requirements specified in the end-product standard.

### **5.1.1.3 Additional component requirements specified in the national standard for the end product**

#### **5.1.1.3.1 Additional component requirements addressed by the issuing NCB**

Component shall be accepted by the receiving NCB if National Differences have been addressed (5.1.1.2).

#### **5.1.1.3.2 Additional component requirements not covered by the issuing NCB**

Component shall be accepted by the receiving NCB after additional evaluation to address the additional component requirements.

### **5.1.1.4 The receiving NCB does not adhere to IEC component standard(s) referenced in the IEC end product standard**

The following scenarios may exist:

#### **5.1.1.4.1 The receiving NCB has a non-harmonized national component standard declared as a national difference**

The receiving NCB may accept a Report issued by another NCB to the national standard of the receiving NCB, or conduct component testing according to its national standard

#### **5.1.1.4.2 The receiving NCB has a non-harmonized national component standard not declared as a national difference**

Component shall be accepted by the receiving NCB based on the available CB Test Report according to the IEC component standard

#### **5.1.1.4.3 The receiving NCB has no national component standard**

Component shall be accepted by the receiving NCB based on the available CB Test Report according to the IEC component standard

## **5.1.2 Component without a CB Test Certificate**

Where a component is not provided with its own valid CB Test Certificate for compliance with a relevant component standard it shall be checked for correct application and use in accordance with its specified ratings. It shall be subjected to the applicable tests of the end-product standard, as part of the end product, and to the applicable tests of the component standard, under the conditions occurring in the end product. In order to ease the process of acceptance, the applicable tests from component standard shall be reported in the Test Report for the component and attached to the end -product CB Test Report. The following acceptance situations shall be considered:

### **5.1.2.1 No additional requirements for the component in the end-product standard**

#### **5.1.2.1.1 No National Differences declared for component**

Component shall be accepted by receiving NCB provided that component test report to IEC standard is available from the issuing NCB.

#### **5.1.2.1.2 National Differences declared for component**

- Component shall be accepted by receiving NCB provided that component test report to IEC standard is available from the issuing NCB and includes National Differences, otherwise.
- Component shall be accepted by receiving NCB when information provided in the Report fulfils acceptance criteria declared by the receiving NCB in the CAM database, otherwise.
- Component shall be accepted by receiving NCB after additional evaluation addressing National Differences.

### **5.1.2.2 Additional requirements for component in the end-product standard**

#### **5.1.2.2.1 No National Differences declared**

Component shall be accepted by receiving NCB provided that component test report to IEC standard is available from the issuing NCB.

#### **5.1.2.2.2 National Differences declared for component**

Same as 5.1.2.1.2.

#### **5.1.2.3 Component provided with a national certificate, which indicates that, the component was tested to a harmonized standard and it shows limitations and/or conditions of use**

Component shall be accepted by receiving NCB provided that any additional requirements (i.e., National Differences, end-product requirements, applicable tests of the component standard, under the conditions occurring in the end product) have been addressed in the end-product report.

#### **5.1.2.4 Component tested to the requirement of a non-harmonized standard**

Component may be accepted at the discretion of the receiving NCB.

#### **5.1.2.5 Component tested to the component requirements in the end product only (not tested to the applicable component standard)**

Component shall be accepted after additional evaluation to the applicable component requirements, where necessary.

#### **5.1.2.6 The receiving NCB does not adhere to IEC component standard**

See 5.1.1.4.

### **5.2 No existing IEC Component Standard**

Potential situations identified for evaluation and acceptance of components in the end product in case no IEC standard for component is available. This situation is possible due to quickly changing technology.

It is not allowed to issue a CB Test Certificate for a component if there is no existing IEC component standard accepted for use in the IECEE. The test results for such component testing shall be included in the CB Test Report of the end product.

#### **5.2.1 Receiving NCB has a national/regional component standard and has declared it in National Differences for the end-product standard**

The receiving NCBs are strongly encouraged to accept component reports prepared by the issuing NCB when testing has been done to their declared national/regional component standard(s).

#### **5.2.2 Receiving NCB has no declared national component standard**

Component shall be accepted by the receiving NCB when tested to the component requirements of the end-product standard under the conditions occurring in the end product.

## **6 Component Acceptance Matrix**

The Database is general in nature and is intended for use with a variety of IEC standards. It is not meant as a substitute for the technical requirements in a particular standard (which may be more stringent) nor is it intended as a replacement for established practices for a particular product category.

The primary purpose of the Component Acceptance Matrix is to create widest possible acceptance of CB Test Reports, whilst maintaining a reasonable minimum standard for evidence of components' conformity to declared standards. See Clause 7.

Detailed information on technical requirements for member countries, as well as, NCB adherence to IEC standards and scope of participation are contained in the CB Bulletin and on the IECEE website.

### 6.1 Responsibilities of the NCBs

Each NCB shall update the CAM database (identify the required “proof of compliance”) on a regular basis as requirements change.

### 6.2 Responsibilities of the IECEE Secretariat

The IECEE Secretariat is responsible for uploading updated Excel spreadsheets into the CAM database based on the input received from NCBs.

### 6.3 CAM Database details

The following displays the contents and the abbreviations used in the database.

| Component   | Country | IEC Std.  | National Std.       | Level of Harmonization<br>(IEC, ND, NH-T, NH)   | CB Cert.                            | National License         | National Mark on Product | Relevant Test Report     | Factory Inspection<br>(Initial, On-going)                          | Comment |
|---|---------|-----------|---------------------|---|-------------------------------------|--------------------------|--------------------------|--------------------------|--|---------|
| 1   | 2       | 3         | 4                   | 5   | 6                                   | 7                        | 8                        | 9                        | 10   | 11      |
| Asociación Española de Normalización y Certificación, AENOR<br>Modified at: 2010-07-19 13:46:51<br><a href="#">edit</a> | SPAIN   | IEC 60454 | UNE-EN 60454-series | <input checked="" type="checkbox"/> IEC <input type="checkbox"/> ND <input type="checkbox"/> NH-T <input type="checkbox"/> NH | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Initial <input type="checkbox"/> On-going |         |
| BBJ-SEP<br>Modified at: 2010-02-02 14:23:39<br><a href="#">edit</a>   | POLAND  | IEC 60454 | PN-EN 60454 series  | <input checked="" type="checkbox"/> IEC <input type="checkbox"/> ND <input type="checkbox"/> NH-T <input type="checkbox"/> NH | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Initial <input type="checkbox"/> On-going |         |
| BELLIS Testing and  | BELARUS | IEC 60454 | NA                  | <input checked="" type="checkbox"/> IEC <input type="checkbox"/> ND <input type="checkbox"/> NH-T <input type="checkbox"/> NH | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Initial <input type="checkbox"/> On-going |         |

### 6.4 Additional Rules for completing the Component Acceptance Matrix

6.4.1 The NCB may select as many choices as acceptable by that NCB for component acceptance. The selected choices may be different for each component.

The column called “Comments” should be used to explain choices marked in columns from 5 to 9. (The selected choices can be inclusive or exclusive. The NCB should state if the selected options are “or” or “and”).

6.4.2 If the NCB requires Factory Inspections for components, then column 10 should be marked appropriately. In the column for comments, the NCB should provide answers to the following questions:

- Does the NCB accept Factory Inspections done by others?
- If yes, who can perform the factory inspection?
- What type of inspection is required, product based, quality based or combination?
- How often the Factory Inspection is required for components?
- Is there any on-going retesting required?

## **7 Component information in the CB Test Reports**

A Critical Component Table in CB Test Reports shall be completed according to the latest Edition of OD-2020.

### **7.1 Proof of component compliance**

The minimum expected proof of component compliance with component standard(s) is a copy of certification documentation according to the definition in clause 2.5 of this proposed Component Acceptance Operational Document.

Note 1: This documentation shall contain, as a minimum, a model number, manufacturer's name, standard used including edition and any limitation or restrictions on component use, if any.

Note 2: Due to different systems at each NCB, the expected proof of component compliance with the requirements may be different, however, any additional requirements on top of a valid component license must be declared by each NCB in the Component Acceptance Matrix Database.

Note 3: The column in the Critical Component Table called "Mark(s) of conformity" is used to identify/describe proof of component's compliance with the requirements used by Issuing Body during the end product investigation.

Note 4: When providing product description in the CB Test Report special emphasis should be place on explaining the role of specific components in the end product to assist Recognizing Bodies with identification of truly safety critical components in the end product. This is especially important to those NCB that "waive" sample requirements.

**INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION**

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

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

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SCHEMES FOR ELECTROTECHNICAL  
EQUIPMENT AND COMPONENTS (IECEE)**

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

Tel: + 41 22 919 02 11  
secretariat@iecee.org  
www.iecee.org