



NSAI
Standards

Irish Standard
I.S. EN 62034:2012

Automatic test systems for battery powered emergency escape lighting (IEC 62034:2012 (EQV))

I.S. EN 62034:2012

Incorporating amendments/corrigenda issued since publication:

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I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

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EN 62034

May 2012

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Supersedes EN 62034:2006

English version

**Automatic test systems for battery powered emergency escape lighting
(IEC 62034:2012)**

Systèmes automatiques d'essai pour
éclairage de sécurité sur batteries
(CEI 62034:2012)

Automatische Prüfsysteme für
batteriebetriebene Sicherheitsbeleuchtung
für Rettungswege
(IEC 62034:2012)

This European Standard was approved by CENELEC on 2012-03-28. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

The text of document 34D/1040/FDIS, future edition 2 of IEC 62034, prepared by SC 34D, "Luminaires", of IEC TC 34, "Lamps and related equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62034:2012.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2012-12-28
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-03-28

This document supersedes EN 62034:2006.

The main changes with respect to EN 62034:2006 are the improvement of the understanding of the requirements in the various clauses and the compliance requirements listed below and the updating of the normative references.

4.2 Monitoring of the timing circuit

4.3 Functional requirements

4.3.1 The automatic test system (ATS)

4.4.2 Intercommunications failure

4.4.4 Component failures

4.4.7 Software failure

5.1 Functional test

5.2 Duration test

6.2.2 Timing accuracy

6.3.2.2 Testing alternate luminaires

6.3.3.4 Limited duration test

7.1 General

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 62034:2012 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 61347-2-7	NOTE Harmonized as EN 61347-2-7.
IEC 61347-2-11	NOTE Harmonized as EN 61347-2-11.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60073	-	Basic and safety principles for man-machine interface, marking and identification - Coding principles for indicators and actuators	EN 60073	-
IEC 60598-1	-	Luminaires - Part 1: General requirements and tests	EN 60598-1	-
IEC 60598-2-22	-	Luminaires - Part 2-22: Particular requirements - Luminaires for emergency lighting	EN 60598-2-22	-
IEC 61347-1	-	Lamp controlgear - Part 1: General and safety requirements	EN 61347-1	-
IEC 61547	-	Equipment for general lighting purposes - EMC immunity requirements	EN 61547	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**AUTOMATIC TEST SYSTEMS FOR BATTERY POWERED
EMERGENCY ESCAPE LIGHTING**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 62034 has been prepared by subcommittee 34D: Luminaires, of IEC technical committee 34: Lamps and related equipment.

The text of this standard is based on the following documents:

FDIS	Report on voting
34D/1040/FDIS	34D/1048/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

This second edition cancels and replaces the first edition published in 2006. It constitutes a technical revision.

The main changes with respect to the first edition are the improvement of the understanding of the requirements in the various clauses and the compliance requirements listed below and the updating of the normative references.

- 4.2 Monitoring of the timing circuit
- 4.3 Functional requirements
 - 4.3.1 The automatic test system (ATS)
 - 4.4.2 Intercommunications failure
 - 4.4.4 Component failures
 - 4.4.7 Software failure
- 5.1 Functional test
- 5.2 Duration test
 - 6.2.2 Timing accuracy
 - 6.3.2.2 Testing alternate luminaires
 - 6.3.3.4 Limited duration test
- 7.1 General

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

Emergency lighting systems are a safety related product; their correct performance can only be assured by systematic testing and maintenance. Conventional techniques for testing are reliant upon manual testing procedures, and are highly susceptible to neglect. These limitations of conventional techniques can be overcome by automating the testing process. It is essential that automatic testing systems for emergency luminaires schedule tests reliably, and provide timely notification of failures or degradation of performance.

Automatic test systems (ATS) will still require manual intervention to correct faults when they are identified, and procedures should be put in place for such intervention. These systems provide information to assist users to manage risk on their premises.

Automatic test systems for emergency escape lighting assist the operator of the building by showing the results of tests that will have been made at prescribed intervals, without disrupting any other electrical services. It is essential that the notification of failures or reduction in performance be given at the earliest opportunity to enable the emergency escape system to be restored to full operation.

The automatic test system will provide those responsible for an emergency lighting installation with information to enable them to ensure that the installed luminaires operate correctly when required.

The automatic test system may be part of a building management system (BMS) for making the emergency lighting tests; this standard would only apply to the emergency lighting testing part of a BMS.

A visual check of system components and indicators should be included in the routine of safety staff. This check should be made regularly to ensure that the emergency luminaire is present and intact, with lamps and indicators working and visible i.e. not obscured, covered or painted.

AUTOMATIC TEST SYSTEMS FOR BATTERY POWERED EMERGENCY ESCAPE LIGHTING

1 Scope

This International Standard specifies the basic performance and safety requirements for individual products and components that are incorporated into automatic test systems for use with emergency lighting systems on supply voltages not exceeding 1 000 V.

This standard also specifies the required functionality of a complete automatic test system for an emergency lighting system.

This standard is applicable to testing systems consisting of a number of emergency lighting self-contained luminaires or a central battery with associated emergency lighting luminaires.

NOTE Manual test facilities that rely on manual initiation and/or visual inspection of the lamp condition are outside the scope of this standard.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60073, *Basic and safety principles for man-machine interface, marking and identification – Coding principles for indicators and actuators*

IEC 60598-1, *Luminaires – Part 1: General requirements and tests*

IEC 60598-2-22, *Luminaires – Part 2-22: Particular requirements – Luminaires for emergency lighting*

IEC 61347-1, *Lamp control gear – Part 1: General and safety requirements*

IEC 61547, *Equipment for general lighting purposes – EMC immunity requirements*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60598-2-22 as well as the following apply.

3.1

automatic test system

ATS

automated test system that may be manually initiated, consisting of parts (such as timers, current detectors, light detectors, changeover switches) which, when connected together, make a system that can carry out the routine testing requirements of emergency lighting luminaires, and indicate the test results

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