

Automatic test systems for battery powered emergency escape lighting

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National foreword

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A list of organizations represented on CPL/34/4 can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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**Automatic test systems
for battery powered emergency escape lighting
(IEC 62034:2006)**

Système automatique de tests
pour éclairage de sécurité sur batteries
(CEI 62034:2006)

Automatische Prüfsysteme
für batteriebetriebene
Sicherheitsbeleuchtung
für Rettungswege
(IEC 62034:2006)

This European Standard was approved by CENELEC on 2006-09-12. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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CENELEC

European Committee for Electrotechnical Standardization
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Europäisches Komitee für Elektrotechnische Normung

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Foreword

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Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 62034:2006 was approved by CENELEC as a European Standard without any modification.

CONTENTS

INTRODUCTION.....	4
1 Scope.....	5
2 Normative references	5
3 Terms and definitions	5
4 Requirements	6
4.1 Safety, construction and installation instructions	6
4.2 Monitoring of the timing circuit.....	7
4.3 Functional requirements	7
4.4 Protection against system part failures and faults.....	8
4.5 Test of emergency lamp(s).....	9
5 Test duration and interval	10
5.1 Functional test.....	10
5.2 Duration test	10
6 Protection of a building during the periods of test and subsequent recharge of the emergency lighting system	10
6.1 General.....	10
6.2 Accuracy and protection of timing periods	11
6.3 Requirements for premises that may be occupied during test and recharge periods.....	11
7 Indication and recording of results of tests that the equipment has to perform	13
7.1 General.....	13
7.2 Indication	13
7.3 Recording.....	14
Annex A (informative) Examples of typical automatic test systems.....	15
Annex B (informative) Classification of ATS types.....	20
Bibliography.....	21
Figure 1 – Stand-alone, self-contained luminaire with automatic test facilities.....	15
Figure 2 – Direct connection between luminaires and remote panel	16
Figure 3 – Alternative system luminaires connection is marshalled by a connection box for transmission to remote indicators and control panel.....	17
Figure 4 – Direct connection between luminaires and remote panel	18
Table A.1 – Standards conformity guide.....	16
Table A.2 – Standards conformity guide.....	18
Table A.3 – Standards conformity guide.....	19

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 (ATSS) 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 maybe 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 1000 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 indication devices and activators*

IEC 60598-1:2003, *Luminaires – Part 1: General requirements and tests*

IEC 60598-2-22:1997, *Luminaires – Part 2-22: Particular requirements – Luminaires for emergency lighting*

IEC 61347-1:2000, *Lamp controlgear – Part 1: General and safety requirements*

IEC 61547:1995, *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 60598-22 and 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, change over 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

3.2**self-contained luminaires**

emergency luminaire that is self-contained with built-in testing facilities to perform tests and indicate the test results

NOTE Examples of self-contained luminaires are shown in Annex A.

3.3**self-contained luminaire system**

system that performs tests on one or more self-contained emergency luminaires, which is connected to a remote panel giving a proper indication of results

NOTE Examples of a self-contained luminaire system are shown in Annex A.

3.4**centrally powered luminaire system**

system that performs tests on one or more emergency luminaires, which is connected to a central power supply system or a remote power supply system and giving a proper indication of results

NOTE Examples of a centrally powered luminaire system are shown in Annex A.

3.5**remote panel**

part of a system that receives and/or sends information from and/or to the emergency lighting luminaires, and may also indicate the test results

3.6**functional test**

test to check the integrity of the circuit and the correct operation of a lamp, a changeover device and an energy source

3.7**duration test**

test to check if the safety source supplies the system within the limits of rated duration of emergency operation

3.8**alternate luminaires**

luminaires configured so that tests conducted by the ATS are not made on two adjacent luminaires at the same time

3.9**test facility**

main testing and recording device that may consist of a remote panel and/or computerized system, which facilitates and controls the manual and automatic testing and recording of relevant information, and has the ability to indicate test results in a visual and/or printed form

4 Requirements**4.1 Safety, construction and installation instructions**

All parts of the ATS shall conform to the requirements of IEC 60598-1 and IEC 60598-2-22 where these are appropriate

NOTE 1 Guidance for the appropriate application of standards for typical systems is provided in Annex A.