SLOVENSKI STANDARD

SIST EN 61821:2003

april 2003

Electrical installations for lighting and beaconing of aerodromes - Maintenance of aeronautical ground lighting constant current series circuits

ICS 29.140.50; 93.120

Referenčna številka
SIST EN 61821:2003(en)

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61821

January 2003

ICS 93.120; 29.140.50

English version

Electrical installations for lighting and beaconing of aerodromes - Maintenance of aeronautical ground lighting constant current series circuits
(IEC 61821:2002)

Installations électriques pour l'éclairage et le balisage des aérodromes - Maintenance des circuits série à courant constant pour le balisage aéronautique au sol
(CEI 61821:2002)

Elektrische Anlagen für Beleuchtung und Befeuerung von Flugplätzen - Wartung von Konstantstrom-Serienstromkreisen für Flugplatzbefeuerungsanlagen
(IEC 61821:2002)

This European Standard was approved by CENELEC on 2002-12-03. 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.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Ref. No. EN 61821:2003 E

Foreword

The text of document 97/77/FDIS, future edition 1 of IEC 61821, prepared by IEC TC 97, Electrical installations for lighting and beaconing of aerodromes, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61821 on 2002-12-03.

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2003-09-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2005-12-01

Annexes designated "normative" are part of the body of the standard.
Annexes designated "informative" are given for information only.
In this standard, annex ZA is normative and annex A is informative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61821:2002 was approved by CENELEC as a European Standard without any modification.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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

Publication	Year	Title	EN/HD	Year
IEC 60903 (mod)	1988	Specification for gloves and mitts of insulating material for live working	EN 60903	1992
IEC/TS 62143	- [1)]	Electrical installations for lighting and beaconing of aerodromes - Aeronautical ground lighting systems - Guidelines for the development of a safety lifecycle methodology	-	-
ISO/IEC Guide 51	1999	Safety aspects - Guidelines for their inclusion in standards	-	-

1) Undated reference.

NORME INTERNATIONALE

INTERNATIONAL STANDARD

CEI
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61821

Première édition
First edition
2002-03

Electrical installations for lighting and beaconing of aerodromes – Maintenance of aeronautical ground lighting constant current series circuits

Installations électriques pour l'éclairage et le balisage des aérodromes – Maintenance des circuits série à courant constant pour le balisage aéronautique au sol

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Международная Электротехническая Комиссия

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CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTRICAL INSTALLATIONS FOR LIGHTING AND BEACONING OF AERODROMES – MAINTENANCE OF AERONAUTICAL GROUND LIGHTING CONSTANT CURRENT SERIES CIRCUITS

FOREWORD

1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the 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, the IEC publishes International Standards. 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. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61821 has been prepared by IEC technical committee 97: Electrical installations for lighting and beaconing of aerodromes.

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

FDIS	Report on voting
97/77/FDIS	97/84/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 3.

The committee has decided that the contents of this publication will remain unchanged until 2006. At this date, the publication will be

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

INTRODUCTION

This International Standard contains the management, safety and procedural requirements specific to the maintenance of an aeronautical ground lighting (AGL) constant current series circuit and has taken into consideration existing national standards, requirements and practices. The maintenance activities are required to ensure that the AGL constant current series circuit continues to meet the operational requirements and minimise the occurrence of operational failures.

To conform to this International Standard it should be demonstrated to the relevant bodies that the requirements have been satisfied and therefore that the clause objective(s) has(have) been met.

NOTE Examples of relevant bodies would include the following:

- certification and licensing authorities;
- safety regulators;
- notified bodies for international or European directives;
- national standards bodies.

ELECTRICAL INSTALLATIONS FOR LIGHTING AND BEACONING OF AERODROMES – MAINTENANCE OF AERONAUTICAL GROUND LIGHTING CONSTANT CURRENT SERIES CIRCUITS

1 Scope

This International Standard applies to the maintenance of AGL constant current series circuits.

This International Standard

- covers constant current series circuits for AGL installed at aerodromes and heliports;
- concentrates on providing the safety requirements for the maintenance of an AGL constant current series circuit. It is recognised that AGL constant current series circuits of different design characteristics and parameters are in existence;
- is mainly concerned with safety to persons by specifying the rules and fundamental principles for the maintenance of AGL constant current series circuits;
- is not intended to apply to AGL primary series circuits supplied directly from a mains constant voltage source;
- is not intended to be used for public street lighting, roadway lighting or any other installation requiring the use of constant current series circuits.

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 60903:1988, *Specification for gloves and mitts of insulating material for live working*

IEC/TS 62143, – *Electrical installations for the lighting and beaconing of aerodromes – Aeronautical ground lighting systems – Guidelines for the development of a safety life-cycle methodology* [1)]

IEC/ISO Guide 51:1999, *Safety aspects – Guidelines for their inclusion in standards*

3 Definitions

For the purpose of this International Standard the following definitions apply.

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1) To be published.

3.1
aerodrome authority
organisation accountable for the safety and security of persons, aircraft operations and facilities at an aerodrome

3.2
AGL constant current series circuit
apparatus configured as an electrical circuit designed to produce and operate with a constant current, independent of specified load variations, in order to provide a specified light for aeronautical purposes

3.3
AGL operator
person responsible for the control of the AGL to permit the safe movement of aircraft

3.4
caution sign
non-metallic safety sign attached to equipment conveying a warning against interference with such equipment

3.5
constant current regulator (CCR)
apparatus which produces a current output at a constant r.m.s. value independent of variations in the constant current series circuit load, input voltage and service conditions as specified

3.6
contractor
organisation or person(s) given a written order to provide a service or undertake specified work

3.7
dead
free from any electrical connection to a source of potential difference and from electric charge; not having a potential different from that of the earth

3.8
earthed
connected to the general mass of earth in such a manner as to ensure at all times an immediate discharge of electrical energy without harm

3.9
electrical equipment
anything used, intended to be used or installed for use, to generate, provide, transmit, transform, rectify, convert, conduct, distributes, control, store, measure or use electrical energy

3.10
harm
physical injury or damage to the health of people either directly, or indirectly, as a result of damage to property or to the environment.

[ISO/IEC Guide 51, 3.3, modified]