SLOVENSKI STANDARD

SIST EN 61822:2003

oktober 2003

Electrical installations for lighting and beaconing of aerodromes - Constant current regulators

ICS 29.140.50; 93.120

Referenčna številka
SIST EN 61822:2003(en)

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61822

June 2003

ICS 93.120; 29.140.50

English version

Electrical installations for lighting and beaconing of aerodromes - Constant current regulators
(IEC 61822:2002, modified)

Installations électriques pour l'éclairage et le balisage des aérodromes - Régulateurs du courant constant
(CEI 61822:2002, modifiée)

Elektrische Anlagen für Beleuchtung und Befeuerung von Flugplätzen - Konstantstromregler
(IEC 61822:2002, modifiziert)

This European Standard was approved by CENELEC on 2003-02-01. 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 61822:2003 E

Foreword

The text of document 97/86/FDIS, future edition 1 of IEC 61822, 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 61822 on 2003-02-01 together with a common modification prepared by the Technical Committee CENELEC TC 97.

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) 2004-01-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2006-02-01

Annexes designated "normative" are part of the body of the standard.
In this standard, annex ZA is normative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61822:2002 was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

1 Scope

At the end of the second sentence, **delete** "in order to be used on existing circuits".

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 60038 (mod)	- [1)]	IEC standard voltages [2)]	HD 472 S1 + corr. February	1989 [3)] 2002
IEC 60439-1 + corr. December	1992 1993	Low-voltage switchgear and controlgear assemblies Part 1: Type-tested and partially type-tested assemblies	EN 60439-1	1994 [4)]
IEC 60529	- [1)]	Degrees of protection provided by enclosures (IP Code)	EN 60529 + corr. May	1991 [3)] 1993
IEC 61000-6-2 (mod)	- [1)]	Electromagnetic compatibility (EMC) Part 6-2: Generic standards - Immunity for industrial environments	EN 61000-6-2	2001 [3)]
IEC 61000-6-4 (mod)	- [1)]	Part 6-4: Generic standards - Emission standard for industrial environments	EN 61000-6-4	2001 [3)]
IEC/TS 61000-6-5	- [1)]	Part 6-5: Generic standards - Immunity for power station and substation environments	-	-
IEC 61140	- [1)]	Protection against electric shock - Common aspects for installation and equipment	EN 61140	2002 [3)]
CISPR 11 (mod)	- [1)]	Industrial, scientific and medical (ISM) radio-frequency equipment - Radio disturbance characteristics - Limits and methods of measurement	EN 55011	1998 [3)]
CISPR 22 (mod)	- [1)]	Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement	EN 55022	1998 [3)]

[1)] Undated reference.

[2)] The title of HD 472 S1 is: Nominal voltages for low-voltage public electricity supply systems.

[3)] Valid edition at date of issue.

[4)] EN 60439-1 is superseded by EN 60439-1:1999, which is based on IEC 60439-1:1999.

INTERNATIONAL STANDARD

IEC 61822

First edition
2002-06

Electrical installations for lighting and beaconing of aerodromes – Constant current regulators

Installations électriques pour l'éclairage et le balisage des aérodromes – Régulateurs de courant constant

International Electrotechnical Commission, 3, rue de Varembé, PO Box 131, CH-1211 Geneva 20, Switzerland
Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: inmail@iec.ch Web: www.iec.ch

Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

PRICE CODE S

For price, see current catalogue

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTRICAL INSTALLATIONS FOR LIGHTING AND BEACONING OF AERODROMES – CONSTANT CURRENT REGULATORS

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 liasing 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 61822 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
97/86/FDIS	97/90/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.

ELECTRICAL INSTALLATIONS FOR LIGHTING AND BEACONING OF AERODROMES – CONSTANT CURRENT REGULATORS

1 Scope

This International Standard specifies the requirements for a Constant Current Regulator (CCR) having a nominal output of 6,6 A for use in an aeronautical ground lighting constant current series circuit. However CCRs may be manufactured which have a different power rating (kVA) and current steps than those specified in this standard in order to be used on existing circuits. This standard shall be applied where appropriate for these CCRs.

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 60038, *IEC standard voltages*

IEC 60439-1:1991, *Low-voltage switchgear and controlgear assemblies – Part 1: Type-tested and partially type-tested assemblies*

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

IEC 61000-6-2, *Electromagnetic compatibility (EMC) – Part 6-2: Generic standards – Immunity for industrial environments*

IEC 61000-6-4, *Electromagnetic compatibility (EMC) – Part 6: Generic standards – Section 4: Emission standard for industrial environments*

IEC/TS 61000-6-5, *Electromagnetic compatibility (EMC) – Part 6-5: Generic standards – Immunity for power station and substation environments*

IEC 61140, *Protection against electric shock – Common aspects for installation of equipment*

CISPR 11, *Industrial, scientific and medical (ISM) radio-frequency equipment – Electromagnetic disturbance characteristics – Limits and methods of measurement*

CISPR 22, *Information technology equipment – Radio disturbance characteristics – Limits and methods of measurement*

3 Terms and definitions

For the purposes of this International Standard, the following definitions developed to be included in international standards relating to airport/aerodrome visual aids apply

3.1
aeronautical ground lighting (AGL) constant current series circuit
apparatus configured as an electrical circuit designed to produce and operate with a constant current, independent of variations in the load, in order to provide a specified light for aeronautical purposes

3.2
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

3.3
contractor
organisation or person(s) given a written order to provide a service or undertake specified work

3.4
earthed
connected to the ground in such a manner as to ensure at all times an immediate discharge of electrical energy to reduce the danger of equipment damage or personnel injury

3.5
electrical equipment
anything used, intended to be used or installed for use, to generate, provide, transmit, transform, rectify, convert, conduct, distribute, control, store, measure or use electrical energy

3.6
injury
death or personnel injury from electric shock, electric burn, electrical explosion or arcing, or from fire or explosion initiated by electrical energy, where any such death or injury is associated with the generation, provision, transmission, transformation, rectification, conversion, conduction, distribution, control, storage, measurement or use of electrical energy

3.7
isolate
to disconnect and separate electrical equipment from the normal source(s) of electrical energy in such a way that the disconnection and separation is secure

3.8
live
electrically connected to a source of electricity or having acquired a charge by other means

3.9
work/working (on electrical equipment)
installing, dismantling, assembling, maintaining or repairing of electrical equipment

4 Classification

4.1 Output current

The CCR shall produce a maximum rated r.m.s. current output of 6,6 A and a minimum rated r.m.s. current output of 1,8 A.

4.2 Current steps

CCRs shall be classified according to the number of output current steps available, as follows:

style 1 3 current steps;

style 2 5 current steps.

Each step shall have a single adjustment over the full range specified in 4.1.

NOTE An additional low current step(s) for non-illumination purposes may be offered as an option (see5.7.6). Each style CCR can be configured to operate with a reduced number of current steps.