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Electrical installations for lighting and beaconing of aerodromes - AGL series transformers

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**Electrical installations for lighting and beaconing of aerodromes -  
AGL series transformers  
(IEC 61823:2002, modified)**

Installations électriques pour le balisage  
et l'éclairage des aérodromes -  
Transformateurs séries AGL  
(CEI 61823:2002, modifiée)

Elektrische Anlagen für Beleuchtung  
und Befeuerung von Flugplätzen -  
Serienstromtransformatoren  
(IEC 61823:2002, modifiziert)

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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**

## Foreword

The text of document 97/94/FDIS, future edition 1 of IEC 61823, 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 61823 on 2003-02-01 together with common modifications 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, annexes A and ZA are normative.  
Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 61823:2002 was approved by CENELEC as a European Standard with agreed common modifications as given below.

### COMMON MODIFICATIONS

**3.1.2 Add** at the end of the definition ", unless otherwise stated"

**4.4 Add** at the end of the first paragraph "(See Annex A.)".

## Bibliography

**Add** the following note for IEC 61821:

NOTE Harmonized as EN 61821:2003 (not modified).

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## 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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60085	- <sup>1)</sup>	Thermal evaluation and classification of electrical insulation	HD 566 S1	1990 <sup>2)</sup>
IEC 61822 (mod.)	- <sup>1)</sup>	Electrical installations for lighting and beaconing of aerodromes - Constant current regulators	EN 61822	2003 <sup>2)</sup>
ISO 48	- <sup>1)</sup>	Rubber, vulcanized or thermoplastic Determination of hardness (hardness between 10 IRHD and 100 IRHD)	-	-

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<sup>1)</sup> Undated reference.

<sup>2)</sup> Valid edition at date of issue.

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# INTERNATIONAL STANDARD

# IEC 61823

First edition  
2002-12

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## Electrical installations for lighting and beaconing of aerodromes – AGL series transformers

*Installations électriques pour le balisage  
et l'éclairage des aérodromes –  
Transformateurs séries AGL*

SIST EN 61823:2003

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International Electrotechnical Commission  
Международная Электротехническая Комиссия

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# INTERNATIONAL ELECTROTECHNICAL COMMISSION

## ELECTRICAL INSTALLATIONS FOR LIGHTING AND BEACONING OF AERODROMES – AGL SERIES TRANSFORMERS

### 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 61823 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
97/94/FDIS	97/95/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.

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 – AGL SERIES TRANSFORMERS

### 1 Scope

This standard specifies the characteristics of aeronautical ground lighting series transformers (AGLST) used in aeronautical ground lighting for 6,6 A series circuits, at a service voltage of up to 5 kV, supplied by constant current regulators up to 30 kVA in rating.

AGL series transformers provide power to airport lighting luminaires or other loads (resistive) from their secondary circuits. The AGL series transformers provide continuity of the series circuit in the event of a loss of the load on the transformer, and electrical isolation between the primary circuit supplied by a constant current regulator, and the secondary circuit connected to the load under conditions defined in this standard.

An AGL series transformer is to be able to withstand a permanent short or open-circuit secondary series circuit.

Specifications for similar series transformers intended for any primary or secondary currents other than 6,6 A, or to supply alternative voltages, constant power, reactive loads, etc., are not included in 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 60085, *Thermal evaluation and classification of electrical insulation*

IEC 61822, *Electrical installations for lighting and beaconing of aerodromes – Constant current regulators*

ISO 48, *Rubber, vulcanised or thermoplastic – Determination of hardness (hardness between 10 IRHD and 100 IRHD)*

### 3 Definitions and abbreviated terms

#### 3.1 Definitions

For the purposes of this standard the following definitions apply.

Where the terms voltage and current are used, they shall be r.m.s. values unless otherwise stated.

##### 3.1.1

##### **AGL series transformer**

aeronautical ground lighting series transformer, as specified in this standard

##### 3.1.2

##### **ambient temperature**

the temperature of the air or other medium surrounding the AGL series transformer; for testing purposes, a temperature of  $(20 \pm 5) ^\circ\text{C}$