

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

The European Standard EN 61823:2003 has the status of a
British Standard

ICS 29.140.50; 93.120

National foreword

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English version

**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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CENELEC

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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with the EN have to be withdrawn (dow) 2006-02-01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.

Endorsement notice

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

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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 $(20 \pm 5) ^\circ\text{C}$ [C] unless otherwise stated [C]

3.1.3**nominal power**

arbitrarily selected values of power used in this standard for convenience to refer to AGL series transformers with different characteristics

3.1.4**rated frequency**

the frequency or frequency range for which the AGL series transformer is designed to operate

3.1.5**rated power**

the range of powers for which each AGL series transformer is suitable.

NOTE The low and high values of these ranges are given in Table 1.

3.1.6**rated primary current**

the current at which the primary of the AGL series transformer is designed to operate

3.1.7**rated secondary current**

the current at which the secondary of the AGL series transformer is designed to operate

3.1.8**routine test**

test for the purpose of checking manufactured products for compliance with this standard

3.1.9**service voltage**

the maximum primary or secondary voltage at which the AGL series transformer is designed to operate

3.1.10**type test**

a test to confirm that the product design and production processes are capable of providing products that meet the requirements of this standard

3.1.11**type test sample**

a sample consisting of one or more similar samples used for a type test

3.2 Abbreviated terms

AC1	Source of mains power
AC2	High voltage a.c. source
AGLST	AGL series transformer
DC1	Source of d.c. power
CCR	Constant current regulator as specified in IEC 61822
I_1, I_2	Primary and secondary currents respectively, as measured by ammeters or equivalent devices
U_1, U_2	Primary and secondary voltages respectively, as measured by voltmeters or equivalent devices
P_1, P_2	Active power measurements or calculations of respectively the primary and secondary circuits of an AGL series transformer