

Stationary lead-acid batteries

General requirements and methods of test

Part 1. Vented types

The European Standard EN 60896-1 : 1991 has the status of a
British Standard

Batteries stationnaires au plomb —
Prescriptions générales et méthodes d'essai
Première partie: Batteries au plomb du type
ouvert

Ortsfeste Blei-Akkumulatoren —
Allgemeine Anforderungen und Prüfungen
Teil 1: Geschlossene Batterien

Cooperating organizations

The European Committee for Electrotechnical Standardization (CENELEC), under whose supervision this European Standard was prepared, comprises the national committees of the following countries:

Austria	Italy
Belgium	Luxembourg
Denmark	Netherlands
Finland	Norway
France	Portugal
Germany	Spain
Greece	Sweden
Iceland	Switzerland
Ireland	United Kingdom

This British Standard, having been prepared under the direction of the Light Electrical Engineering Standards Policy Committee, was published under the authority of the Standards Board and comes into effect on 15 August 1992

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The following BSI references relate to the work on this standard:
Committee reference LEL/12
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Amendments issued since publication

Amd. No.	Date	Text affected

Amendment No. 1
published and effective from 15 July 1993
to BS EN 60896-1 : 1992

Stationary lead-acid batteries
General requirements and methods of test
Part 1. Vented types

NOTE. The English language version of European Standard EN 60896-1 was implemented in the United Kingdom by the publication of BS EN 60896-1 : 1992. This amendment implements amendment A2 to EN 60896-1 : 1991. This amendment together with the European Standard EN 60896-1 : 1992 as amended by amendment A1 has the status of a British Standard.

Revised text

National foreword

In line 6, after 'Amendment No 1 (1988)' insert 'and Amendment No 2 (1990)'.

AMD 7863/July 1993

EN title page and foreword

Insert the attached EN title page (foreword on reverse).

AMD 7863/July 1993

Text of EN 60896-1 (as amended by amendment A1)

Amend the text of European Standard EN 60896-1 in accordance with the details given on the attached pages.

AMD 7863/July 1993

UDC 621.355.2

Descriptors: Lead-acid batteries, specifications, characteristics, tests

Amendment A2 to the English version of EN 60896-1

Stationary lead-acid batteries – General requirements and methods of test Part 1: Vented types

(IEC 896 : 1987/A2 : 1990)

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(IEC 896 : 1987/A2 : 1990)

This amendment A2 modifies the European Standard EN 60896-1 : 1991. It was approved by CENELEC on 1992-09-15. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, 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 CENELEC questionnaire procedure, performed for finding out whether or not the International Standard IEC 896-1 : 1987/A2 : 1990 could be accepted without textual changes, has shown that no common modifications were necessary for the acceptance as European Standard.

The reference document was submitted to the CENELEC members for formal vote and was approved by CENELEC as EN 60896-1/A2 on 15 September 1992.

The following dates were fixed:

- latest date of publication of
an identical national standard (dop) 1993-03-15
- latest date of withdrawal of
conflicting national standards (dow) 1993-03-15

For products which have complied with EN 60896-1 : 1991 before 1993-03-15, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 1998-03-15.

CONTENTS

Add a new Section Six: Marking.

Delete Appendix A.

SECTION ONE - GENERAL

Replace Clauses 1 and 2 by the following:

1. Scope

This standard is applicable to lead-acid cells and batteries which are designed for service in fixed location (i.e. not habitually to be moved from place to place) and which are permanently connected to the load and to the d.c. power supply. Batteries operating in such applications are called "stationary batteries".

Any type or construction of lead-acid battery may be used for stationary battery applications. This Part 1 of the standard is applicable to vented types only. A Part 2 will be prepared for valve-regulated types.

2. Object

The object of this standard is to specify general requirements and the main characteristics, together with corresponding test methods associated with all types and construction modes of lead-acid stationary batteries, excluding valve-regulated types. Recommendations on the use of tests for stationary battery application are given in Table I. Recommendations relating the type of cell or monobloc to the use of tests are given in Table II.

Statements and claims of basic performance data by the manufacturer shall correspond to those tests. The tests may also be used for type-qualification.

SECTION THREE - FUNCTIONAL CHARACTERISTICS AND SPECIFIC REQUIREMENTS

Sub-clause 7.2b), Note:

Replace the existing note by the following:

Note.- In some batteries with Monobloc design the voltage of individual cells cannot be measured. In those cases the assessment of uniformity should be made with the voltage of individual Monobloc-units.

After Clause 18 add a new Section Six:

SECTION SIX - MARKING

19. Cell and battery description

The following information shall be permanently marked on the cell or monobloc:

- a) voltage,
- b) manufacturer's or supplier's type reference,
- c) capacity, with an indication of the rating expressed as a current or as time of discharge,
- d) manufacturer's or supplier's name,
- e) electrolyte density (fully charged at reference temperature),
- f) date of manufacture (month and year).

20. Information to be included on the cell or monobloc package

Safety recommendations as required by local, national or international regulations.

21. Recommended information for the battery room

- a) voltage (battery),
- b) manufacturer's or supplier's type reference,
- c) ampere-hour capacity with rate of discharge and end voltage,
- d) installer's name,
- e) commission date,
- f) electrolyte density (fully charged at the reference temperature),
- g) statements on safety recommendations, operation and maintenance.

22. Marking of polarity

22.1 General provision for marking of cell polarity

To comply with this standard, stationary battery cells and monoblocs shall carry the polarity marking, at least of the positive terminal.

22.2 Form of marking

The marking shall take the form of the symbol +, indented or in relief, on the lid adjacent to the positive terminal.

If the negative terminal is also marked, the marking shall take the form of the symbol -, indented or in relief, on the lid adjacent to the negative terminal.

22.3 Symbols used for marking and their dimensions

Symbols used for marking of the polarity shall be in accordance with IEC 417: Graphical symbols for use on equipment.

The marking of the positive terminal shall be in accordance with the symbol: 5005-a, Positive polarity.

Where used, the marking of the negative terminal shall be in accordance with the symbol: 5006-a, Negative polarity.

The actual value of the dimension "a" of these symbols shall be greater than or equal to 5 mm.

Note.- A dimension "a" of 5 mm corresponds to a total length of each arm of the symbol equal to 6 mm.

Delete: Appendix A and replace Tables AI and AII by the following Tables I and II.

