



# SLOVENSKI STANDARD

## SIST HD 465.2 S1:1997

01-februar-1997

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### Lead-acid traction batteries - Part 1: Dimensions of cells and terminals and marking of polarity on cells

Lead-acid traction batteries -- Part 2: Dimensions of cells and terminals and marking of polarity on cells

Blei-Antriebsbatterien -- Teil 2: Maße von Zellen und Endanschlüssen und Kennzeichnung der Polarität von Zellen

Batteries de traction au plomb -- Partie 2: Dimensions des éléments et des bornes et indication de la polarité sur les éléments

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Ta slovenski standard je istoveten z: **HD 465.2 S1:1987**

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#### **ICS:**

29.220.20	Kislinski sekundarni člani in baterije	Acid secondary cells and batteries
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PART 2: DIMENSIONS OF CELLS AND TERMINALS AND  
MARKING OF POLARITY ON CELLSBatteries de traction au plomb  
Deuxième partie: Dimensions des  
éléments et des bornes et  
indication de la polarité sur  
les élémentsBlei-Antriebsbatterien  
Teil 2: Maße von Zellen  
und Endpolen und Kennzeichnung  
der Polarität auf Zellen

## BODY OF THE HD

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The Harmonization Document consists of:

- IEC 254-2 (1985) ed 2; IEC/TC 21, not appended

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 This Harmonization Document was approved by CENELEC on 15 June 1987.

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**Batteries de traction au plomb**

**Deuxième partie: Dimensions des éléments et des bornes  
et indication de la polarité sur les éléments**

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**Lead-acid traction batteries**

**Part 2: Dimensions of cells and terminals and marking  
of polarity on cells**



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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## LEAD-ACID TRACTION BATTERIES

Part 2: Dimensions of cells and terminals and marking  
of polarity on cells

## FOREWORD

- 1) The formal decisions or agreements of the IEC on technical matters, prepared by Technical Committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
- 2) They have the form of recommendations for international use and they are accepted by the National Committees in that sense.
- 3) In order to promote international unification, the IEC expresses the wish that all National Committees should adopt the text of the IEC recommendation for their national rules in so far as national conditions will permit. Any divergence between the IEC recommendation and the corresponding national rules should, as far as possible, be clearly indicated in the latter.

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## PREFACE

This standard has been prepared by IEC Technical Committee No. 21: Secondary Cells and Batteries.

This second edition replaces the first edition of IEC Publication 254-2 (1973) and the first supplement, Publication 254-2A (1974).

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

Six Months' Rule	Report on Voting	Two Months' Procedure	Report on Voting
21(CO)194	21(CO)213	} 21(CO)281	} 21(CO)284
21(CO)235	21(CO)247		
21(CO)243	21(CO)252		
21(CO)260	21(CO)271		
21(CO)262	21(CO)272		
21(CO)242	21(CO)251	21(CO)281 and 21(CO)262	21(CO)284 and 21(CO)272

Further information can be found in the relevant Reports on Voting indicated in the table above.

The following IEC publications are quoted in this standard:

Publication Nos. 95-2 (1984): Lead-acid Starter Batteries, Part 2: Dimensions of Batteries and Dimensions and Marking of Terminals.

417 (1973): Graphical Symbols for Use on Equipment. Index, Survey and Compilation of the Single Sheets.

## LEAD-ACID TRACTION BATTERIES

### Part 2: Dimensions of cells and terminals and marking of polarity on cells

#### SECTION ONE — GENERAL

##### 1. Scope

This standard applies to traction battery cells, battery terminals and marking of the cells' polarity.

##### 2. Object

The object of the present standard is to specify:

- the maximum external (overall) dimensions of traction battery cells, that is the width, the height and the length;
- the form of the marking of traction battery cell polarity and dimensions of corresponding symbols;
- the basic dimensions of conical traction battery terminals designed to connect output cables.

#### SECTION TWO — MAIN DIMENSIONS OF TRACTION BATTERY CELLS

##### 3. Standard series

Traction battery cells in accordance with this standard shall belong to one of the following two dimensional series determined by the width:

E (narrow)                      L (wide)

##### 4. External dimensions

4.1 The external (overall) dimensions of traction battery cells are represented by the following symbols:

*b* . . . . . width (dimension parallel to the surface of the plates)

*h* . . . . . height (including lid, vent plugs and terminals, but without output cable)

*l* . . . . . length (dimension perpendicular to the surface of the plates)

4.2 The dimensions of traction battery cells in accordance with this standard shall correspond to those of Table I.

### SECTION THREE — MARKING OF THE POLARITY ON TRACTION BATTERY CELLS AND DIMENSIONS OF CORRESPONDING SYMBOLS

#### 5. General provisions for marking of cell polarity

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

##### 5.1 Form of marking

The marking shall take the form of the symbol +, intended 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.

##### 5.2 Symbols used for marking and their dimensions

Symbols used for the marking of the polarity shall be in accordance with IEC Publication 417: Graphical Symbols for Use on Equipment. Index, Survey and Compilation of the Single Sheets.

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

The eventual marking of the negative terminal shall be in accordance with the symbol: 5006-a: Negative polarity.

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

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

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 SECTION FOUR — BASIC DIMENSIONS OF TRACTION  
 BATTERY TERMINALS

#### 6. General provisions for dimensions of battery terminals

This standard gives only basic dimensions of standardized types of terminals necessary to ensure interchangeability.

##### 6.1 Standardized types of terminals

The traction battery terminals in accordance with this standard shall be chosen from the three following standardized types, the dimensions of which are listed in Table II:

A                      B                      C

*Notes 1.* — The maximum cross-sectional areas of single-core flexible cables intended for use with each terminal design are:

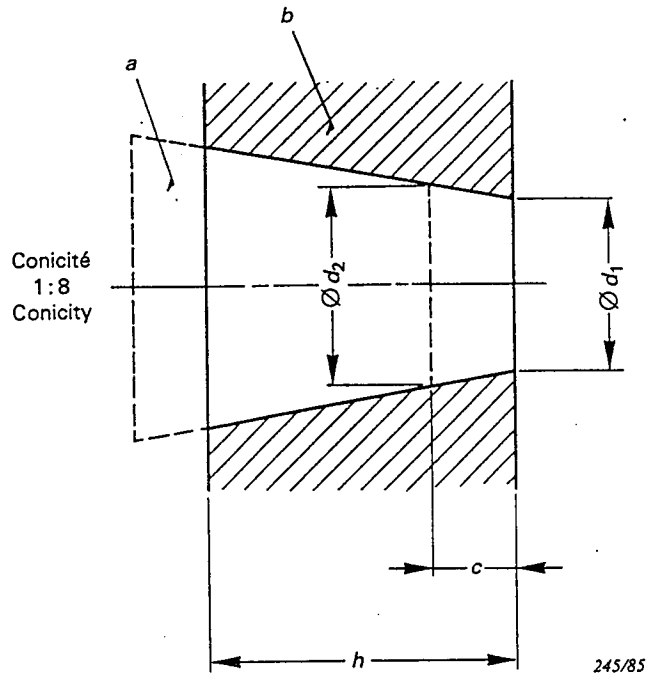
50 mm<sup>2</sup> for Type A  
 70 mm<sup>2</sup> for Type B  
 90 mm<sup>2</sup> for Type C

2. — For smaller size connections, reference should be made to the dimensions of terminals shown in IEC Publication 95-2: Lead-acid Starter Batteries, Part 2: Dimensions of batteries and Dimensions and Marking of Terminals.

##### 6.2 Basic dimensions of conical traction battery terminals (conical cable end and socket)

The basic dimensions of conical traction battery terminals in accordance with this standard shall correspond to the requirements given in Figure 1, page 8, and Table II.





*a* — embout de câble conique  
conical cable end

*b* — cosse conique  
conical socket

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FIG. 1. — Dimensions de base des bornes coniques terminales des batteries de traction.  
Basic dimensions of conical traction battery terminals.

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