

Gj]bY Ybc! _]g`]bg_YnU[cbg_Y`VUhf]`Y!" "XY.`G]ghYa `df]_`f _cj `df]`VUhf]`U `n bUn]j bc`bUdYf`ghc`" * `J

Lead-acid starter batteries - Part 3: Terminal system for batteries with 36 V nominal voltage

Blei-Akkumulatoren-Starterbatterien - Teil 3: Anschlusssystem für Batterien mit 36 V Nennspannung

Batteries de démarrage au plomb - Partie 3: Système de bornes pour batteries de tension nominale de 36 V

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Ta slovenski standard je istoveten z: EN 50342-3:2008

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29.220.20 Sä |ä • \ ä ^ \ ~ } å æ } ä | ^ } ä ð Acid secondary cells and batteries

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EUROPEAN STANDARD
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EN 50342-3

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English version

**Lead-acid starter batteries -
Part 3: Terminal system for batteries with 36 V nominal voltage**

Batteries de démarrage au plomb -
Partie 3: Système de bornes
pour batteries de tension nominale de 36 V

Blei-Akkumulatoren-Starterbatterien -
Teil 3: Anschlusssystem für Batterien
mit 36 V Nennspannung

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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

This European Standard was prepared by the Technical Committee CENELEC TC 21X, Secondary cells and batteries.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 50342-3 on 2008-10-01.

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) | 2009-10-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2011-10-01 |

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Contents

1	Scope	4
2	Normative references.....	4
3	Definitions	4
4	Design, dimensions and resignations.....	4
4.1	General.....	4
4.2	System of battery terminals.....	5

Figures

Figure 1 – Top view of battery terminals	5
Figure 2 – Cut A–A across the terminal.....	6
Figure 3 – Plastic cap for protection of lead taper	8
Figure 4 – Touch protection with polarity coding	9

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1 Scope

This European Standard is applicable to lead-acid batteries used for starting, lighting and ignition of passenger automobiles and light commercial vehicles with a nominal voltage of 36 V. This standard specifies the position, details of design and dimensions of a system of battery terminals.

Starter batteries with 36 V nominal voltage may have the same dimensions and means for fixation as 6 V or 12 V batteries. This can be either intentional or unintentional. Therefore, the compatibility of batteries with 36 V nominal voltage down to electric power nets with 6 V or 12 V nominal voltage should be prevented. Such design of a 36 V termination and contacting system must prevent the case to be connected to a 6 V or 12 V power net in order to avoid serious damage in the 6 V or 12 V power net. For the same reason the design of the battery terminals must prevent that standard commercial jumper-cables may be contacted to the 36 V battery terminals if the battery is installed in the vehicle or not.

A commercial application of this standard must expressively be agreed upon as the final standard may differ from the present draft.

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.

EN 50342-1	Lead-acid starter batteries – Part 1: General requirements and methods of test
EN 61429	Marking of secondary cells and batteries with the international recycling symbol ISO 7000-1135 and indications regarding directives 93/86/EEC and 91/157/EEC (IEC 61429)
EN ISO 1043	Series Plastics – Symbols and abbreviated terms (ISO 1043 Series)
IEC 60050-482	International Electrotechnical Vocabulary (IEV) – Part 482: Primary and secondary cells and batteries
IEC 60417	Graphical symbols for use on equipment

3 Definitions

For the purposes of this document, the terms and definitions of the International Electrotechnical Vocabulary (IEC 60050-482) are applicable.

4 Design, dimensions and resignations

4.1 General

All measures are indicated in millimetres.

Mechanical tensions must be kept away from the bushings of the battery. A free space at the side and behind each terminal is required for electric/electronic devices. Further on the free space may provide the possibility to support the cables mechanically.

The system of battery terminals must prevent reversed polarity in order to avoid damages in the 36 V power net.

4.2 System of battery terminals

4.2.1 Position of terminals in relation to the outer contours

Figure 1 shows the top view of the battery with the systems of the positive and negative battery terminals and their position to the outer contour of the battery cover.

The position and dimension of the battery terminals including the free space besides the terminals are identical for the battery dimension LN3-36V through LN6-36V.

As well Figure 1 shows the position of the marking of polarity and the device for the rotatable touch-prevention.

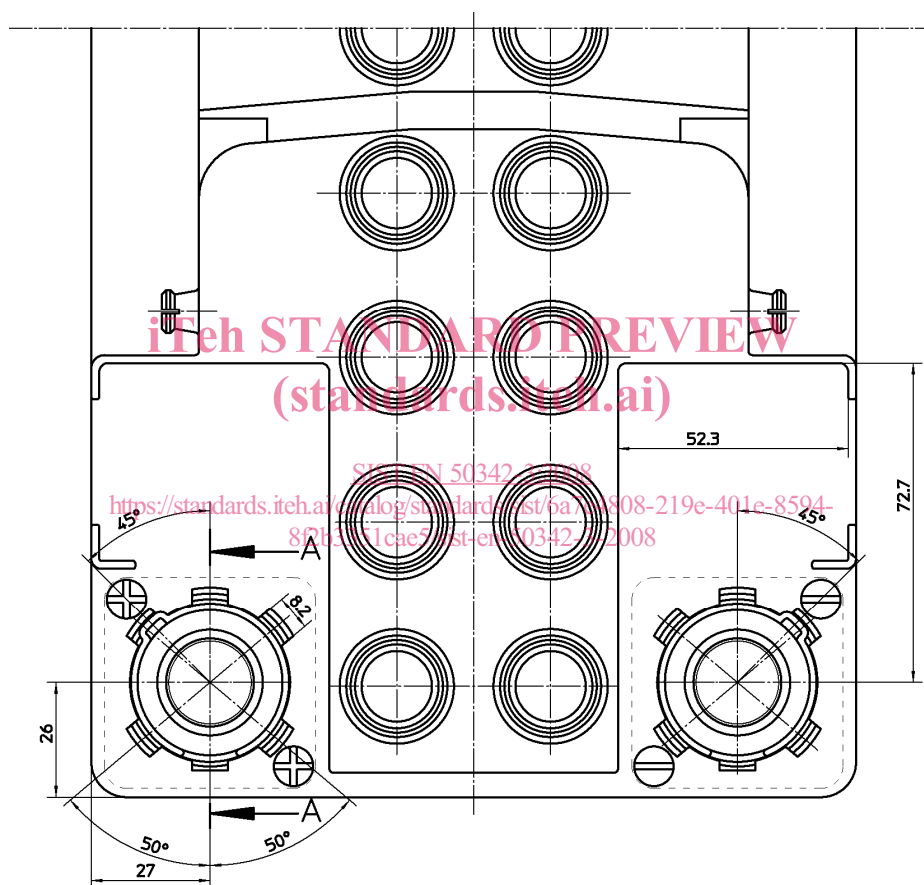


Figure 1 – Top view of battery terminals

4.2.2 Cut A-A, sectional view of the system of battery terminals

Figure 2 shows the cut AA across the terminals with the following details:

- contacting sleeve;
- plastic cap for protection of lead taper (Figure 3);
- clips for touch protection;
- touch protection (Figure 4).

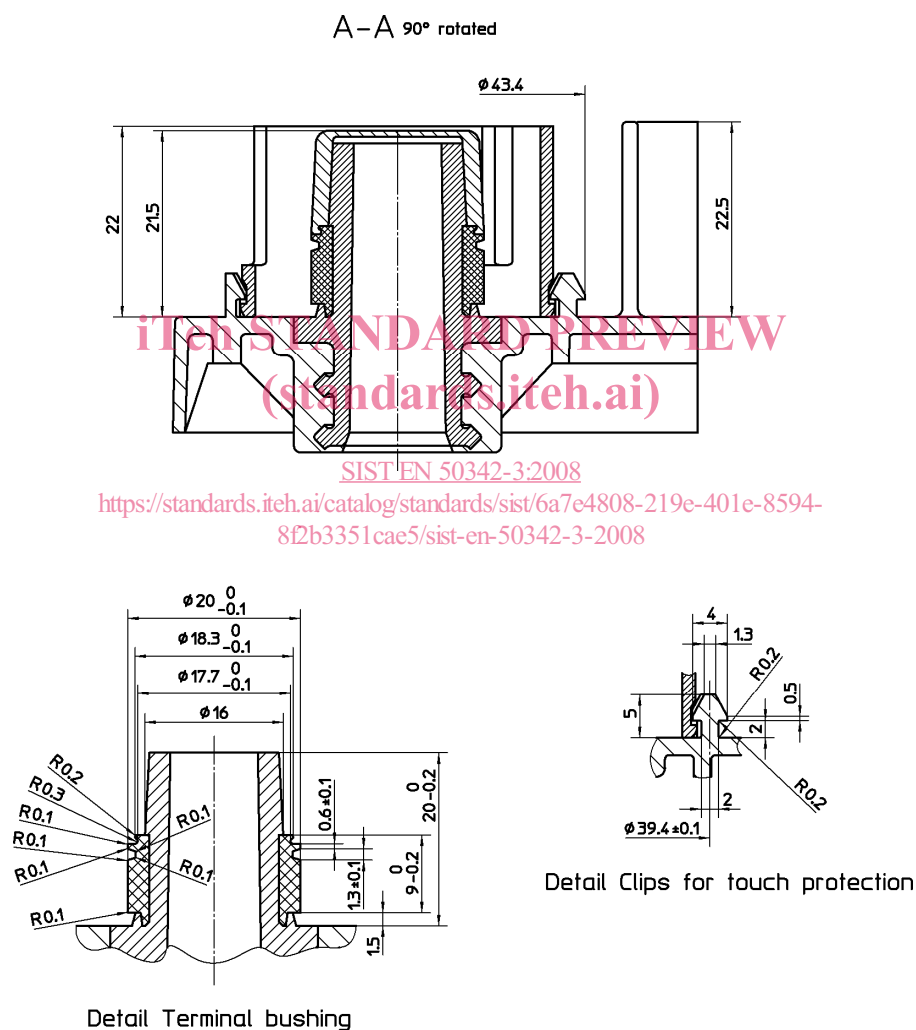


Figure 2 – Cut A-A across the terminal

4.2.3 Basic terminal with contacting sleeve

The basic terminal is a lead-cone (shown single hatched) with a tinned sleeve made from brass for the electrical contact (shown double hatched). The contact may be positioned and rotated in the area of the niche walls of the terminal by an angle of more than 225°.

NOTE The surface of the tinned sleeve needs to be specified later.

In the upper section the sleeve has a groove around. This groove may be used for additional mechanical fixation of the electrical contact.

The free portion of the lead-cone can be used by the battery manufacturer for the formation. This lead-cone is covered by means of a plastic cap (4.2.5) before delivering the battery.

4.2.4 Clips for the rotatable touch protection

The battery lid surface includes six clips for touch protection centrically around each terminal. These clips have grooves at the inside to hold the rotatable touch protection.

Five of these clips have also grooves at the outside (at the sixth groove this is not realizable because of manufacturing process reasons). These grooves may be used alternatively for the mechanical fixation of the electric contact if necessary.

NOTE The outside grooves may be cancelled, if they are not needed.

4.2.5 Plastic cap for terminal protection

The cap for terminal protection according to Figure 3 prevents short circuits between the two polarities. At the same time the cap for terminal protection together with the touch protection (4.2.6) prevents to use standard jumper-cables.

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The plastic cap is mounted by the manufacturer and remains unchanged on the battery during the battery life. The cap clips into the upper contour of the contacting sleeve and closes flush with the sleeve.

For contacting the electrical contacting clamp is pushed over the cap.

4.2.6 Rotatable touch protection

The battery terminal is covered in its full height by a continuously rotating touch protection device (Figure 4). This touch protection device is a plastic cylinder and is permanently connected to the battery cover with its clips. The slot in the cylinders is used for intrusion and positioning of the battery cables.

The battery terminals and the touch protection have the same dimensions for both polarities. In order to achieve prevention of reversed polarity the touch protection features differently positioned codes.

4.2.7 Free space behind the terminal

Behind respectively at the side of the terminal the battery cover features a rectangular free space of minimum area of 50 mm x 50 mm. This free space may be used for components like electronic parts or distributors.

Furthermore, the free space may be used to keep away mechanical tensions of the battery cable from the terminal bushing.

4.2.8 Marking of polarity

For the marking of the polarity polarity signs are moulded into the battery cover. In addition the caps for terminal protection are marked in different colours.