



SLOVENSKI STANDARD SIST EN 50342-2:2021

01-februar-2021

Nadomešča:

SIST EN 50342-2:2008

SIST EN 50342-2:2008/A1:2016

Svinčeno-kislinske zaganjalne baterije - 2. del: Mere baterij in označevanje priključkov

Lead-acid starter batteries - Part 2: Dimensions of batteries and marking of terminals

Blei-Akkumulatoren-Starterbatterien - Teil 2: Maße von Batterien und Kennzeichnung von Anschlüssen

Batteries d'accumulateurs de démarrage au plomb - Partie 2: Dimensions des batteries et marquage des bornes

<https://standards.iteh.ai/catalog/standards/sist/1354ff1-52fa-4389-9c0e-43c8fe932d3d/sist-en-50342-2-2021>

Ta slovenski standard je istoveten z: EN 50342-2:2019

ICS:

29.220.20	Kislinski sekundarni člani in baterije	Acid secondary cells and batteries
-----------	--	------------------------------------

SIST EN 50342-2:2021

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 50342-2:2021

<https://standards.iteh.ai/catalog/standards/sist/1354ff1-52fa-4389-9c0e-43c8fe932d3d/sist-en-50342-2-2021>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 50342-2

October 2019

ICS 29.220.20

Supersedes EN 50342-2:2007 and all of its amendments
and corrigenda (if any)

English Version

Lead-acid starter batteries - Part 2: Dimensions of batteries and marking of terminals

Batteries d'accumulateurs de démarrage au plomb - Partie
2: Dimensions des batteries et marquage des bornes

Blei-Akkumulatoren-Starterbatterien - Teil 2: Maße von
Batterien und Kennzeichnung von Anschlüssen

This European Standard was approved by CENELEC on 2019-08-19. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

(standards.iteh.ai)

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents

	Page
European foreword	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	4
4 General requirements.....	4
4.1 General.....	4
4.2 Marking	4
4.2.1 Safety labelling.....	4
4.2.2 Marking of the polarity of terminals.....	4
4.3 Recycling	5
4.3.1 Recycling of lead	5
4.3.2 Recycling of plastic material	5
4.4 Dimensions and design	6
5 Recommended types.....	6
5.1 General.....	6
5.2 Main dimensions of batteries	6
5.3 Handles	11
5.3.1 General.....	11
5.3.2 Mounting of handles.....	12
5.4 Mounting of batteries	12
5.4.1 General.....	12
5.4.2 Dimensions and arrangement of ledges and notches	12
5.5 Terminals	13
5.5.1 Position of terminals	13
5.5.2 Dimensions of battery terminals	13
5.5.3 Marking of polarity.....	14
5.6 Special features of the battery lid	14
5.6.1 General.....	14
5.6.2 Semi bloc lid.....	14
5.6.3 Central degassing.....	14
5.6.4 Recessed holes.....	15
5.6.5 Removable cell plugs	16
5.6.6 Position of sensor openings	16
5.7 Handling of starter batteries by robot-equipment.....	16
5.8 Bulging and reinforcement of battery side walls	18
6 Other battery types	19
6.1 General.....	19
6.2 Main dimensions of batteries	20
6.3 Handles	25
6.4 Mounting of batteries	25
6.4.1 General.....	25
6.4.2 Dimensions and arrangement of ledges and notches	25
6.5 Terminals	26
6.5.1 Position of terminals	26
6.5.2 Dimensions of battery terminals	26
6.5.3 Marking of polarity.....	26
6.6 Handling of starter batteries by robot-equipment.....	26
Bibliography	29

European foreword

This document (EN 50342-2:2019) has been prepared by CLC/TC 21X "Secondary cells and batteries".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2020-08-19
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2022-08-19

This document supersedes EN 50342-2:2007 and all of its amendments and corrigenda (if any).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN 50342-2:2021

<https://standards.iteh.ai/catalog/standards/sist/1354ff1-52fa-4389-9c0e-43c8fe932d3d/sist-en-50342-2-2021>

EN 50342-2:2019 (E)

1 Scope

This document is applicable to lead-acid batteries used for starting, lighting and ignition of passenger automobiles and light commercial vehicles with a nominal voltage of 12 V.

All batteries in accordance with this document can be fastened to the vehicle either by means of the ledges around the case or by means of a hold-down device engaging with the lid.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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*

IEC 60050-482, *International Electrotechnical Vocabulary (IEV) - Part 482: Primary and secondary cells and batteries*

IEC 60417, *Graphical Symbols for use on Equipment*

ISO 11469, *Plastics — Generic identification and marking of plastics products*

ISO 1043-1, *Plastics — Symbols and abbreviated terms — Part 1: Basic polymers and their special characteristics*

iTeh STANDARD PREVIEW
(standards.iteh.ai)

3 Terms and definitions

For the purpose of this document, the terms and definitions given in IEC 60050-482 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

4 General requirements

4.1 General

The following specifications are common to all vehicle batteries, not only for the batteries of this standard.

4.2 Marking

4.2.1 Safety labelling

The batteries shall bear the six coloured safety symbols in accordance with EN 50342-1.

4.2.2 Marking of the polarity of terminals

4.2.2.1 General

The batteries shall be marked with signs for both polarities that have to be positioned near to or on the top face of the terminals.

4.2.2.2 Marking of positive terminals

This marking shall take the form of the symbol “+” either on the upper surface of the positive terminal or on the lid adjacent to the positive terminal.

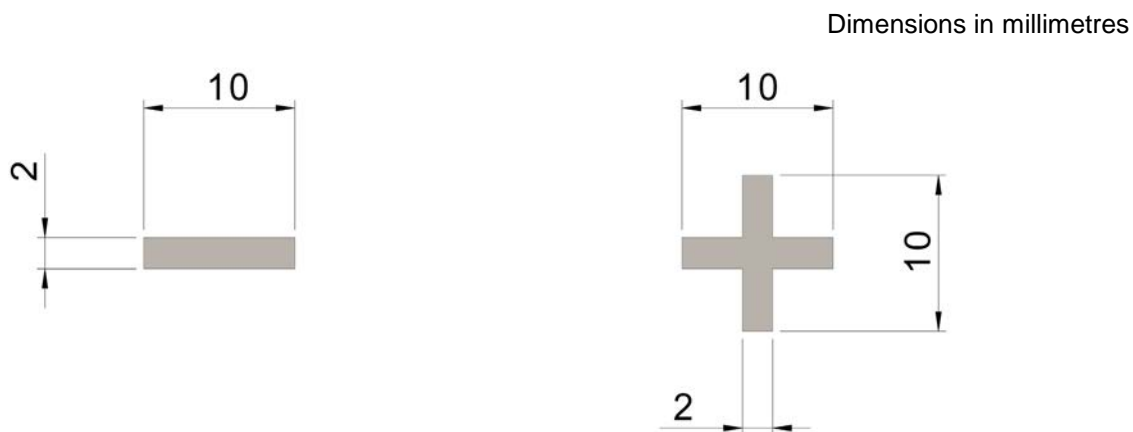
4.2.2.3 Marking of negative terminals

This marking shall take the form of the symbol “-” either on the upper surface of the negative terminal or on the lid adjacent to the negative terminal.

4.2.2.4 Design and dimensions of marking of terminals

The symbols used for marking the terminals shall be in accordance with the IEC 60417, symbol 5005 for the positive and symbol 5006 for the negative polarity.

The dimensions of the marking shall be according to Figure 1.



iTeh STANDARD PREVIEW
Figure 1 — Marking of polarity
 (standards.iteh.ai)

The polarity symbols may be either indented or embossed by $(0,4 \pm 0,1)$ mm.

4.3 Recycling

[SIST EN 50342-2:2021](https://standards.iteh.ai/catalog/standards/sist/1354ff1-52fa-4389-9c0e-43c8fe932d3d/sist-en-50342-2-2021)

[https://standards.iteh.ai/catalog/standards/sist/1354ff1-52fa-4389-9c0e-](https://standards.iteh.ai/catalog/standards/sist/1354ff1-52fa-4389-9c0e-43c8fe932d3d/sist-en-50342-2-2021)

4.3.1 Recycling of lead

[43c8fe932d3d/sist-en-50342-2-2021](https://standards.iteh.ai/catalog/standards/sist/1354ff1-52fa-4389-9c0e-43c8fe932d3d/sist-en-50342-2-2021)

The batteries shall be marked with the symbols for recycling and separate collection in accordance with EN 61429 as it relates to European Directives.

4.3.2 Recycling of plastic material

Injection moulded battery components need to be marked according to ISO 11469 and ISO 1043-1. The marking shall be placed on the bottom of the battery container or on one short side near the ledge.

According to ISO 11469 and ISO 1043-1, the minimum marking for polypropylene-polyethylene copolymer is > PP < or > PP/PE < .

In addition it is possible to show the recycling symbol with number 7 (Unicode Character 'RECYCLING SYMBOL FOR TYPE-7 PLASTICS' (U+2679) according to ISO/IEC 10646) and the term “Other”.

The recommended thickness is $(0,3 \pm 0,1)$ mm. The height of the marking characters shall be between 5 mm and 7 mm.

An example for this marking is shown in Figure 2.



Figure 2 — Marking of polypropylene-polyethylene copolymer battery components

4.4 Dimensions and design

All dimensions in this document are given in millimetres.

All dimensions given in this document correspond to a temperature of 20 °C of the polypropylene-polyethylene copolymer.

Details of the design that are not indicated in the generic drawings need to be chosen appropriately.

The generic drawings in this standard are possible examples only. Especially the design of the lid, handles, ribs, ledges and vent caps are not mandatory in total.

5 Recommended types

5.1 General

For new battery developments, only the recommended series shall be used.

This clause specifies:

- the main dimensions of starter batteries of the preferred LN series;
- the location of the positive and negative terminals with respect to the fastening system;
- the dimensions of tapered terminals of starter batteries;

5.2 Main dimensions of batteries

The main dimensions of the batteries of the LN series are shown in Table 1 and Figure 3, Figure 4, Figure 5 and Figure 6.

NOTE The schematic drawings do not show every design detail of the battery.

The followings symbols are used:

- a1 = Overall length at the battery base with ledges
- a2 = Length at the battery base without ledges
- a3 = Length at battery lid
- a4 = Distance of the inside notches
- a5 = Distance between terminal and the edges of the lid at the short side (see Figure 3 and Figure 5)
- a6 = Distance of the grips-segments for handling by robot equipment (see Figure 13)
- A = Position of optional sensors (see Figure 12)
- B = Position of optional sensors (see Figure 12)
- H = Overall height including lid and plugs
- h = Height of the top clamping area supporting the hold-down device

Table 1 — Main dimensions of batteries of standard series LN

Dimensions in millimetres

Type	a ₁ +0 / -2	a ₂ ± 1	a ₃ +0 / -3	a ₄ +0 / -1	a ₅ ± 2	a ₆ ± 2	A ± 2	B ± 2	H +0 / -3	h +0 / -4
LN 0	175	161	175	40	19	79	13	40	190	168
LN 1	207	193	207	40	24	95	18	48		
LN 2	242	228	242	40	26	113	19	57		
LN 3	278	264	277	40	29	130	27	65		
LN 4	315	301	314	40	31	150	27	74		
LN 5	353	339	352	60	27	168	28	84		
LN 6	394	379	393	60	30	187	31	94		

Dimensions in millimetres

**Key**

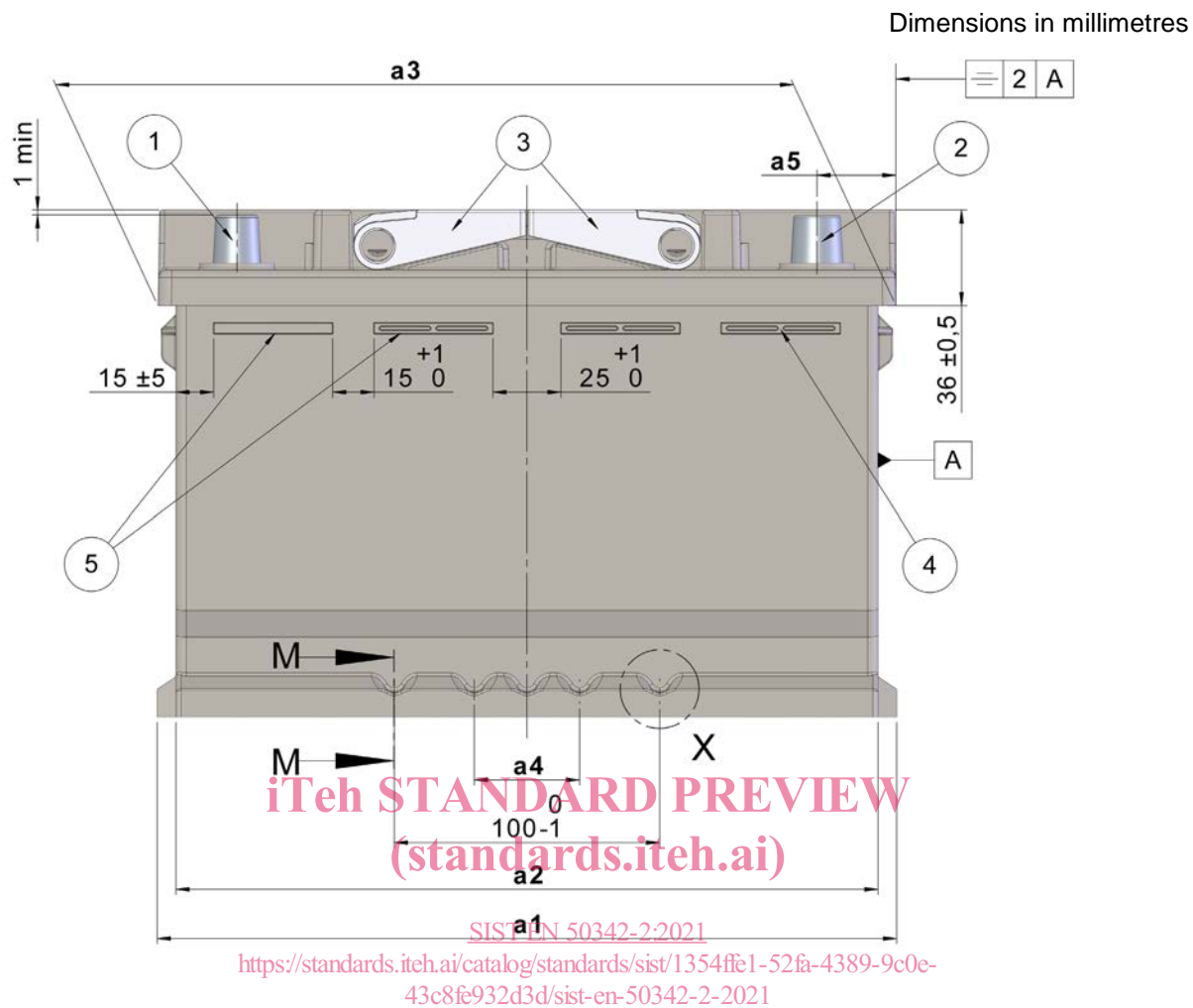
- 1 Ledge on battery front side
- 2 Ledge on battery back side

Figure 4 — Details of Figure 3

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 50342-2:2021](https://standards.iteh.ai/catalog/standards/sist/1354ff1-52fa-4389-9c0e-43c8fe932d3d/sist-en-50342-2-2021)

<https://standards.iteh.ai/catalog/standards/sist/1354ff1-52fa-4389-9c0e-43c8fe932d3d/sist-en-50342-2-2021>

**Key**

- 1 Negative terminal
- 2 Positive terminal
- 3 Handles shown as example only
- 4 Both versions acceptable
- 5 Interruption acceptable

Figure 5 — Main dimensions of batteries of standard series LN — Front view