# PINGEALUNE TÖÖ. KESK- JA MADALPINGEPAIGALDISTES KASUTATAVAD ELEKTRIISOLATSIOONIGA KIIVRID

Live Working - Electrically insulating helmets for use on low and medium voltage installations

## FFSTI STANDARDI FFSSÕNA

## NATIONAL FORFWORD

See Eesti standard EVS-EN 50365:2023 sisaldab Euroopa standardi EN 50365:2023 ingliskeelset teksti.

Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.

Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 22.12.2023.

Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.

This Estonian standard EVS-EN 50365:2023 consists of the English text of the European standard EN 50365:2023.

This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.

Date of Availability of the European standard is 22.12.2023.

The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 13.260, 13.340.20

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardimis- ja Akrediteerimiskeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardimis-ja Akrediteerimiskeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardimis-ja Akrediteerimiskeskusega: Koduleht <a href="https://www.evs.ee">www.evs.ee</a>; telefon 605 5050; e-post <a href="mailto:info@evs.ee">info@evs.ee</a>

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation and Accreditation No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation and Accreditation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation and Accreditation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

# EUROPEAN STANDARD NORME EUROPÉENNE

**EUROPÄISCHE NORM** 

**EN 50365** 

December 2023

ICS 13.260; 13.340.20

Supersedes EN 50365:2002

#### **English Version**

# Live Working - Electrically insulating helmets for use on low and medium voltage installations

Travaux sous tension - Casques électriquement isolants pour utilisation sur installations à basse et à moyenne tension Elektrisch isolierende Helme für Arbeiten an Nieder- und Mittelspannungsanlagen

This European Standard was approved by CENELEC on 2023-12-04. 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.

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, Türkiye 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**

Eui	opean	foreword	6
1	Scope	e	7
2	Norm	ative references	7
3	Term	s and definitions	7
4	Regu	irements	8
	4.1 '	General	
	4.2	Non-electrical requirements	
	4.2.1	General	
	4.2.2	Helmet Design	
	4.3	Electrical requirements	
	4.3.1	General	
	4.3.2	Electrical Classification	10
	4.4	Marking	10
	4.4.1	General	10
	4.4.2	Colour code	11
	4.5	Packaging	11
	4.6	Instruction for use	11
5	Туре	testing	12
	5.1	General	12
	5.2	Non-electrical type tests	12
	5.3	Electrical type tests	12
	5.3.1	General	12
	5.3.2	Test arrangement	
	5.3.3	Preconditioning	14
	5.3.4	AC Proof test voltage	14
	5.3.5	AC Withstand test voltage	
	5.3.6	DC Proof voltage test	
	5.4	Marking	
	5.4.1	Visual inspection	
	5.4.2	Durability	
	5.5	Packaging	
	5.6	Instructions of use	
6		native testing after production	16
7		od for assessment of defects and verification of performance applicable to electrically ating helmets having completed the production phase	16
8	Modif	ications	16
Anı	nex A (r	normative) Suitable for live working: double triangle (IEC 60417-5216:2002-10)	17
	•	normative) Example of Marking	
		nformative) Additional recommendations and information to the instructions for use	
		ral	
		ge	
		ination before use	
		aution in use	

.5 Precaution after use	19	
.6 Periodic test	20	
.7 Obsolescence	20	
nnex D (normative) Chronological order for type testing		
nnex E (normative) Classification of tests and defects to be allocated	22	
Annex F (informative) Rationale for the classification of defects		
Annex ZZ (informative) Relationship between this European standard and the essential requirements of Regulation (EU) 2016/425 aimed to be covered		
Bibliography	25	
Sibliography		

# **European foreword**

This document (EN 50365:2023) has been prepared by CLC/TC 78 "Equipment and tools for live working".

The following dates are fixed:

- Latest date which this document has to be implemented at national level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with this document have to be withdrawn
  (dow) 2026-12-04

This document supersedes EN 50365:2002 and all its amendments and corrigenda (if any).

EN 50365:2023 includes the following significant technical changes with respect to EN 50365:2002

- Change of scope to test helmets up to Class 2
- Update on normative references
- Definitions for Brim, Crown and Shell
- Helmet design types Type A and B
- Additional marking required for voltage and design type
- DC testing
- Alternative testing after production
- Removal of air hole design test
- Only electrical aspect are covered
- Addition of Annex ZZ

Terms defined in Clause 3 are given in *italic* print throughout this standard.

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.

This document has been prepared under a standardization request addressed to CENELEC by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZZ, which is an integral part of this document.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

# 1 Scope

This document specifies the electrical requirements and testing for *electrically insulating helmets* that provide electrical insulating protection of head of the worker against electric shock used for when working live or near to live parts on installations not exceeding 17 000 V AC or 1 500 V DC.

The products designed and manufactured according to this document contribute to the safety of the users provided they are used by skilled persons, in accordance with EN 50110-1:2023 and/or National Regulations.

This document does not cover arc flash or additional helmet accessories such as face shields, ear defenders, lamps and voltage detectors and doesn't cover mechanical requirements and tests.

#### 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 397:2012+A1:2012, Industrial safety helmets

EN 443:2008, Helmets for fire fighting in buildings and other structures

EN 14052:2012+A1:2012, High performance industrial helmets

EN 50110-1:2023, Operation of electrical installations - Part 1: General requirements

EN 60060-1:2010, High-voltage test techniques - Part 1: General definitions and test requirements (IEC 60060-1:2010)

EN 60212:2011, Standard conditions for use prior to and during the testing of solid electrical insulating materials (IEC 60212:2010)

EN IEC 61318:2021, Live working - Methods for assessment of defects and verification of performance applicable to tools, devices and equipment (IEC 61318:2021)

### 3 Terms and definitions

For the purposes of the present document, the following terms and definitions apply.

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

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

#### 3.1

#### brim

rim surrounding the shell

[SOURCE: ISO 3873:1977,3.4]

#### 3.2

#### crown

area on the upper outside surface of the helmet centred on the top

## 3.3

# electrically insulating helmet

safety helmet which protects the wearer against electrical shocks by preventing the passage of dangerous current through the body via the head