SLOVENSKI STANDARD
SIST EN IEC 61851-23-3:2026

01-december-2026

Sistem kabelskega napajanja električnih vozil - 23-3. del: Postaja za kabelsko napajanje električnega vozila z enosmernim tokom - Megavatni napajalni sistemi (IEC 61851-23-3:2026)

Electric vehicle conductive charging system - Part 23-3: DC electric vehicle supply equipment - Megawatt charging systems (IEC 61851-23-3:2026)

Konduktive Ladesysteme für Elektrofahrzeuge - Teil 23-3: Gleichstromversorgungseinrichtungen für Elektrofahrzeuge - Megawatt-Ladesysteme (IEC 61851-23-3:2026)

Sample Document

Système de charge par conduction pour véhicules électriques - Partie 23-3: Système d'alimentation en courant continu pour véhicules électriques - Système de recharge mégawatt (IEC 61851-23-3:2026)

Ta slovenski standard je istoveten z: **EN IEC 61851-23-3:2026**

ICS:

43.120	Električna cestna vozila	Electric road vehicles

SIST EN IEC 61851-23-3:2026 **en**

2003-01.Slovenski inštitut za standardizacijo. Razmnoževanje celote ali delov tega standarda ni dovoljeno.

Sample Document

get full document from standards.iteh.ai

SIST EN IEC 61851-23-3:2026

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 61851-23-3

October 2026

ICS 43.120

English Version

Electric vehicle conductive charging system - Part 23-3: DC electric vehicle supply equipment - Megawatt charging systems (IEC 61851-23-3:2026)

Système de charge par conduction pour véhicules électriques - Partie 23-3: Système d'alimentation en courant continu pour véhicules électriques - Système de recharge mégawatt
(IEC 61851-23-3:2026)

Konduktive Ladesysteme für Elektrofahrzeuge - Teil 23-3: Gleichstromversorgungseinrichtungen für Elektrofahrzeuge - Megawatt-Ladesysteme
(IEC 61851-23-3:2026)

This European Standard was approved by CENELEC on 2026-09-25. 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.

Sample Document

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.

get full document from 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, 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

© 2026 CENELEC All rights of exploitation in any form and by any means reserved worldwide for CENELEC Members.

Ref. No. EN IEC 61851-23-3:2026 E

SIST EN IEC 61851-23-3:2026 • https://standards.iteh.ai/catalog/standards/sist/6983fcf6-9181-4ce5-9ae8-678a23c8af61/sist-en-iec-61851-23-3-2026

SIST EN IEC 61851-23-3:2026

European foreword

The text of document 69/1132/FDIS, future edition 1 of IEC 61851-23-3, prepared by TC 69 "Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61851-23-3:2026.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2027-10-31
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2029-10-31

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 is read in conjunction with EN IEC 61851-1:2019 and EN IEC 61851-23:2026.

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.

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.

Sample Document
get full document from standards.iteh.ai

Endorsement notice

The text of the International Standard IEC 61851-23-3:2026 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standard indicated:

IEC 60664-1:2020	NOTE	Approved as EN IEC 60664-1:2020 (not modified)
IEC 60664-1:2020/AMD1:2025	NOTE	Approved as EN IEC 60664-1:2020/A1:2025 (not modified)
IEC 61851-23:2014	NOTE	Approved as EN 61851-23:2014 (not modified)
IEC 61851-23	NOTE	Approved as EN 61851-23
IEC 61851-24	NOTE	Approved as EN IEC 61851-24
IEC 62196-3	NOTE	Approved as EN IEC 62196-3
IEC 62477-1:2022	NOTE	Approved as EN IEC 62477-1:2023 (not modified)
ISO 15118-2:2014	NOTE	Approved as EN ISO 15118-2:2016 (not modified)

SIST EN IEC 61851-23-3:2026 • https://standards.iteh.ai/catalog/standards/sist/6983fcf6-9181-4ce5-9ae8-678a23c8af61/sist-en-iec-61851-23-3-2026

SIST EN IEC 61851-23-3:2026

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cencenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60364-4-43	2023	Low-voltage electrical installations - Part 4-43: Protection for safety - Protection against overcurrent	HD 60364-4-43	2023
IEC 60364-5-54	2011	Low-voltage electrical installations - Part 5-54: Selection and erection of electrical equipment - Earthing arrangements and protective conductors	HD 60364-5-54	2011
-	-		+ A11	2017
IEC 61851-23	2023	Electric vehicle conductive charging system - Part 23: DC electric vehicle supply equipment	EN IEC 61851-23	2026
IEC/TS 63379	2026	Vehicle connector, vehicle inlet and cable assembly for megawatt DC charging	-	-
ISO 5474-3	2024	Electrically propelled road vehicles - Functional and safety requirements for power transfer between vehicle and external electric circuit - Part 3: DC power transfer	-	-
ISO 15118-10	2025		EN ISO 15118-10	2025
ISO 15118-20	2022	Road vehicles - Vehicle to grid communication interface - Part 20: 2nd generation network layer and application layer requirements	EN ISO 15118-20	2022
+ A1	2026		+ A1	2026
IEEE 802.3-2022		IEEE Standard for Ethernet	-	-
		10BASE-T1S channel and components requirements for link segments - Electrical requirements and measurements specification for 10BASE-T1S channels and components [online], Open Alliance Inc. Version 1.1, 2025, [viewed 2026-02-05]. Available at: https://opensig.org/wpcontent/uploads/2025/06/10BASE-T1S-Channel-and-Component-Requirements-for-Link-Segments.pdf	-	-

Sample Document
get full document from standards.iteh.ai

SIST EN IEC 61851-23-3:2026 • https://standards.iteh.ai/catalog/standards/sist/6983fcf6-9181-4ce5-9ae8-678a23c8af61/sist-en-iec-61851-23-3-2026

Sample Document

get full document from standards.iteh.ai

SIST EN IEC 61851-23-3:2026

IEC 61851-23-3

Edition 1.0 2026-08

INTERNATIONAL STANDARD

Electric vehicle conductive charging system -
Part 23-3: DC electric vehicle supply equipment - Megawatt charging systems

Sample Document
get full document from standards.iteh.ai

ICS 43.120

ISBN 978-2-8327-1438-6

IEC 61851-23-3:2026-08(en)

SIST EN IEC 61851-23-3:2026 • https://standards.iteh.ai/catalog/standards/sist/6983fcf6-9181-4ce5-9ae8-678a23c8af61/sist-en-iec-61851-23-3-2026

SIST EN IEC 61851-23-3:2026

CONTENTS

FOREWORD 4
INTRODUCTION 6
1 Scope 7
2 Normative references 7
3 Terms and definitions 8
4 General requirements 9
5 Classification 9
6 Charging modes and functions 9
7 Communications 18
8 Protection against electric shock 19
9 Conductive electrical interface requirements 23
10 Requirements for adaptors 24
11 Cable assembly requirements 24
12 EV supply equipment constructional requirements and tests 24
13 Overload and short-circuit protection 25
14 Automatic reclosing of protective devices 26
15 Emergency switching or disconnect (optional) 26
16 Marking and instructions 26
101 Specific requirements for EV supply equipment 27
102 Test methods 33
Annexes 37
Annex AA (normative) EV supply equipment of system A 38
Annex BB (normative) EV supply equipment of system B 39
Annex CC (normative) EV supply equipment of system C 40
Annex EE (normative) Test load impedance verification 135
Annex FF (normative) Multi-side B separated EV supply equipment 137
Annex GG (informative) Communication and energy transfer process between the EV supply equipment and the EV 139
Annex HH (informative) Touch current and touch impulse current 140
Annex AAA (informative) Auxiliary power supply through the insertion detection circuit 144
Bibliography 147

Figure 201 – Typical voltages between side B live parts (DC+/DC−) and protective conductor under normal operation 13
Figure 202 – Measurement of the touch leakage current 15
Figure 203 – Examples of a fault between the secondary circuit and the protective conductor 16
Figure 204 – Example of the voltage range for active and passive voltage balancing with a system Y-capacitance according to Table 203 20
Figure 205 – Insulation barriers 21
Figure 206 – Test arrangement MCS_0 30
Figure 207 – General test setup for system MCS 34
Figure 208 – Test load example 35

Sample Document
Get full document from standards.iteh.ai

SIST EN IEC 61851-23-3:2026 • https://standards.iteh.ai/catalog/standards/sist/6983fcf6-9181-4ce5-9ae8-678a23c8af61/sist-en-iec-61851-23-3-2026

SIST EN IEC 61851-23-3:2026

Figure CC.201 – Circuit diagram for an EV supply equipment of configuration HH 42
Figure CC.202 – Example of a filtering circuit for the charge enable circuit 47
Figure CC.203 – Example of a filtering circuit for the insertion detection circuit 47
Figure CC.204 – Equivalent disabled side B of the EV supply equipment 49
Figure CC.205 – Sequence diagram for normal start up 53
Figure CC.206 – Sequence diagram for normal shutdown during energy transfer by EV or EV supply equipment 58
Figure CC.207 – Sequence diagram for EV supply equipment and EV initiated error shutdown 62
Figure CC.208 – Sequence diagram for an emergency shutdown executed by the EV 66
Figure CC.209 – Sequence diagram for an emergency shutdown executed by the EV supply equipment 68
Figure CC.210 – Sequence diagram for pause before cable-check phase by EV supply equipment using ISO 15118-20:2022 and ISO 15118-20:2022/AMD1:2026 71
Figure CC.211 – Sequence diagram for pause after pre-charge phase and before energy transfer stage by the EV supply equipment using ISO 15118-20:2022 and ISO 15118-20:2022/AMD1:2026 75
Figure CC.212 – Worst case equivalent circuit during pre-charge 85
Figure CC.213 – Restart methods sequence for the EV supply equipment 87
Figure CC.214 – Restart verification method on the EV supply equipment 88
Figure CC.215 – Example of a CE state B0 – B transition 88
Figure CC.216 – Restart methods sequence for the EV 89
Figure CC.217 – Example of a B0 – EC – B0 toggle 90
Figure CC.218 – Approaching a single test point TP in CCM (example 1) 95
Figure CC.219 – Approaching multiple test points TP_n CCM (example 2) 95
Figure CC.26 – Voltage at the vehicle connector 107
Figure CC.220 – Test setup for IMD measurement connections 131
Figure EE.201 – Magnitude of the impedance of the test load between DC+ and DC− for system MCS 135
Figure HH.201 – C_1 limit: Y-capacitance considering a human body resistance of 575 Ω 142

Table 201 – Comparison between IEC 61851-23 and IEC 61851-23-3 6
Table 202 – Voltage threshold for emergency shutdown reaction 11
Table 203 – Maximum Y-capacitance of the EV supply equipment at side B 19
Table 204 – Minimum protective measures 22
Table 205 – Current ripple limit of the EV supply equipment 27
Table 206 – Recommended circuit parameters of the test load 36
Table CC.201 – EV supply equipment component values and tolerances for configuration HH 42
Table CC.202 – EV component values and tolerances for configuration HH 43
Table CC.203 – System states of configuration HH based on the CE voltage 44
Table CC.204 – Charge enable states and voltage ranges for the EV supply equipment 44
Table CC.205 – Charge enable states and voltage ranges for the EV 45
Table CC.206 – Insertion detection states and voltage ranges for the EV supply equipment 45

Sample Document
get full document from standards.iteh.ai

SIST EN IEC 61851-23-3:2026 • https://standards.iteh.ai/catalog/standards/sist/6983fcf6-9181-4ce5-9ae8-678a23c8af61/sist-en-iec-61851-23-3-2026

SIST EN IEC 61851-23-3:2026

Table CC.207 – Insertion detection states and voltage ranges for the EV 46
Table CC.208 – EV supply equipment components for charge enable and insertion detection filtering 48
Table CC.209 – EV components for charge enable and insertion detection filtering 48
Table CC.210 – Component limits for the disabled side B of the EV supply equipment 50
Table CC.211 – Message code mapping for sequence diagram 52
Table CC.212 – Sequence description for normal start up 54
Table CC.213 – Sequence description for normal shutdown during energy transfer by EV or EV supply equipment 59
Table CC.214 – Overview of error and emergency shutdown cases 61
Table CC.215 – Sequence description for EV supply equipment and EV initiated error shutdown 63
Table CC.216 – Sequence diagram for an emergency shutdown executed by the EV 67
Table CC.217 – Sequence diagram an emergency shutdown executed by the EV supply equipment 69
Table CC.218 – Sequence description for pause before cable-check phase by EV supply equipment using ISO 15118-20:2022 and ISO 15118-20:2022/AMD1:2026 72
Table CC.219 – Sequence description for pause after pre-charge phase and before energy transfer stage by the EV supply equipment using ISO 15118-20:2022 and ISO 15118-20:2022/AMD1:2026 76
Table CC.220 – Insulation states and EV supply equipment reaction based on the insulation resistance 82
Table CC.221 – Values to design the EV supply equipment during pre-charge based on Figure CC.212 85
Table CC.222 – Current ripple limits 104
Table CC.223 – Component valued for the inrush current limit test 109
Table CC.224 – Current ripple limits 111
Table CC.225 – Test setup values to measure side B voltage regulation in CVM during pre-charge 112
Table CC.226 – Current ripple limits 114
Table CC.227 – EV simulator characteristics 125
Table EE.201 – Test load parameters for system MCS 135
Table AAA.1 – Auxiliary voltage source of the EV supply equipment X_S1 144
Table AAA.2 – Auxiliary voltage source of the EV X_V2 146

Sample Document
get full document for standards.iteh.ai

SIST EN IEC 61851-23-3:2026 • https://standards.iteh.ai/catalog/standards/sist/6983fcf6-9181-4ce5-9ae8-678a23c8af61/sist-en-iec-61851-23-3-2026

SIST EN IEC 61851-23-3:2026

INTERNATIONAL ELECTROTECHNICAL COMMISSION

_____

Electric vehicle conductive charging system - Part 23-3: DC electric vehicle supply equipment - Megawatt charging systems

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
6) All users should ensure that they have the latest edition of this publication.
7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at https://patents.iec.ch. IEC shall not be held responsible for identifying any or all such patent rights.

Sample Document
get full document from standards.iteh.ai

IEC 61851-23-3 has been prepared by IEC technical committee 69: Electric power/energy transfer systems for electrically propelled road vehicles and industrial trucks. It is an International Standard.

The text of this International Standard is based on the following documents:

Draft	Report on voting
69/1132/FDIS	69/1147/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

SIST EN IEC 61851-23-3:2026 • https://standards.iteh.ai/catalog/standards/sist/6983fcf6-9181-4ce5-9ae8-678a23c8af61/sist-en-iec-61851-23-3-2026

SIST EN IEC 61851-23-3:2026

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

This document is to be read in conjunction with IEC 61851-1:2017 and IEC 61851-23:2023.

The clauses of particular requirements in this document supplement or modify the corresponding clauses in IEC 61851-23:2023 and IEC 61851-1:2017. Where the text of subsequent clauses indicates an "addition", an "amendment" to or a "replacement" of the relevant requirement, test specification or explanation of IEC 61851-23:2023 or IEC 61851-1:2017, these changes are made to the relevant text of IEC 61851-23:2023 or IEC 61851-1:2017, which then becomes part of this document. Where no change is necessary, the words "IEC 61851-23:2023, [clause], is applicable" are used, where [clause] indicated the relevant clause. Replaced tables and figures are numbered starting from 201. Any additional items (clause, subclause, figure, etc.), which are not included in IEC 61851-23:2023, have a number starting from 201, for example 3.201, 201.1, etc. The new annexes of this document are numbered using triple-alphabet, for example Annex AAA to avoid confusion with the annexes of IEC 61851-23:2023.

In this document, the following print types are used:

– *test specifications: italic type*.

– notes: smaller roman type.

A list of all parts in the IEC 61851 series, published under the general title *Electric vehicle conductive charging system*, can be found on the IEC website.

Sample Document

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

get full document from standards.iteh.ai

– reconfirmed,

– withdrawn, or

– revised.

SIST EN IEC 61851-23-3:2026 • https://standards.iteh.ai/catalog/standards/sist/6983fcf6-9181-4ce5-9ae8-678a23c8af61/sist-en-iec-61851-23-3-2026

SIST EN IEC 61851-23-3:2026

INTRODUCTION

Responding to the global challenges of CO_2 reduction and energy security, the automobile industry has started the development and commercialization of heavy-duty electric vehicles (EV). These heavy duty EVs are equipped with significantly larger batteries than passenger cars or light commercial vehicles. The charging power provided by standards published before the publication of this document does not allow recharging of these batteries within the time needed for a commercial application of heavy duty EVs – especially considering long routes with limited time for intermediate charging. Consequently, this document allows for superior charging power up to several megawatts and describes the related safety and interoperability requirements. Table 201 shows the comparison between IEC 61851-23 and this document.

Table 201 – Comparison between IEC 61851-23 and IEC 61851-23-3

Topic	IEC 61851-23:2023	IEC 61851-23-3
Rated maximum voltage of the EV supply equipment at side B (EV side)	1 000 V	1 250 V
Rated continuous current of the EV supply equipment at side B (EV side)	Maximum as defined in IEC 62196-3	As defined in IEC TS 63379
Basic signalling	CP and PP (Annex CC)	CE and ID
Digital communication	HomePlug GreenPHY (IEC 61851-24) with ISO 15118-2, ISO 15118-20 or DIN SPEC 70121 as application layer	Ethernet 10BASE-T1S (ISO 15118-10) with ISO 15118-20 as application layer

Sample Document

Although the system described in this document has been developed for heavy duty EVs, its application is not limited practically to these.

get full document from standards.iteh.ai

SIST EN IEC 61851-23-3:2026 • https://standards.iteh.ai/catalog/standards/sist/6983fcf6-9181-4ce5-9ae8-678a23c8af61/sist-en-iec-61851-23-3-2026

SIST EN IEC 61851-23-3:2026

1 Scope

This part of IEC 61851 applies to the EV supply equipment to provide energy transfer between the supply network and electric vehicles (EVs), with a rated maximum voltage at side A (supply network side) up to 1 000 V AC or up to 1 500 V DC and a rated maximum voltage at side B (EV side) up to 1 250 V DC.

NOTE A rated maximum voltage of the EV supply equipment at side B of up to 1 500 V DC is under consideration.

This document specifies the EV supply equipment of megawatt charging system (MCS) equipped with a coupler according to IEC TS 63379. Systems different to MCS using a coupler specified in IEC TS 63379 are under consideration.

The requirements for bidirectional power flow systems are under consideration.

This document does not cover all safety aspects related to maintenance.

This document specifies systems with protective separation between side A and side B.

The requirements for digital communication between the EV supply equipment and the EV for control of energy transfer are defined in ISO 15118-10 and ISO 15118-20.

EV supply equipment in compliance with this document is not intended to provide energy transfer to a single EV using

– multiple vehicle connectors of the same EV supply equipment, or
– multiple EV supply equipment.

Sample Document

The requirements for such use cases are not specified in this document but are under consideration.

get full document from standards.iteh.ai

The requirements for EVs mated to EV supply equipment according to this document are specified in ISO 5474-3:2024, Annex B.

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.

IEC 60364-4-43:2023, *Low-voltage electrical installations - Part 4-43: Protection for safety - Protection against overcurrent*

IEC 60364-5-54:2011, *Low-voltage electrical installations - Part 5-54: Selection and erection of electrical equipment - Earthing arrangements and protective conductors*

IEC 61851-23:2023, *Electric vehicle conductive charging system - Part 23: DC electric vehicle supply equipment*

IEC TS 63379:2026, *Vehicle connector, vehicle inlet and cable assembly for megawatt DC charging*

ISO 5474-3:2024, *Electrically propelled road vehicles - Functional and safety requirements for power transfer between vehicle and external electric circuit - Part 3: DC power transfer*

SIST EN IEC 61851-23-3:2026 • https://standards.iteh.ai/catalog/standards/sist/6983fcf6-9181-4ce5-9ae8-678a23c8af61/sist-en-iec-61851-23-3-2026

SIST EN IEC 61851-23-3:2026

ISO 15118-10:2025, *Road vehicles - Vehicle-to-grid communication interface - Part 10: Physical layer and data link layer requirements for single-pair Ethernet*

ISO 15118-20:2022, *Road vehicles - Vehicle-to-grid communication interface - Part 2: 2nd generation network layer and application layer requirements*
ISO 15118-20:2022/AMD1:2026

IEEE 802.3-2022*, IEEE Standard for Ethernet*

10BASE-T1S channel and components requirements for link segments - Electrical requirements and measurements specification for 10BASE-T1S channels and components [online], Open Alliance Inc. Version 1.1, 2025, [viewed 2026-02-05]. Available at: https://opensig.org/wp-content/uploads/2025/06/10BASE-T1S-Channel-and-Component-Requirements-for-Link-Segments.pdf

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 61851-23:2023 apply, except as follows.

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

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

Sample Document

3.2 Insulation

Addition:

get full document from standards.iteh.ai

3.2.201
simple separation
separation between electric circuits or between an electric circuit and local earth by means of basic insulation

[SOURCE: IEC 60050-826:2021, 195-06-30]

3.3 Functions

3.3.1
control pilot conductor

Replacement:

charge enable conductor
CE
conductor incorporated in a cable assembly, which, together with the protective conductor, is part of the charge enable circuit

3.3.5
proximity function

Replacement:

insertion detection function
ID
electrical means to indicate the insertion state of the vehicle connector in the vehicle inlet of the EV

SIST EN IEC 61851-23-3:2026 • https://standards.iteh.ai/catalog/standards/sist/6983fcf6-9181-4ce5-9ae8-678a23c8af61/sist-en-iec-61851-23-3-2026