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Responsible committee: GEL/9 Railway Electrotechnical Applications

Interested committees:

Title: Draft BS EN 50562-2 BS Fixed installations for railway applications - Safety of electric traction power supply systems. Part 2: Generic approach for non-conventional applications, functions and properties.

Please notify the secretary if you are aware of any keywords that might assist in classifying or identifying the standard or if the content of this standard

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- ii) affects other national standard(s)
- iii) requires additional national guidance or information

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	

May 2025

ICS 29.280

Will supersede EN 50562:2018 (PART)

English Version

Fixed installations for railway applications - Safety of electric traction power supply systems - Part 2: Generic approach for non-conventional applications, functions and properties

To be completed

To be completed

This draft European Standard is submitted to CENELEC members for enquiry.
Deadline for CENELEC: 2025-08-22.

It has been drawn up by CLC/SC 9XC.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CENELEC 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.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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

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51 European foreword

52 This document (prEN 50562-2:2025) has been prepared by CLC/SC 9XC “Electric supply and earthing
53 systems for public transport equipment and ancillary apparatus (Fixed installations)” of CLC/TC 9X
54 “Electrical and electronic applications for railways”.

55 This document is currently submitted to the Enquiry.

56 The following dates are proposed:

- latest date by which the existence of this document has to be announced at national level (doa) dav + 6 months
- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) dav + 12 months
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) dav + 36 months (to be confirmed or modified when voting)

57 This document will partially supersede EN 50562:2018 and all of its amendments and corrigenda (if any).

58 prEN 50562-2:2025 includes the following significant technical changes with respect to EN 50562:2018:

59 — The standard has been supplemented by a second part; Part 1 covers conventional applications,
60 functions and properties by the application of codes of practice. Part 2 covers non-conventional
61 applications, functions and properties by application of codes of practice of other provenance,
62 comparison with reference systems and explicit risk estimation.

63 — Annex B “Documents related to EN 50562” has been removed; The content has been shifted to the
64 Bibliography.

65 — Annex C “Combination of risk acceptance principles” has been integrated in Part 2;

66 — Annex D “Guidance of software for safety functions on system level” has been integrated in Part 2.

67 The EN 50562 series consists of the following parts:

68 — Part 1: Generic approach for conventional applications, functions and properties

69 — Part 2: Generic approach for non-conventional applications, functions and properties

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

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

75 **Introduction**

76 The introduction of prEN 50562-1:2025 covers this document.

1 Scope

This document defines the process, protective measures and demonstration of safety in accordance with prEN 50126-1:2017 and prEN 50126-2:2017 for AC and DC electric traction power supply systems for railways. This document can also be applied to urban rail and trolleybus systems. All these systems can be elevated, at-grade and underground.

This document has two parts:

This document supports the implementation of non-conventional applications, functions and properties in electric traction power supply systems that remain after the application of prEN 50562-1:2025.

NOTE EN 50562-1 establishes the code of practice for conventional applications, functions and properties in electric traction power supply systems.

This document applies to electric traction power supply systems, which are new or are undergoing major changes as defined in the legal framework. For similar technology and similar hazardous scenarios, the safety considerations can be used as a guideline.

This document does not apply to:

- underground mine traction systems,
- cranes, transportable platforms and similar transportation equipment on rails, temporary structures (e.g. exhibition structures) in so far as these are not supplied directly or via transformers from the contact line system and are not endangered by the traction power supply system,
- suspended cable cars,
- funicular railways,
- magnetic levitated systems,

This document does not consider aspects like IT-security or protection against other malevolent acts etc. It is assumed that those aspects are handled on the overall system level.

NOTE For railways IT-security is covered in CLC/TS 50701. Because of the short life cycles of IT-security applications it is advisable to separate IT-security functions from safety functions at least on virtual levels. E.g. the frequent patch processes for updating the IT-security applications is expected to be independent from Safety applications.

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 50126-1:2017¹, *Railway applications – The specification and demonstration of Reliability, Availability, Maintainability and Safety (RAMS) - Part 1: Generic RAMS Process*

EN 50126-2:2017², *Railway applications – The specification and demonstration of Reliability, Availability, Maintainability and Safety (RAMS) - Part 2: Systems Approach to Safety*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in prEN 50562-1:2025 apply.

¹ As impacted by EN 50126-1:2017/A1:2024

² As impacted by EN 50126-2:2017/A1:2024

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

115 — ISO Online browsing platform: available at <https://www.iso.org/obp>

116 — IEC Electropedia: available at <http://www.electropedia.org>

117 **4 Abbreviations**

118 For the purposes of this document, the abbreviations given in prEN 50562-1:2025 apply.

119 **5 Risk assessment process**

120 The risk assessment process is described in a generic way in prEN 50562-1:2025 (Figure 1 below). By the
121 application of prEN 50562-1:2025 the conventional applications, functions or properties are sufficiently
122 covered.

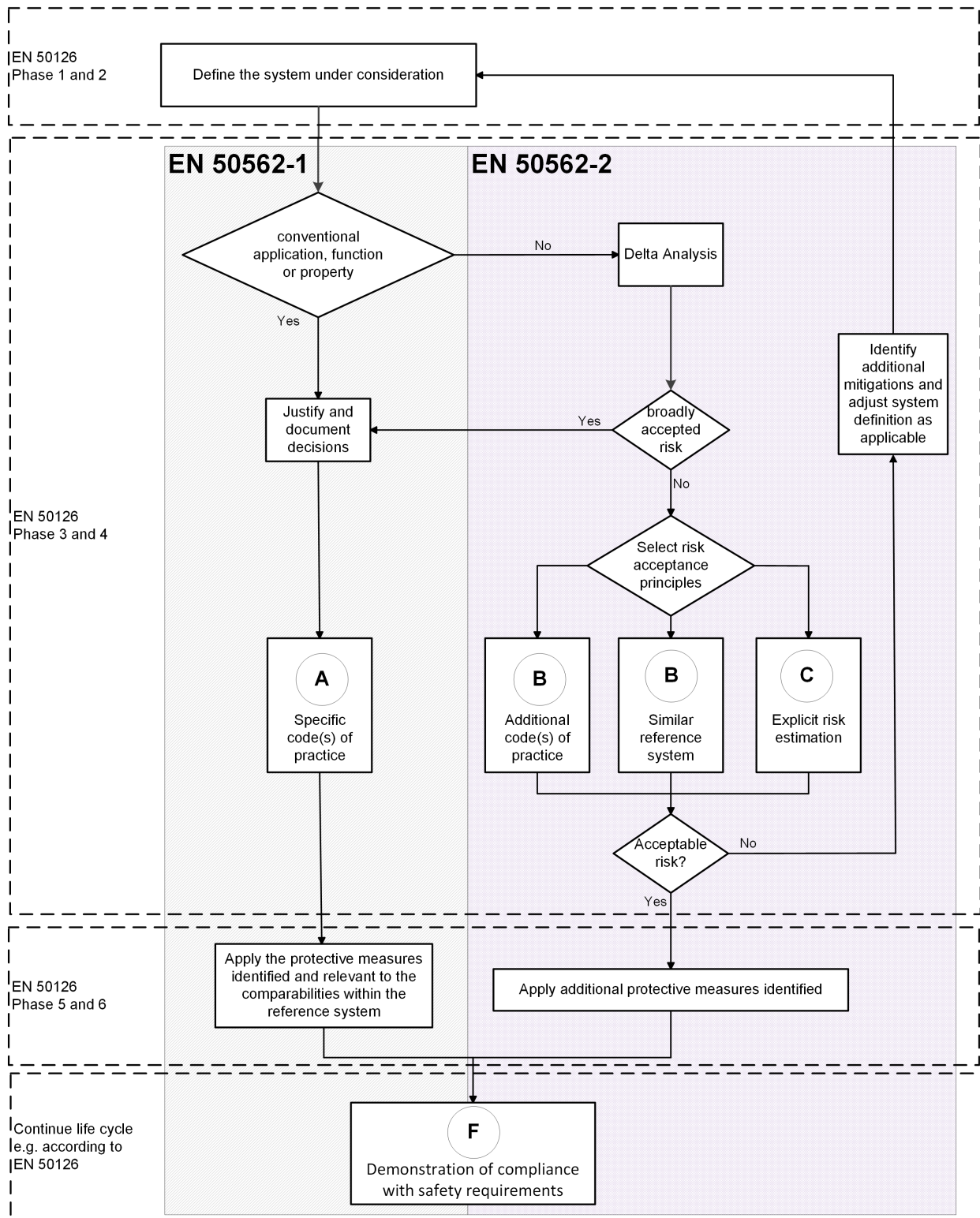


Figure 1 — Risk assessment process and relation to corresponding life cycle phases (prEN 50562-1:2025, Figure 3)

For the application of all risk acceptance principles a more detailed representation is useful as shown in Figure 2.