

<b>STN</b>	<b>Dráhové aplikácie Pevné inštalácie Elektrická bezpečnosť, uzemňovanie a spätné vedenie Časť 3: Vzájomné pôsobenie trakčných sietí striedavého a jednosmerného prúdu</b>	<b>STN EN 50122-3</b>  34 1505
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Railway applications - Fixed installations - Electrical safety, earthing and the return circuit - Part 3: Mutual Interaction of AC and DC traction systems

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

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English Version

## Railway applications - Fixed installations - Electrical safety, earthing and the return circuit - Part 3: Mutual Interaction of AC and DC traction systems

Applications ferroviaires - Installations fixes - Sécurité électrique, mise à la terre et circuit de retour - Partie 3: Interactions mutuelles entre systèmes de traction en courant alternatif et en courant continu

Bahnanwendungen - Ortsfeste Anlagen - Elektrische Sicherheit, Erdung und Rückleitung - Teil 3: Gegenseitige Beeinflussung von Wechselstrom- und Gleichstrombahnen

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

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**EN 50122-3:2022 (E)**

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**EN 50122-3:2022 (E)****European foreword**

This document (EN 50122-3:2022) has been prepared by CLC/SC 9XC “Electric supply and earthing systems for public transport equipment and ancillary apparatus (Fixed installations)”.

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) 2023-07-25
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2025-07-25

This document supersedes EN 50122-3:2010 and all of its amendments and corrigenda (if any).

EN 50122-3:2022 includes the following significant technical changes with respect to EN 50122-3:2010:

— harmonization with EN 50122-1:2022.

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 given to CENELEC by the European Commission and the European Free Trade Association.

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 requirements for the protective provisions relating to electrical safety in fixed installations, when it is reasonably likely that hazardous voltages or currents will arise for people or equipment, as a result of the mutual interaction of AC and DC electric power supply traction systems.

It also applies to all aspects of fixed installations that are necessary to ensure electrical safety during maintenance work within electric power supply traction systems.

The mutual interaction can be of any of the following kinds:

- parallel running of AC and DC electric traction power supply systems;
- crossing of AC and DC electric traction power supply systems;
- shared use of tracks, buildings or other structures;
- system separation sections between AC and DC electric traction power supply systems.

The scope is limited to galvanic, inductive and capacitive coupling of the fundamental frequency voltages and currents and their superposition.

This document applies to all new lines, extensions and to all major revisions to existing lines for the following electric traction power supply systems:

- a) railways;
- b) guided mass transport systems such as:
  - 1) tramways,
  - 2) elevated and underground railways,
  - 3) mountain railways,
  - 4) magnetically levitated systems, which use a contact line system,
  - 5) trolleybus systems, and
  - 6) electric traction power supply systems for road vehicles, which use an overhead contact line system;
- c) material transportation systems.

The document does not apply to:

- a) electric traction power supply systems in underground mines;
- b) 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 electric traction power supply system for railways;
- c) suspended cable cars;
- d) funicular railways;
- e) procedures or rules for maintenance.

The rules given in this document can also be applied to mutual interaction with non-electrified tracks, if hazardous voltages or currents can arise from AC or DC electric traction power supply systems.

**EN 50122-3:2022 (E)****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 50122-1:2022, *Railway applications – Fixed installations – Electrical safety, earthing and the return circuit – Part 1: Protective provisions against electric shock*

EN 50122-2:2022, *Railway applications – Fixed installations – Electrical safety, earthing and the return circuit – Part 2: Provisions against the effects of stray currents caused by DC traction systems*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**