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Järnvägstillämpningar – Fasta installationer – Skyddsåtgärder vid arbete med eller nära kontaktledningssystem eller dess returströmkrets

Railway applications –

Fixed Installations –

Electrical protective measures for working on or near an overhead contact line system and/or its associated return circuit

Som svensk standard gäller europastandarden EN 50488:2021. Den svenska standarden innehåller den officiella engelska språkversionen av EN 50488:2021.

Nationellt förord

Tidigare fastställd SEK Teknisk Rapport 50488, utgåva 1, 2007, gäller ej fr o m 2026-01-29.

Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a mätning, säkerhet och provning och för utförande, skötsel och dokumentation av elprodukter och elanläggningar.

Genom att utforma sådana standarder blir säkerhetsfordringar tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

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SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

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English Version

**Railway applications - Fixed installations - Electrical protective
measures for working on or near an overhead contact line
system and/or its associated return circuit**

Applications ferroviaires - Installations fixes - Mesures de
protection électriques pour des activités de travail sur ou à
proximité des systèmes de lignes aériennes de contact
et/ou le circuit de retour associé

Bahnanwendungen - Ortsfeste Anlagen - Elektrische
Schutzmaßnahmen bei Arbeiten an oder in der Nähe einer
Oberleitungsanlage und/oder ihrer zugehörigen Rückleitung

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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.

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

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European foreword

This document (EN 50488:2021) has been prepared by CLC/SC 9XC “Electric supply and earthing systems for public transport equipment and ancillary apparatus (Fixed installations)”, of Technical Committee CLC/TC 9X, “Electrical and electronic applications for railways”.

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) 2021-07-29
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2026-01-29

This document supersedes CLC/TR 50488:2006 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.

Introduction

This document provides railway specific requirements for electrical protective measures for working on or near an overhead contact line system and/or its associated return circuit.

When developing this document, EN 50110-1, *Operation of electrical installations – Part 1: General requirements*, was used as a guide. EN 50110-1 was not developed specifically to apply to the electric traction system which have different characteristics than those commonly found in other electrical installations.

Due to the numerous variations of organization, this document does not give any recommendations concerning organisational structure.

Because of numerous variations in overhead contact lines with nominal voltage lower than 1,5 kV, this document does not deal with work activities on or near these overhead contact lines and/or their associated return circuit.

The trend in Europe is that “dead working” is more common than “live working”. In the countries where live working on the overhead contact lines is allowed, the national regulation should state the necessary safety rules.

1 Scope

This document provides requirements for electrical safety for:

- dead working on an overhead contact line system;
- working activities near an overhead contact line system when it is live.

It applies to all work activities in relation to electrical hazards only.

This document is applicable to overhead contact line systems with the following nominal voltages and configurations:

- 1,5 kV and 3 kV DC;
- 15 kV, 2x15 kV, 25 kV and 2x25 kV AC.

It also provides requirements for work activities that can give rise to electrical hazards from the return circuit.

This document does not cover electrical risk arising from:

- live working on overhead contact line systems (live working can be carried out according to national requirements, regulations and practices);
- working on or near other electrical sources or electrical systems connected to or close to the OCL system and its return circuit.

If there are no other rules or procedures, the principles described in this document can be applied to overhead contact line systems with other nominal voltages.

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 50122-1:2011, *Railway applications - Fixed installations - Electrical safety, earthing and the return circuit - Part 1: Protective provisions against electric shock*