



NSAI
Standards

Irish Standard
I.S. EN 50388:2012

Railway Applications - Power supply and rolling stock - Technical criteria for the coordination between power supply (substation) and rolling stock to achieve interoperability

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I.S. EN 50388:2012

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SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

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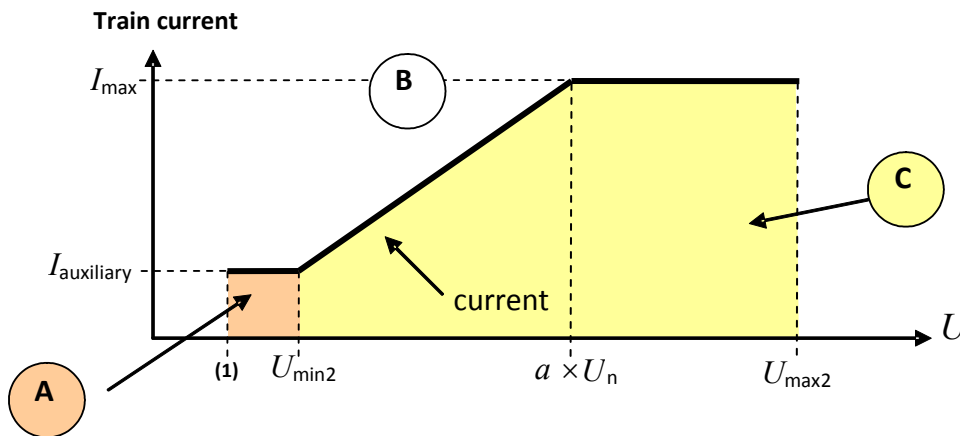
Corrigendum to EN 50388:2012

English version

Corrigendum to EN 50388:2012 published 2012-08-24

1 Modification to Figure 1

Replace Figure 1 by the following new figure:



- A** No traction
- B** Current level exceeded
- C** Allowable current levels

Corrigendum to EN 50388:2012 published 2013-04-26

2 Modification to 12.1.1

In the first bullet, **delete** "in the conditions described in 11.4".

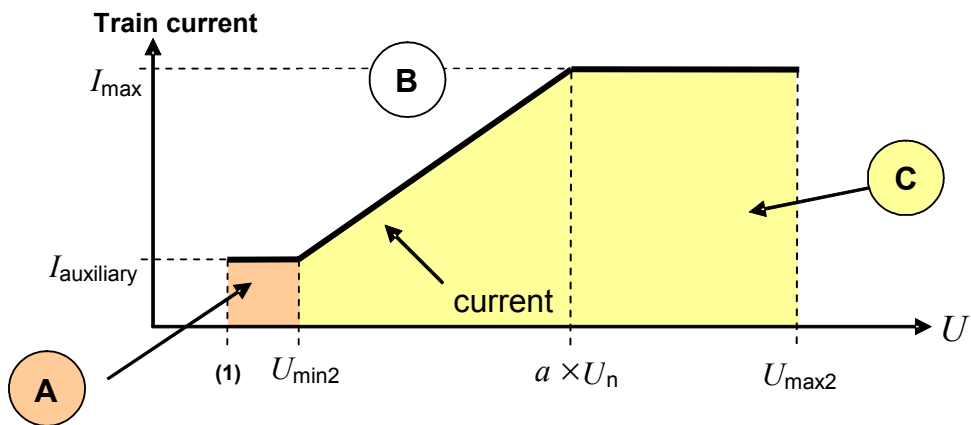
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3 Modification to Table F.1

In Table F.1, Column: SK and Row: d.c. 3000 V, **replace** "1000 for single track line" by "1400 for single track line".

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Replace Figure 1 by the following new figure:



- A** No traction
- B** Current level exceeded
- C** Allowable current levels

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English version

**Railway Applications -
Power supply and rolling stock -
Technical criteria for the coordination between power supply (substation)
and rolling stock to achieve interoperability**

Applications ferroviaires -
Alimentation électrique
et matériel roulant -
Critères techniques pour la coordination
entre le système d'alimentation (sous-
station) et le matériel roulant pour réaliser
l'interopérabilité

Bahnanwendungen -
Bahnenergieversorgung und Fahrzeuge -
Technische Kriterien für die Koordination
zwischen Anlagen der
Bahnenergieversorgung und Fahrzeugen
zum Erreichen der Interoperabilität

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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.

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CENELEC

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

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Foreword

This document (EN 50388:2012) 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". It also concerns the expertise of CLC/SC 9XB, "Electromechanical material on board of rolling stock".

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) 2013-02-13
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2015-02-13

This document supersedes EN 50388:2005 + corrigendum May 2010.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive 2008/57/EC, see informative Annex ZZ, which is an integral part of this document.

For TSI lines, modification and amendments shall be made within a procedure which is related to the legal status of the HS and CR TSIs.

1 Scope

This European Standard establishes requirements for the compatibility of rolling stock with infrastructure particularly in relation to:

- co-ordination of protection principles between power supply and traction units, especially fault discrimination for short-circuits;
- co-ordination of installed power on the line and the power demand of trains;
- co-ordination of traction unit regenerative braking and power supply receptivity;
- co-ordination of harmonic behaviour.

This European Standard deals with the definition and quality requirements of the power supply at the interface between traction units and fixed installations.

This European Standard specifies the interface between rolling stock and electrical fixed installations for traction, in respect of the power supply system. The interaction between pantograph and overhead contact line is dealt with in EN 50367. The interaction with the “control-command” subsystem (especially signalling) is not dealt with in this standard.

Requirements are given for TSI lines (both high speed and conventional) and classical lines.

For classical lines, values, where given, are for the existing European networks. Furthermore the maximum values that are specified are applicable to the foreseen developments of the infrastructure of the Trans European rail networks.

The following electric traction systems are within scope:

- railways;
- guided mass transport systems that are integrated with railways;
- material transport systems that are integrated with railways.

This European Standard does not apply retrospectively to rolling stock already in service.

Information is given on electrification parameters such as to enable train operating companies to confirm, after consultation with the rolling stock manufacturers, that there will be no consequential disturbance on the electrification system.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 50122-2:2010, *Railway applications — Fixed installations — Electrical safety, earthing and the return circuit — Part 2: Provisions against the effects of stray currents caused by d.c. traction systems*

EN 50122-3:2010, *Railway applications — Fixed installations — Electrical safety, earthing and the return circuit — Part 3: Mutual Interaction of a.c. and d.c. traction systems*

EN 50123-1:2003, *Railway applications — Fixed installations — D.C. switchgear — Part 1: General*

EN 50163:2004 + A1:2007, *Railway applications — Supply voltages of traction systems*

EN 50367, *Railway applications — Current collection systems — Technical criteria for the interaction between pantograph and overhead line (to achieve free access)*

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