SVENSK STANDARD SS-EN 60077-2

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Svenska Elektriska Kommissionen, SEK

Järnvägsanläggningar – Elutrustning för rälsfordon – Del 2: Allmänt

Railway applications –
Electric equipment for rolling stock –
Part 2: Electrotechnical components –
General rules

Som svensk standard gäller europastandarden EN 60077-2:2002. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60077-2:2002.

Nationellt förord

Europastandarden EN 60077-2:2002

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 60077-2, First edition, 1999 - Railway applications - Electric equipment for rolling stock - Part 2: Electrotechnical components - General rules**

utarbetad inom International Electrotechnical Commission, IEC.

Standarden skall användas tillsammans med SS-EN 60077-1.

ICS 45.060

Denna standard är fastställd av Svenska Elektriska Kommissionen, SEK,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
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EUROPEAN STANDARD **EN 60077-2**

NORME EUROPÉENNE

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English version

Railway applications - Electric equipment for rolling stock Part 2: Electrotechnical components - General rules

(IEC 60077-2:1999, modified)

Applications ferroviaires - Equipements électriques du matériel roulant Partie 2: Composants électrotechniques - Règles générales (CEI 60077-2:1999, modifiée)

Bahnanwendungen - Elektrische Betriebsmittel auf Bahnfahrzeugen Teil 2: Elektrotechnische Bauteile - Allgemeine Regeln (IEC 60077-2:1999, modifiziert)

This European Standard was approved by CENELEC on 2002-03-01. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Ref. No. EN 60077-2:2002 E

Foreword

The text of the International Standard IEC 60077-2:1999, prepared by IEC TC 9, Electric railway equipment, together with the common modifications prepared by SC 9XB, Electromechanical material on board of rolling stock, of Technical Committee CENELEC TC 9X, Electrical and electronic applications for railways, was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 60077-2 on 2002-03-01.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2003-03-01

- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2005-03-01

This Part 2 shall be read in conjunction with EN 60077-1.

In this European Standard the common modifications to the International Standard are indicated by a vertical line in the left margin of the text.

Subclauses, tables and figures which are additional to those in IEC 60077-2 are prefixed "Z".

Annexes designated "normative" are part of the body of the standard.
Annexes designated "informative" are given for information only.
In this standard, annexes A and ZA are normative and annex B is informative.
Annex ZA has been added by CENELEC.

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Introduction

This product standard is Part 2 of the EN 60077 series of product standards:

Railway applications - Electric equipment for rolling stock

- Part 1: General service conditions and general rules,
- Part 2: Electrotechnical components - General rules,
- Part 3: Electrotechnical components - Rules for d.c. circuit-breakers,
- Part 4: Electrotechnical components - Rules for a.c. circuit-breakers,
- Part 5: Electrotechnical components - Rules for HV fuses.

This document has used IEC 60077-2 as its base and its form and structure have been modified to take account of already existing European Standards covering related subjects.

1 Scope

In addition to the rules given in EN 60077-1, this European standard provides general rules for all electrotechnical components installed in power circuits, auxiliary circuits and control circuits, etc., on rolling stock.

NOTE Certain of these rules may, after agreement between user and manufacturer, be used for electrotechnical components installed on vehicles other than rail rolling stock such as mine locomotives, trolleybuses, etc.

The purpose of this standard is to adapt the general rules given in EN 60077-1 to all electrotechnical components for rolling stock, in order to obtain uniformity of requirements and tests for the corresponding range of components.

Electrotechnical components are mainly switchgear and controlgear, irrespective of their control, including also relays, valves, resistors, fuses, etc.

NOTE The incorporation of electronic components or electronic sub-assemblies into electrotechnical components is now common practice. Although this standard is not applicable to electronic equipment, the presence of electronic components does not provide a reason to exclude such electrotechnical components from the scope.
Electronic sub-assemblies should comply with the relevant standard.

This standard states

a) the characteristics of the components,
b) the constructional and performance requirements with which components have to comply,
c) the tests intended to confirm compliance of the components with these characteristics under these service conditions, and the methods to be adopted for these tests,
d) the information to be marked on, or given with the apparatus.

This standard does not cover industrial electrotechnical components which comply with their own product standard. In order to ensure satisfactory operation of these components for rolling stock, this standard should be used to specify only the particular requirements for railway application. In that case, a specific document should state the additional requirements with which the industrial components are to comply, e.g.

- to be adapted (for example for control voltage, environmental conditions, etc.), or
- to be installed and used such that they do not have to endure specific railway conditions, or
- to be additionally tested to prove that these components can withstand satisfactorily the railway conditions.