

Electrical supply track systems for luminaires

The European Standard EN 60570:2003 has the status of a British Standard

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National foreword

This British Standard is the official English language version of EN 60570:2003. It was derived by CENELEC from IEC 60570:2003. It supersedes BS EN 60570:1997 and BS EN 60570-2-1:1995 which will be withdrawn on 2010-03-01.

The CENELEC common modifications have been implemented at the appropriate places in the text and are indicated by tags (e.g. **Ⓒ** **Ⓓ**)

The UK participation in its preparation was entrusted to Technical Committee CPL/34/4, Luminaires, which has the responsibility to:

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Summary of pages

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Electrical supply track systems for luminaires
(IEC 60570:2003, modified)

Systèmes d'alimentation électrique
par rail pour luminaires
(CEI 60570:2003, modifiée)

Elektrische Stromschienensysteme
für Leuchten
(IEC 60570:2003, modifiziert)

This European Standard was approved by CENELEC on 2003-03-18. 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, Hungary, Iceland, Ireland, Italy, Lithuania, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

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Foreword

The text of document 34D/770/FDIS, future edition 4 of IEC 60570, prepared by SC 34D, Luminaires, of IEC TC 34, Lamps and related equipment, was submitted to the IEC-CENELEC parallel vote. Together with existing common modifications in EN 60570:1996, it was approved by CENELEC as EN 60570 on 2003-03-18.

This European Standard supersedes EN 60570:1996 + A1:1998 + A2:2000 and EN 60570-2-1:1994 + A1:1996.

This standard is to be used in conjunction with EN 60598-1.

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) 2004-02-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2010-03-01

Annexes designated "normative" are part of the body of the standard.
In this standard, annex ZA is normative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60570:2003 was approved by CENELEC as a European Standard with agreed common modifications.

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ELECTRICAL SUPPLY TRACK SYSTEMS FOR LUMINAIRES

1 Scope

This International Standard applies to the following track systems with two or more poles for the connection of luminaires to the electrical supply consisting of, either

- a system with a rated voltage not exceeding 440 V between poles (live conductors) with provision for earthing (class I) and a rated current not exceeding 16 A per conductor, or
- a SELV system with a rated voltage not exceeding 25 V without provision for earthing (class III) and a rated current not exceeding 25 A per conductor, or
- a combination of the two systems mentioned above (mixed supply system) for the connection of both mains voltage luminaires (class I or II) and SELV supplied luminaires (class III) simultaneously, but in different sector openings (mains or SELV).

The track systems may also provide for the mechanical support of the luminaires.

It applies to track systems designed for ordinary interior use for mounting on, or flush with, or suspended from walls and ceilings. These track systems are not intended for locations where special conditions prevail as in ships, vehicles and the like and in hazardous locations, for example, where explosions are liable to occur.

2 Normative references

The following referenced documents are indispensable for the application 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.

IEC 60417-2, *Graphical symbols for use on equipment – Part 2: Symbol originals*

IEC 60598-1:1999, *Luminaires – Part 1: General requirements and tests*

IEC 61032:1997, *Protection of persons and equipment by enclosures – Probes for verification*

3 Terms and definitions

For the purposes of this standard, the definitions of section one of IEC 60598-1 apply, together with the following definitions.

NOTE The use of the term luminaire (see IEC 60598-1) hereinafter also includes components of the luminaire track system.

3.1

luminaire track system

system, including a track with conductors, for the connection of luminaires to an electrical supply in a range of different positions determined only by the length and location of the track and comprising some or all of the components defined in 3.2 to 3.14 (see also Figure 1)

3.2

track

generally linear assembly of conductors within a housing providing the electrical connection and in most instances mechanical support of luminaires

NOTE Luminaires can be positioned or repositioned along the length of track in a simple manner (that is, without the use of tools).

3.3

track* coupler

component enabling electrical or mechanical connection to be made between tracks, but electrically only on the same sector opening (mains voltage or SELV)

3.4

track* supply connector

component used for the electrical connection of a supply to the track system, but always operating on one sector opening only

NOTE 1 The function of a coupler and a track supply connector may be combined.

NOTE 2 For the SELV sector, the track supply connector may incorporate a SELV convertor or safety isolating transformer supplied directly from the mains voltage sector.

3.5

luminaire supply connector

component for the electrical connection of a luminaire to the track. A connector does not provide mechanical connection of a luminaire to the track

The electrical connection shall operate on one sector only (mains or SELV)

3.6

track* adaptor

component used for the electrical and mechanical connection of a luminaire to the track, but electrically and mechanically only on the same sector opening (mains voltage or SELV)

NOTE An adaptor may incorporate a switch or a fuse.

3.7

track* suspension device

component used for the mechanical connection of the track system to the supporting surface

3.8

luminaire suspension device

component used for the mechanical connection of a luminaire to the track

3.9

end cover

component intended to be fixed at the end of a track, providing electrical and mechanical protection of the ends of the conductors

3.10

class I track

generally linear assembly of conductors and housing designed to be operated from a mains voltage supply providing the electrical connection and in most instances mechanical support of class I and class II luminaires only.

* The word 'track' is occasionally not repeated in the text of the standard where these definitions are used.

3.11**class III track**

generally linear assembly of conductors and housing designed to be operated from a SELV supply providing the electrical connection and in most instances mechanical support of class III luminaires only

NOTE A class III SELV supplied system or a SELV sector opening need not have insulation to protect against contact with current-carrying parts, due to its inherently safe nature.

3.12**mixed supply track system – classes I and III**

combination of tracks according to 3.10 and 3.11

3.13**rated current**

current assigned to the track or the component by the manufacturer

3.14**track* sector opening**

opening in the track enabling the electrical connection of the adaptor or the luminaire supply connector to the track conductors

4 Classification

Luminaire track systems shall be either class I, class III or a mixed supply track system with class I and class III sectors in accordance with the provisions of section two of IEC 60598-1.

Track systems shall only be classified as ordinary.

Luminaire/adaptor assemblies that are inseparable can be class II in accordance with the provisions of section two of IEC 60598-1 provided they contain no earthing facilities.

Separate adaptors shall not be classified as class II, but may be used with class II luminaires.

5 General test requirements

5.1 The requirements and tests of this standard shall not be applied to equipment already subject to its own separate IEC standard.

5.2 Tests according to this standard are type tests.

One test sample as described in 5.3 shall be subjected to all relevant tests.

In order to reduce the time of testing and to allow for any tests which may be destructive, the manufacturer may submit additional samples or parts of samples provided that these are of the same materials as the original sample and that the results of the test are the same as if carried out on a single sample.

* The word 'track' is occasionally not repeated in the following text where these definitions are used.