



**SLOVENSKI STANDARD**  
**SIST EN 60570-2-1:1999**

**01-julij-1999**

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**Električni tračni napajalni sistemi za svetilke - 2. del: Mešani napajalni sistemi - 1. oddelek: Razreda I in III (IEC 60570-2-1:1994)**

Electrical supply track systems for luminaires - Part 2: Mixed supply systems - Section 1: Classes I and III (IEC 60570-2-1:1994)

Elektrische Stromschienensysteme für Leuchten - Teil 2: Gemischte Stromschienensysteme - Hauptabschnitt 1: Schutzklassen I und III (IEC 60570-2-1:1994)

Systèmes d'alimentation électrique par rail pour luminaires - Partie 2: Systèmes d'alimentation mixte - Section 1: Classes I et III (CEI 60570-2-1:1994)

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**Ta slovenski standard je istoveten z: EN 60570-2-1:1994**

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**ICS:**

29.140.50	Instalacijski sistemi za razsvetljavo	Lighting installation systems
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ICS 29.060.10

Descriptors: Lighting equipment, luminaire, electrical supply, track, definition, construction characteristics, electrical insulation, earthing, electrical endurance test, protection against electric shocks, short-circuit protection, marking

English version

**Electrical supply track systems for luminaires**  
**Part 2: Mixed supply systems**  
**Section 1: Classes I and III**

(IEC 570-2-1 : 1994 )

Systèmes d'alimentation électrique par rail  
pour luminaires  
Partie 2: Systèmes d'alimentation mixte  
Section 1: Classes I et III  
(CEI 570-2-1 : 1994)

Elektrische Stromschienensysteme für  
Leuchten  
Teil 2: Gemischte Stromschienensysteme  
Hauptabschnitt 1: Schutzklassen I und III  
(IEC 570-2-1 : 1994)

This European Standard was approved by CENELEC on 1994-10-04. 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.

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**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**

**Foreword**

The text of document 34D(CO)255, as prepared by Subcommittee 34D, Luminaires, of IEC Technical Committee 34, Lamps and related equipment, was submitted to the IEC-CENELEC parallel vote in March 1994.

The reference document was approved by CENELEC as EN 60570-2-1 on 4 October 1994.

The following dates were fixed:

- latest date of publication  
of an identical national  
standard (dop) 1995-10-01
- latest date of withdrawal  
of conflicting national  
standards (dow) 1995-10-01

For products which have complied with the relevant national standard before 1995-10-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2000-10-01.

This standard is to be read in conjunction with EN 60570 : 1993.

Annexes designated 'normative' are part of the body of the standard. In this standard, annex ZA is normative.

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## ELECTRICAL SUPPLY TRACK SYSTEMS FOR LUMINAIRES –

### Part 2: Mixed supply systems – Section 1: Classes I and III

#### 1 General

##### 1.1 Scope

This International Standard applies to mixed supply track systems for connecting both class I and class III luminaires simultaneously, but in different track openings to the electrical supply, with two or more poles with a maximum nominal voltage of 440 V between poles (live conductors), maximum nominal frequency of 60 Hz and a maximum nominal current per conductor of 16 A for a class I sector and 25 A for a class III sector.

It applies to track systems designed for ordinary interior use for mounting on, 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.

##### 1.2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 570. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 570 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 598-1: 1992, *Luminaires – Part 1: General requirements and tests*

IEC 1032: 1990, *Test probes to verify protection by enclosures*

ISO 4046: 1978, *Paper, board, pulp and related terms – Vocabulary*

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#### 2 Definitions (see figure 1)

The definitions of clause 2 of IEC 570 apply together with the following definitions or additions:

##### 2.1 Luminaire track system

Delete "page 24".

### 2.3 Coupler

Add the following note:

NOTE – Couplers may make the electrical connection on one sector only (i.e., mains voltage or SELV).

### 2.4 Track supply connector

After the existing note, add the following new note 2 and number the existing note as note 1:

#### NOTES

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

### 2.5 Luminaire connector

Add the following:

The electrical connection shall operate on one sector only.

### 2.6 Adaptor

The definition of 2.6 applies with the following additions:

#### *Adaptor (at mains voltage)*

A component used only for the electrical and mechanical connection on the sector supplied at mains voltage.

#### *Adaptor (at SELV)*

A component used only for the electrical and mechanical connection of class III luminaires to the SELV sector of the track.

## 3 Classification

Replace this clause by the following:

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Luminaire track systems shall be a combination of class I and class III in accordance with the provisions of section 2 of IEC 598-1.

## 4 General test requirements

This clause of IEC 570 is applicable.

## 5 Marking

This clause of IEC 570 is applicable, together with the following requirements:



### 5.1 Add:

The marking shall be put on the mains voltage sector and on the SELV sector respectively.

### 5.5 Add at the end of item a) the following:

... and accessories. In addition, a warning that the mechanical loading shall be intended as complete loading of mains voltage sector and SELV sector.

### 5.7 Marking

The instruction leaflet with the track shall contain the following warning:

CAUTION: TO REDUCE THE RISK OF OVERHEATING AND FIRE  
DO NOT BRIDGE CONDUCTORS

## 6 General requirements

This clause of IEC 570 is applicable.

## 7 Construction

This clause of IEC 570 is applicable, together with the following requirements:

7.1.1 Components shall not be interchangeable between the mains voltage and SELV sector.

Compliance is under consideration.

### 7.9.1 Add at the end of the second line of the fourth paragraph the following:

... for components operating at mains voltage and to 500 V for components operating at SELV.

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### 7.11 Short-circuit protection

Replace 7.11 by:

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The SELV track system shall incorporate means to prevent accidental short circuits between current-carrying parts of different polarity in the output circuit.

7.11.1 Adequate means shall be provided to prevent impairing of safety due to unintended short-circuiting of uninsulated accessible ELV conductors of opposite polarity by the test chain.

NOTE – Class III luminaires supplied from a separate unspecified SELV supply should have at least one conductor insulated. Where insulation is not provided, the luminaire manufacturer should declare the maximum VA output of the SELV source and the test should be conducted at this value.



Compliance is checked by the test of 7.11.2.

7.11.2 The type test sample is operated at 0,9 to 1,1 times its nominal voltage with its most unfavourable load and positioned such that a test chain as specified in 7.11.3 is hung over the accessible uninsulated parts of the ELV conductors. The test chain shall form the shortest path possible, by loading both ends with small weights\*, but not causing mechanical distortion. The test chain shall not melt through, nor shall any part of the type test sample reach a temperature exceeding the values of tables 12.1 and 12.2 of IEC 598-1.

7.11.3 *Test chain:* A chain of sufficient length of an uncoated metal having links in accordance with IEC 1032, figure 10 and made of 63 % Cu/37 % Sn. The chain shall have a maximum resistance value of 0,05  $\Omega$ /m when stretched with a load of 200 g/m.

The resistance value of the test chain shall be checked before measurement.

## 8 Creepage distances and clearances

This clause of IEC 570 is applicable, together with the following requirements.

*Add the following new subclause:*

8.2 Creepage distances and clearances between conductors of mains voltage sector and SELV sector shall comply with table 11.1 of IEC 598-1 regarding class II for the maximum working voltage used.

## 9 Terminals

This clause of IEC 570 is applicable.

## 10 External and Internal wiring

This clause of IEC 570 is applicable.

## 11 Thermal endurance and operating temperatures

This clause of IEC 570 is applicable, together with the following requirements.

11.1 *Replace the second paragraph as follows:*

Compliance is checked by the following test:

One typical luminaire, as detailed in section zero, subclause 0.4.2, IEC 598-1 for the mains voltage sector and one for SELV sector shall be mounted on the track in the most unfavourable position of normal use and electrically connected to it. The track shall be further electrically loaded so as to pass rated current, including the current to the

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\* Under consideration.