

**SLOVENSKI  
STANDARD**

**SIST HD 364 S2:1998**

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High-voltage cable plug and socket connections for medical X-ray equipment (IEC 60526:1978 (Modified))

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## ENGLISH VERSION

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### HIGH VOLTAGE CABLE PLUG AND SOCKET CONNECTIONS FOR MEDICAL X-RAY EQUIPMENT

Raccordement par fiche et réceptacle Hochspannungskabel-Steckverbindungen  
des câbles haute tension pour für medizinische Röntgengeräte  
équipements à rayons X à usage  
médical

#### BODY OF HD

The Harmonization Document consists of:

- IEC 526 (1978) edition 2; IEC/SC 62B, not appended
- common modifications of CENELEC prepared by the Technical Board

**iTeh STANDARD PREVIEW**

This Harmonization Document was approved by CENELEC on 7 September 1983.

The English and French versions of this HD are provided by the text of the IEC publication and the German version is the official translation of the IEC text; the German translation is not yet available.

According to the CENELEC Internal Regulations the CENELEC member National Committees are bound:

to announce the existence of this Harmonization Document at national level

by or before 1984-01-01

to publish their new harmonized national standard

by or before 1985-01-01

to withdraw all conflicting national standards

by or before 1985-01-01.

Harmonized national standards are listed on the HD information sheet, which is available from the CENELEC National Committees or from the CENELEC General Secretariat.

The CENELEC National Committees are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxemburg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom.

C E N E L E C

COMMON MODIFICATION TO HD 364 S2 (IEC 526 (1978))

As a result of a decision of the 38th Technical Board the present common modification to HD 364 S2 was submitted to 3MV and was ratified by the 40th BT on 7 September 1983.

A textual error is noted in Clause 6 in the statement of compliance of the Reference Document (RD). The first edition of IEC 526 (1975) is quoted as the sole compliance reference for **three-conductor assemblies**. It has been subsequently confirmed with the Secretariat of the IEC Sub-committee that as both the first and second editions of IEC 526 are identical in respect to three-conductor assemblies, the compliance reference for such assemblies in Clause 6 should have quoted both the 1975 and the 1978 editions and not just the 1975 edition. The RD can therefore be used as the RD for both 3-conductor and 4-conductor assemblies.

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NORME  
INTERNATIONALE  
INTERNATIONAL  
STANDARD

CEI  
IEC  
526

Deuxième édition  
Second edition  
1978-01

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Raccordements par fiche et réceptacle des  
câbles haute tension pour équipements à rayons X  
à usage médical

iTeh STANDARD PREVIEW

High-voltage cable plug and socket connections  
for medical X-ray equipment

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

HIGH-VOLTAGE  
CABLE PLUG AND SOCKET CONNECTIONS  
FOR MEDICAL X-RAY EQUIPMENT

FOREWORD

- 1) The formal decisions or agreements of the IEC on technical matters, prepared by Technical Committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
- 2) They have the form of recommendations for international use and they are accepted by the National Committees in that sense.
- 3) In order to promote international unification, the IEC expresses the wish that all National Committees should adopt the text of the IEC recommendation for their national rules in so far as national conditions will permit. Any divergence between the IEC recommendation and the corresponding national rules should, as far as possible, be clearly indicated in the latter.

**iTeh STANDARD PREVIEW**  
PREFACE

This standard has been prepared by Sub-Committee 62B, X-ray Equipment Operating up to 400 kV and Accessories, of IEC Technical Committee No. 62, Electrical Equipment in Medical Practice.

It forms the second edition to IEC Publication 526 (1975).

The first edition was published in 1975 containing the requirements on three-conductor high-voltage cable plug and socket connections. It was based upon a first draft discussed at the meeting in London in 1970. As a result of the meeting held in Rockville, Maryland, in 1973, the draft, Document 62B(Central Office)13, was submitted to the National Committees for approval under the Six Months' Rule in January 1974. Sixteen countries voted explicitly in favour of publication.

A draft incorporating the additional requirements on four-conductor high-voltage cable plug and socket connections was discussed at the meeting held in Ottawa in 1976. As a result of this meeting, the draft, Document 62B(Central Office)30, was submitted to the National Committees for approval under the Six Months' Rule in December 1976.

The following countries voted explicitly in favour of publication:

Australia	Italy
Belgium	Japan
Canada	Netherlands
China	South Africa (Republic of)
Denmark	Spain
Egypt	Sweden
Finland	Switzerland
France	Turkey
Germany	United Kingdom

The requirements on three-conductor high-voltage cable plug and socket connections in the present standard are identical with those of the first edition.

# HIGH-VOLTAGE CABLE PLUG AND SOCKET CONNECTIONS FOR MEDICAL X-RAY EQUIPMENT

## 1. Scope

This standard deals with:

- essential dimensions to ensure mechanical interchangeability;
- recommended dimensions;
- wiring connections to contacts of plug and socket;
- marking of contacts of plug and socket;

of three-conductor and four-conductor high-voltage cable plug and socket connections for medical X-ray equipment.

*Notes 1.* — Ratings of maximum potential difference and electric current are not dealt with in this standard because the behaviour of a high-voltage cable plug and socket connection depends on the materials of the cable termination plug assembly and the receptacle socket assembly, and upon environmental factors.

- 2. — This standard does not include details or particulars of means for preventing removal of the ring nut (see Sub-clause 2.2) or of the cable termination plug assembly without the use of a tool.
- 3. — In cases where high-voltage connections of a type not complying with this standard are used, the X-ray equipment shall comply with the appropriate IEC standards.

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## 2. Terminology

### 2.1 Degree of requirements

In this standard the auxiliary verb

- “shall” implies that compliance with a requirement is mandatory for compliance with the standard
- “should” implies that compliance with a requirement is strongly recommended but is not mandatory for compliance with the standard
- “may” implies that compliance with a requirement is permitted to be accomplished in a particular manner, for compliance with the standard.

*Note* — These definitions are under consideration.

### 2.2 Terms

A high-voltage cable connection according to this standard is composed of:

- the cable termination plug assembly consisting of the main components:

ring nut	component 1 — Figures 1 and 5 (pages 14 and 17);
plug	component 2 — Figures 1 and 5;
contact pins	component 3 — Figures 1 and 5;

fitted to the prepared cable end with suitable provision for earthing, insulation and sealing;



- the receptacle socket assembly consisting of the main components:
  - mounting flange component 4 — Figure 3 (page 16);
  - thrust ring component 5 — Figure 4 (page 16);
  - socket with contacts and terminals component 6 — Figures 2 and 6 (pages 15 and 18);
- the mounting flange possibly forming part of a high potential assembly, an X-ray tube assembly or other item of equipment.

### 3. Dimensions

The dimensions of the high-voltage cable connection shall comply with those shown in Figures 1 to 4 or 3 to 6, as appropriate, and should comply with those enclosed in parentheses.

### 4. Connections

The connections from the high potential assembly and from the X-ray tube to the terminals of the receptacle socket assembly and the connections of the two cable termination plug assemblies to the cable shall be effected as shown in Tables I or II, as appropriate.

### 5. Marking

The terminals of the receptacle socket assembly shall be identified by marking with either graphical or letter symbols as given in Tables I or II and shown in Figures 2 or 6.

If the contact pins of the cable termination plug assembly are to be identified, the marking shall be in accordance with Tables I or II and with Figures 1 or 5.

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### 6. Statement of compliance

If compliance of a cable termination plug assembly and/or a receptacle socket assembly with this standard is to be stated, this shall be indicated appropriately as follows:

- three-conductor cable connection IEC 526/1975;
- three-conductor cable termination IEC 526/1975;
- three-conductor receptacle socket IEC 526/1975;

or:

- four-conductor cable connection IEC 526/1978;
- four-conductor cable termination IEC 526/1978;
- four-conductor receptacle socket IEC 526/1978.