



SLOVENSKI STANDARD
SIST EN 60974-1:2000/A1:2001
01-september-2001

Arc welding equipment - Part 1: Welding power sources

Arc welding equipment -- Part 1: Welding power sources

Lichtbogenschweißeinrichtungen -- Teil 1: Schweißstromquellen

Matériel de soudage électrique -- Partie 1: Sources de courant pour soudage

Ta slovenski standard je istoveten z: EN 60974-1:1998/A1:2000

[SIST EN 60974-1:2000/A1:2001](https://standards.iteh.ai/catalog/standards/sist/4dd9974b-7ce2-4c77-8f86-90ee52e3d8c6/sist-en-60974-1-2000-a1-2001)

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ICS:

25.160.30 Varilna oprema Welding equipment

SIST EN 60974-1:2000/A1:2001 **en**

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[SIST EN 60974-1:2000/A1:2001](https://standards.iteh.ai/catalog/standards/sist/4dd9974b-7ce2-4c77-8f86-90ee52e3d8c6/sist-en-60974-1-2000-a1-2001)

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60974-1/A1

April 2000

ICS 25.160.30

English version

**Arc welding equipment
Part 1: Welding power sources
(IEC 60974-1:1998/A1:2000)**

Matériel de soudage électrique
Partie 1: Sources de courant
pour soudage
(CEI 60974-1:1998/A1:2000)

Lichtbogenschweißeinrichtungen
Teil 1: Schweißstromquellen
(IEC 60974-1:1998/A1:2000)

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This amendment A1 modifies the European Standard EN 60974-1:1998; it was approved by CENELEC on 2000-04-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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, 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

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EN 60974-1:1998/A1:2000

Foreword

The text of document 26/181/FDIS, future amendment 1 to IEC 60974-1:1998, prepared by IEC TC 26, Electric welding, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A1 to EN 60974-1:1998 on 2000-04-01.

The following dates were fixed:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2001-01-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2003-04-01

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 amendment 1:2000 to the International Standard IEC 60974-1:1998 was approved by CENELEC as an amendment to the European Standard without any modification.

[SIST EN 60974-1:2000/A1:2001](https://standards.iteh.ai/catalog/standards/sist/4dd9974b-7ce2-4c77-8f86-90ee52e3d8c6/sist-en-60974-1-2000-a1-2001)

<https://standards.iteh.ai/catalog/standards/sist/4dd9974b-7ce2-4c77-8f86-90ee52e3d8c6/sist-en-60974-1-2000-a1-2001>

Annex ZA (normative)

Normative references to international publications
with their corresponding European publications

Add:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60974-7	2000	Arc welding equipment Part 7: Torches	EN 60974-7	2000

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**NORME
INTERNATIONALE
INTERNATIONAL
STANDARD**

**CEI
IEC**

60974-1

1998

AMENDEMENT 1
AMENDMENT 1
2000-03

Amendement 1

Matériel de soudage électrique –

Partie 1:

Sources de courant pour soudage
(standards.iteh.ai)

Amendment 1

<https://standards.iteh.ai/catalog/standards/sist/4dd9974b-7ce2-4c77-8f86-9ce92c800793/sist-en-60974-1-2000-a1-2001>
Arc welding equipment –

Part 1:

Welding power sources

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE

F

*Pour prix, voir catalogue en vigueur
For price, see current catalogue*

FOREWORD

This amendment has been prepared by IEC technical committee 26: Electric welding.

The text of this amendment is based on the following documents:

FDIS	Report on voting
26/181/FDIS	26/197/RVD

Full information on the voting for the approval of this amendment can be found in the report on voting indicated in the above table.

The committee has decided that the contents of the base publication and its amendments will remain unchanged until 2004. At this date, the publication will be:

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

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1 Scope

[SIST EN 60974-1:2000/A1:2001](https://standards.iteh.ai/catalog/standards/sist/4dd9974b-7ce2-4c77-8f86-80e52c70647d/iec-60974-1-2000-a1-2001)

[https://standards.iteh.ai/catalog/standards/sist/4dd9974b-7ce2-4c77-8f86-](https://standards.iteh.ai/catalog/standards/sist/4dd9974b-7ce2-4c77-8f86-80e52c70647d/iec-60974-1-2000-a1-2001)

Add the following text to the end of the third paragraph:

and plasma cutting systems.

2 Normative references

Add the following title:

IEC 60974-7:1999, *Arc welding equipment – Part 7: Torches*

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3 Définitions

Add the following definitions:

3.56

plasma cutting system

combination of power source, torch, and associated safety devices for plasma cutting/gouging

[IEC 60974-7, 3.21]

3.57**plasma cutting power source**

equipment for supplying current and voltage and having the required characteristics suitable for plasma cutting/gouging and which may supply gas and cooling liquid

NOTE 1 A plasma cutting power source may also supply services to other equipment and auxiliaries, for example auxiliary power, cooling liquid and gas.

NOTE 2 In the following text, the term "cutting power source" is used.

[IEC 60974-7, 3.22]

3.58**SELV**

voltage which does not exceed 50 V a.c. or 120 V ripple free d.c. between conductors, or between any conductor and earth, in a circuit which is isolated from the supply mains by such means as a safety isolating transformer

NOTE 1 Maximum voltage lower than 50 V a.c. or 120 V ripple free d.c. may be specified in particular requirements, especially when direct contact with live parts is allowed.

NOTE 2 The voltage limit should not be exceeded at any load between full load and no-load when the source is a safety isolating transformer.

NOTE 3 "Ripple-free" is conventionally an r.m.s. ripple voltage not more than 10 % of the d.c. component; the maximum peak value does not exceed 140 V for a nominal 120 V ripple-free d.c. system and 70 V for a nominal 60 V ripple-free d.c. system.

iTeh STANDARD PREVIEW [IEC 61558-1, 3.7.16]

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3.59**plasma tip**

component that provides the constricting orifice through which the plasma arc passes

<https://standards.iteh.ai/catalog/standards/sist/4dd9974b-7ce2-4c77-8f86-90ee52e3d8c6/sist-en-60974-1-2000-a1-2001> [IEC 60974-7, 3.19]

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Add the following subclause 6.3.5:

6.3.5 Additional requirements for plasma cutting systems

Plasma tips, that for technical reasons cannot be protected against direct contact, shall be considered to be sufficiently protected under a single-fault condition if the following requirements are fulfilled:

- a) when no arc current is present:
 - the voltage between the plasma tip and the workpiece and/or earth is not under any circumstances higher than the limits of SELV
 - and
- b) when an arc current is present:
 - the d.c. voltage between the plasma tip and the workpiece and/or earth is not under any circumstances higher than 113 V peak
 - or
- c) when the voltages of a) or b) above are exceeded:
 - the voltages are reduced as specified in clause 13.

NOTE An example of a fault is an abnormal condition resulting from the electrode being in contact with the plasma tip because of missing insulators, sticking of the plasma tip to the electrode, conductive material between plasma tip and electrode, wrong parts, loose parts, electrode abrasion, parts inserted incorrectly, excessive load or incorrect gas flow.