
Naprave za obločno varjenje – 12. del: Spojke za varilne kable (IEC 60974-12:2005)

Arc welding equipment – Part 12: Coupling devices for welding cables (IEC 60974-12:2005)

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EUROPEAN STANDARD

EN 60974-12

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2005

ICS 25.160

Supersedes EN 60974-12:1995

English version

Arc welding equipment
Part 12: Coupling devices for welding cables
(IEC 60974-12:2005)

Matériel de soudage à l'arc
Partie 12: Dispositifs de connexion
pour câbles de soudage
(CEI 60974-12:2005)

Lichtbogenschweißeinrichtungen
Teil 12: Steckverbindungen
für Schweißleitungen
(IEC 60974-12:2005)

This European Standard was approved by CENELEC on 2005-07-01. 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.

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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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, 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

Foreword

The text of document 26/303/FDIS, future edition 2 of IEC 60974-12, prepared by IEC TC 26, Electric welding, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60974-12 on 2005-07-01.

This European Standard supersedes EN 60974-12:1995.

Major changes with respect to EN 60974-12:1995 are the following:

- an operation capability requirement has been added to item b) of Clause 4;
- Tables 1 and 6 have slightly changed values and consider only a 60 % duty cycle;
- Subclause 7.1 “Voltage rating” has been newly introduced;
- under 7.3 “Dielectric strength”, the paragraphs 2 and 5 are newly introduced to consider arc striking and stabilizing devices;
- examples and design recommendations have been removed from the normative part of the document and introduced in Annex A.

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 [SIST EN 60974-12:2005](https://standards.iteh.ai/catalog/standards/sist/d06cdb8c-4d3d-4001-ae3e-1b2a00000000/EN-60974-12-2005) (dop) 2006-04-01
<https://standards.iteh.ai/catalog/standards/sist/d06cdb8c-4d3d-4001-ae3e-1b2a00000000/EN-60974-12-2005>
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2008-07-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60974-12:2005 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE Where an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-151	- ¹⁾	International Electrotechnical Vocabulary (IEV) Part 151: Electrical and magnetic devices	-	-
IEC 60529	- ¹⁾	Degrees of protection provided by enclosures (IP Code)	EN 60529 + corr. May	1991 ²⁾ 1993
IEC 60974-1	- ¹⁾	Arc welding equipment Part 1: Welding power sources	EN 60974-1	- ³⁾

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¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

³⁾ To be published.

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NORME
INTERNATIONALE
INTERNATIONAL
STANDARD

CEI
IEC

60974-12

Deuxième édition
Second edition
2005-06

Matériel de soudage à l'arc –

Partie 12:
Dispositifs de connexion pour câbles
de soudage

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Coupling devices for welding cables
973537acfd6/sist-en-60974-12-2005

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ARC WELDING EQUIPMENT –

Part 12: Coupling devices for welding cables

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 60974-12 has been prepared by IEC technical committee 26: Electric welding.

This second edition cancels and replaces the first edition published in 1992. This edition constitutes a technical revision.

Major changes with respect to the first edition are the following:

- An operation capability requirement has been added to item b) of Clause 4).
- Tables 1 and 6 have slightly changed values and consider only a 60 % duty cycle.
- Subclause 7.1 "Voltage rating" has been newly introduced.
- Under 7.3 "Dielectric strength", the paragraphs 2 and 5 are newly introduced to consider arc striking and stabilizing devices.
- Examples and design recommendations have been removed from the normative part of the document and introduced in Annex A.

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

FDIS	Report on voting
26/303/FDIS	26/309/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

IEC 60974 consists of the following parts, under the general title *Arc welding equipment*:

- Part 1: Welding power sources
- Part 2: Liquid cooling systems
- Part 3: Arc striking and stabilizing devices
- Part 4: Safety, maintenance and inspection of arc welding equipment in use ¹
- Part 5: Wire feeders
- Part 6: Limited duty manual metal arc welding power sources
- Part 7: Torches
- Part 8: Gas consoles for welding and plasma cutting systems
- Part 10: Electromagnetic compatibility (EMC) requirements
- Part 11: Electrode holders
- Part 12: Coupling devices for welding cables

SIST EN 60974-12:2005

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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

¹ Under consideration.

ARC WELDING EQUIPMENT –

Part 12: Coupling devices for welding cables

1 Scope

This part of IEC 60974 is applicable to coupling devices for cables for welding and allied processes designed for connection and disconnection without using tools.

This part of IEC 60974 specifies safety and performance requirements of coupling devices.

This part of IEC 60974 is not applicable to coupling devices for underwater welding.

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 60050(151): *International Electrotechnical Vocabulary (IEV) – Part 151: Electrical and magnetic devices*

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

IEC 60974-1, *Arc welding equipment – Part 1: Welding power sources*
<https://standards.iteh.ai/catalog/standards/sist/d06cdb8c-4d3d-4001-ae3e-973537acfd6/sist-en-60974-12-2005>

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-151, IEC 60974-1, as well as the following apply.

3.1

coupling device

device connecting two welding cables together or connecting a welding cable to welding equipment

3.2

rated current

current assigned by the manufacturer that the coupling device can accept at 60 % duty cycle without exceeding the permitted temperature rise

3.3

retaining means

mechanical arrangement that holds the coupling device in position and prevents an unintentional withdrawal, when properly connected

3.4

arc striking and stabilizing voltage

voltage superimposed on the welding circuit to initiate or maintain the arc