



**SLOVENSKI STANDARD**  
**SIST EN IEC 60974-1:2018**

**01-december-2018**

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**Naprave za obločno varjenje - 1. del: Viri varilnega toka (IEC 60974-1:2017)**

Arc welding equipment - Part 1: Welding power sources (IEC 60974-1:2017)

Lichtbogenschweißeinrichtungen - Teil 1: Schweißstromquellen (IEC 60974-1:2017)

Matériel de soudage à l'arc - Partie 1: Sources de courant de soudage (IEC 60974-1:2017)

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**SIST EN IEC 60974-1:2018**      **en**

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EUROPEAN STANDARD

EN IEC 60974-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2018

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Supersedes EN 60974-1:2012

English Version

## Arc welding equipment - Part 1: Welding power sources (IEC 60974-1:2017)

Matériel de soudage à l'arc - Partie 1: Sources de courant  
de soudage  
(IEC 60974-1:2017)

Lichtbogenschweißrichtungen - Teil 1:  
Schweißstromquellen  
(IEC 60974-1:2017)

This European Standard was approved by CENELEC on 2018-07-15. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

**EN IEC 60974-1:2018 (E)****European foreword**

The text of document 26/610/FDIS, future edition 5 of IEC 60974-1, prepared by IEC/TC 26 "Electric welding" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60974-1:2018.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2019-03-28
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2021-09-28

This document supersedes EN 60974-1:2012.

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The text of the International Standard IEC 60974-1:2017 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60038:2009	NOTE	Harmonized as EN 60038:2011 (modified)
IEC 60085	NOTE	Harmonized as EN 60085
IEC 60204-1	NOTE	Harmonized as EN 60204-1
IEC 60309-1	NOTE	Harmonized as EN 60309-1
IEC 60335-2-29	NOTE	Harmonized as EN 60335-2-29
IEC 60384-14	NOTE	Harmonized as EN 60384-14
IEC 60950-1	NOTE	Harmonized as EN 60950-1
IEC 60974-3	NOTE	Harmonized as EN 60974-3
IEC 60974-4	NOTE	Harmonized as EN 60974-4
IEC 60974-6	NOTE	Harmonized as EN 60974-6
IEC 60974-9	NOTE	Harmonized as EN IEC 60974-9
IEC 60974-10	NOTE	Harmonized as EN 60974-10
IEC 60974-12	NOTE	Harmonized as EN 60974-12
IEC 61032:1997	NOTE	Harmonized as EN 61032:1998 (not modified)
IEC 61558-1	NOTE	Harmonized as EN 61558-1
IEC 62281	NOTE	Harmonized as EN 62281
ISO 13732-1	NOTE	Harmonized as EN ISO 13732-1

## Annex ZA

(normative)

### Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-151	-	International Electrotechnical Vocabulary - Part 151: Electrical and magnetic devices	-	-
IEC 60050-851	-	International Electrotechnical Vocabulary - Part 851: Electric welding	-	-
IEC 60245-6	-	Rubber insulated cables - Rated voltages up to and including 450/750 V -- Part 6: Arc welding electrode cables	-	-
IEC 60417	-	Graphical symbols for use on equipment. Index, survey and compilation of the single sheets.	HD 243 S12	-
IEC 60445	-	Basic and safety principles for man-machine interface, marking and identification – Identification of equipment terminals, conductor terminations and conductors	-	-
IEC 60529	-	Degrees of protection provided by enclosures (IP Code)	-	-
IEC 60664-1	2007	Insulation coordination for equipment within low-voltage systems - Part 1: Principles, requirements and tests	EN 60664-1	2007
IEC 60664-3	-	Insulation coordination for equipment within low-voltage systems - Part 3: Use of coating, potting or moulding for protection against pollution	EN 60664-3	-
IEC 60695-11-10	-	Fire hazard testing -- Part 11-10: Test flames - 50 W horizontal and vertical flame test methods	EN 60695-11-10	-
IEC 60974-7	-	Arc welding equipment -- Part 7: Torches	EN 60974-7	-

## EN IEC 60974-1:2018 (E)

IEC 61140	-	Protection against electric shock - Common aspects for installation and equipment	EN 61140	-
IEC 61558-2-4	-	Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V - Part 2-4: Particular requirements and tests for isolating transformers and power supply units incorporating isolating transformers	EN 61558-2-4	-
IEC 61558-2-6	-	Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1 100 V -- Part 2-6: Particular requirements and tests for safety isolating transformers and power supply units incorporating safety isolating transformers	EN 61558-2-6	-
IEC 62133-1	-	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications - Part 1: Nickel systems	EN 62133-1	-
IEC 62133-2	-	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for portable sealed secondary lithium cells, and for batteries made from them, for use in portable applications - Part 2: Lithium systems	EN 62133-2	-
ISO 7010	2011	Graphical symbols - Safety colours and safety signs - Registered safety signs	EN ISO 7010	2012



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# INTERNATIONAL STANDARD

## NORME INTERNATIONALE



Arc welding equipment –  
Part 1: Welding power sources

Matériel de soudage à l'arc –  
Partie 1: Sources de courant de soudage

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## ARC WELDING EQUIPMENT –

## Part 1: Welding power sources

## FOREWORD

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International Standard IEC 60974-1 has been prepared by IEC technical committee 26: Electric welding.

This fifth edition cancels and replaces the fourth edition published in 2012 and constitutes a technical revision.

The significant changes with respect to the previous edition are the following:

- improvement of Figure 1 (6.1.1);
- modification of Table 3 (6.1.4);
- description of energy efficiency measurements in Annex M;
- inclusion of battery supplied welding power sources in the scope. Requirements therefore are described in Annex O.