



SLOVENSKI STANDARD
SIST EN IEC 60974-1:2023/A11:2023

01-februar-2023

Oprema za obločno varjenje - 1. del: Viri varilnega toka - Dopolnilo A11

Arc welding equipment - Part 1: Welding power sources

Lichtbogenschweißeinrichtungen - Teil 1: Schweißstromquellen

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

Ta slovenski standard je istoveten z: EN IEC 60974-1:2022/A11:2022

<https://standards.iteh.ai/catalog/standards/sist/40ee5315-8341-4481-967b-e3d0c15a7969/sist-en-iec-60974-1-2023-a11-2023>

ICS:

25.160.30 Varilna oprema Welding equipment

SIST EN IEC 60974-1:2023/A11:2023 en

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN IEC 60974-1:2022/A11

December 2022

ICS 25.160.30

English Version

Arc welding equipment - Part 1: Welding power sources

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

Lichtbogenschweißrichtungen - Teil 1:
Schweißstromquellen

This amendment A11 modifies the European Standard EN IEC 60974-1:2022; it was approved by CENELEC on 2022-10-25. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

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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 60974-1:2022/A11:2022 (E)

European foreword

This document (EN IEC 60974-1:2022/A11:2022) has been prepared by CLC/TC 26 “Electric Welding”.

The following dates are fixed:

- latest date by which this document has to be (dop) 2023-10-25 implemented at national level by publication of an identical national standard or by endorsement
- latest date by which the national standards (dow) 2025-10-25 conflicting with this document have to be withdrawn

This document modifies by common modifications EN IEC 60974-1:2022, which consists of the text of IEC 60974-1:2021 prepared by IEC/TC 26 “Electric Welding”.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

In this document, the following print types are used:

- *conformity statements*: in *italic* type.
- terms used throughout this document which have been defined in Clause 3: SMALL ROMAN CAPITALS.

This document has been prepared under a Standardization Request given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) / Regulation(s).

For the relationship with EU Directive(s) / Regulation(s), see informative Annexes ZZA and ZZB, which are an integral part of this document.

Any feedback and questions on this document should be directed to the users’ national committee. A complete listing of these bodies can be found on the CENELEC website.

1 Modification to 15.3, “Contents”

Replace NOTE 1

NOTE 1 National or local regulation (e.g. Commission Regulation (EU) 2019/1784) may require to provide the year of manufacture on the RATING PLATE. Alternative methods like decoding the traceability number or retrieving the year of manufacture by typing the traceability number into a web-tool provided by the manufacturer, is considered to fulfil the requirement.

with the following text:

“Commission Regulation (EU) 2019/1784 requires to provide the year of manufacture on the RATING PLATE. Alternative methods like decoding the traceability number or retrieving the year of manufacture by typing the traceability number into a web-tool provided by the manufacturer, is considered to fulfil the requirement.”

Replace NOTE 2

NOTE 2 In addition, this symbol, of a suitable size, can be displayed on the front of the WELDING POWER SOURCE.

with the following text:

“

NOTE 1 In addition, this symbol, of a suitable size, can be displayed on the front of the WELDING POWER SOURCE.”

Replace NOTE 3

NOTE 3 If a WELDING POWER SOURCE is fitted with a HAZARD REDUCING DEVICE, this is the voltage measured before the HAZARD REDUCING DEVICE has performed its function.

with the following text:

“

NOTE 2 If a WELDING POWER SOURCE is fitted with a HAZARD REDUCING DEVICE, this is the voltage measured before the HAZARD REDUCING DEVICE has performed its function.”

2 Modification to 16.3.3, “Displayed value”

Replace the NOTE

NOTE Where a display is provided, Commission Regulation (EU) 2019/1784 requires to provide indication of the use of welding wire or filler material in g/min or equivalent standardized units of measurement, Providing the wire-feed speed in m/min, or optionally in inch/min, is considered to fulfil the requirement.

with the following text:

“Where a display is provided, Commission Regulation (EU) 2019/1784 requires to provide indication of the use of welding wire or filler material in g/min or equivalent standardized units of measurement. Providing the wire-feed speed in m/min, is considered to fulfil the requirement.”

3 Modification to Annex M, “Efficiency and IDLE STATE power measurement”

Replace the heading of Annex M

Annex M
(informative)

Efficiency and IDLE STATE power measurement

with the following:

“Annex M
(normative)

Efficiency and IDLE STATE power measurement”

In M.1.3.2, “Supply voltage waveform”, replace the NOTE

NOTE Power supplies meeting IEC 61000-3-2 are likely to meet the above requirements.

with the following text:

“

NOTE Power supplies meeting IEC 61000-3-2 or IEC 61000-3-12 could meet the above requirements.”

4 Modification to the Bibliography

Add the following new entry to the Bibliography:

IEC 61000-3-12, *Electromagnetic compatibility (EMC) – Part 3-12: Limits – Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current > 16 A and ≤ 75 A per phase*

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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 When 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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-151	2001 ¹	International Electrotechnical Vocabulary (IEV) – Part 151: Electrical and magnetic devices (available at: http://www.electropedia.org)	-	-
IEC 60050-851	2008 ¹	International Electrotechnical Vocabulary (IEV) – Part 851: Electric welding (available at: http://www.electropedia.org)	-	-
IEC 60245-6	1994 ¹	Rubber insulated cables – Rated voltages up to and including 450/750 V – Part 6: Arc welding electrode cables	-	-
IEC 60417	data-base	Graphical symbols for use on equipment (available at: https://www.graphical-symbols.info/equipment)	-	-
IEC 60445	-	Basic and safety principles for man-machine interface, marking and identification – Identification of equipment terminals, conductor terminations and conductors	EN 60445	2017
IEC 60529	-	Degrees of protection provided by enclosures (IP Code)	EN 60529	1991
			+ corrigendum May	1993
			+ A1	2000
			+ A2	2013
			+ AC	2016
			+ A2:2013/AC	2019
IEC 60664-1	2020	Insulation coordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests	EN IEC 60664-1	2020

¹ Dated as no European equivalent exists.

EN IEC 60974-1:2022/A11:2022 (E)

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
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	2017
IEC 60695-11-10		Fire hazard testing – Part 11–10: Test flames – 50 W horizontal and vertical flame test methods	EN 60695-11-10	2013
			+AC	2014
IEC 60974-7	-	Arc welding equipment – Part 7: Torches	EN IEC 60974-7	2019
IEC 60974-10		Arc welding equipment – Part 10: Electromagnetic compatibility (EMC) requirements	EN IEC 60974-10	2021
IEC 61140	-	Protection against electric shock – Common aspects for installation and equipment	EN 61140	2016
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	2009
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	2009
IEC 62133-1	2017	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 62133-17b-	2017
IEC 62133-2	2017	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	2017
IEC 62301	2011	Household electrical appliances - Measurement of standby power	-	-
(IEC 62301, modified)	(2011)	Electrical and electronic household and office equipment - Measurement of low power consumption	EN 50564	2011
ISO 7010	2019	Graphical symbols – Safety colours and safety signs – Registered safety signs	EN ISO 7010	2020

Annex ZZA (informative)

Relationship between this European standard and the safety objectives of Directive 2014/35/EU [2014 OJ L96] aimed to be covered

This European standard has been prepared under a Commission's standardization request relating to harmonized standards in the field of the Low Voltage Directive, M/511, to provide one voluntary means of conforming to safety objectives of Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits [2014 OJ L96].

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding safety objectives of that Directive, and associated EFTA regulations.

Table ZZA.1 — Correspondence between this European standard and Annex I of Directive 2014/35/EU [2014 OJ L96]

Safety objectives of Directive 2014/35/EU	Clause(s) / sub-clause(s) of this EN	Remarks / Notes
1(a)	Clauses 10.4, 15, 17.1, 17.2, O.15, O.17.1 O.17.2	
1(b)	Clause 17.1 Annex O.17.1	
1(c)	Clauses 3, 4 Annex O.4 see also points 2 and 3 below	Testing -967 during periodic maintenance or after repair is covered in separate standards
2(a)	Clauses 5, 6.1, 6.2, 6.3, 10, 11.1, 11.4, 11.5, 11.6, 11.7, 12, 13 Annexes O.5, O.6.1, O.6.2, O.10	
2(b)	Clauses 5, 7.3.1, 7.3.2, 7.3.3	Hazards arising from electric, magnetic, and electromagnetic fields, other ionizing and non-ionizing radiation are covered in separate standards
2(c)	Clauses 5, 6.2.1, 6.2.2, 9.1,10.5.2, 14 Annexes O.5, O.9.1, O.14, O.9.201, O.9.203, O.9.204, O.9.205	
2(d)	Clauses 5, 6.1, 7.3.1 Annexes O.5, O.6.1	
3(a)	Clauses 5, 14 Annexes O.5, O.14	

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Safety objectives of Directive 2014/35/EU	Clause(s) / sub-clause(s) of this EN	Remarks / Notes
3(b)	Clauses 5, 4, 6.2.1, 10.9, 14.2.1, 17.1 r)	Functional safety is covered in separate standards Safety-related security is covered in separate standards
3(c)	Clauses 5, 9 Annexs O.5, O.9	

WARNING 1 — Presumption of conformity stays valid only as long as a reference to this European standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2 — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

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