

This document is a preview generated by EVS

Kaarkeevitusseadmed. Osa 3: Kaare süütamis- ja stabiliseerimisseadmed

Arc welding equipment -- Part 3: Arc striking and stabilizing devices

EESTI STANDARDI EESSÖNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 60974-3:2014 sisaldab Euroopa standardi EN 60974-3:2014 inglisekeelset teksti.	This Estonian standard EVS-EN 60974-3:2014 consists of the English text of the European standard EN 60974-3:2014.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 14.02.2014.	Date of Availability of the European standard is 14.02.2014.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 25.160

Standardite reproduutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Aru 10, 10317 Tallinn, Eesti; www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:
Aru 10, 10317 Tallinn, Estonia; www.evs.ee; phone 605 5050; e-mail info@evs.ee

English version

**Arc welding equipment -
Part 3: Arc striking and stabilizing devices
(IEC 60974-3:2013)**

Matériel de soudage à l'arc -
Partie 3: Dispositifs d'amorçage et de
stabilisation de l'arc
(CEI 60974-3:2013)

Lichtbogenschweißeinrichtungen -
Teil 3: Lichtbogenzünd- und -
stabilisierungseinrichtungen
(IEC 60974-3:2013)

This European Standard was approved by CENELEC on 2013-12-31. 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.

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

CENELEC

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 26/518/FDIS, future edition 3 of IEC 60974-3, prepared by IEC/TC 26 "Electric welding" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60974-3:2014.

The following dates are fixed:

- latest date by which the document has to be implemented at (dop) 2014-09-30 national level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2016-12-31

This document supersedes EN 60974-3:2007.

EN 60974-3:2014 includes the following significant technical changes with respect to EN 60974-3:2007:

- changes induced by the publication of IEC 60974-1:2012.

This standard is to be read in conjunction with EN 60974-1:2012.

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

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

Endorsement notice

The text of the International Standard IEC 60974-3:2013 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated :

IEC 60974

NOTE

Harmonized in EN 60974 series (not modified).

Annex ZA
(normative)

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

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When 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 60974-1	2012	Arc welding equipment Part 1: Welding power sources	EN 60974-1	2012
IEC 60974-7	-	Arc welding equipment Part 7:Torches	EN 60974-7	-
IEC 61140	-	Protection against electric shock - Common aspects for installation and equipment	EN 61140	-

CONTENTS

FOREWORD	4
1 Scope	6
2 Normative references	6
3 Terms and definitions	6
4 Environmental conditions	7
5 Tests	7
5.1 Test conditions	7
5.2 Measuring instruments	7
5.3 Conformity of components	7
5.4 Type tests	7
5.5 Routine tests	7
5.5.1 Stand-alone unit	7
5.5.2 Built-in unit	8
6 Protection against electric shock	8
6.1 Insulation	8
6.1.1 General	8
6.1.2 Clearances	8
6.1.3 Creepage distances	8
6.1.4 Insulation resistance	9
6.1.5 Dielectric strength	9
6.2 Protection against electric shock in normal service (direct contact)	10
6.3 Protection against electric shock in case of a fault condition (indirect contact)	10
6.4 Protective provision	10
7 Thermal requirements	10
8 Thermal protection	10
9 Abnormal operation	10
10 Connection to the supply network	11
11 Output	11
11.1 Rated peak voltage	11
11.2 Impulse current	12
11.2.1 Risk of electric shock	12
11.2.2 Electric charge	12
11.2.3 Direct contact	12
11.2.4 Series contact	13
11.3 Mean energy	14
11.4 Output circuit capacitance discharging	15
12 Control circuits	15
13 Hazard reducing device	15
14 Mechanical provisions	15
15 Rating plate	15
16 Adjustment of the output	16
17 Instructions and markings	16
17.1 Instructions	16
17.2 Markings	17

Annex A (informative) Examples of coupling systems for arc striking and stabilizing devices	18
Annex B (informative) Example of a rating plate.....	19
Bibliography.....	20
Figure 1 – Rated peak voltage	11
Figure 2 – Measurement of electric charge of impulse current	12
Figure 3 – Measuring circuit for direct contact.....	13
Figure 4 – Measuring circuit for serial contact.....	14
Figure 5 – Measurement of mean energy	14
Figure 6 – Measuring circuit for capacitance discharging	15
Figure A.1 – Examples of coupling systems for arc striking and stabilizing devices	18
Figure B.1 – Stand-alone unit	19
Table 1 – Minimum clearances and creepage distances for arc striking and stabilizing circuits.....	9
Table 2 – Maximum peak voltages	11