Live working - Phase comparators - Part 2: Resistive type to be used for voltages from 1 kV to 36 kV a.c.

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 61481-2:2014 sisaldab Euroopa standardi EN 61481-2:2014 ingliskeelset teksti.	This Estonian standard EVS-EN 61481-2:2014 consists of the English text of the European standard EN 61481-2:2014.
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 05.12.2014.	Date of Availability of the European standard is 05.12.2014.
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 13.260, 29.240.20, 29.260.99

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61481-2

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ICS 13.260; 29.240.20; 29.260.99

Supersedes EN 61481:2001 (partially)

English Version

Live working - Phase comparators - Part 2: Resistive type to be used for voltages from 1 kV to 36 kV a.c. (IEC 61481-2:2014)

Travaux sous tension - Comparateurs de phase - Partie 2: Type résistif pour usage sur des tensions alternatives de 1 kV à 36 kV (CEI 61481-2:2014)

Arbeiten unter Spannung - Phasenvergleicher - Teil 2: Resistive (ohmsche) Ausführung für Wechselspannungen über 1 kV bis 36 kV (IEC 61481-2:2014)

This European Standard was approved by CENELEC on 2014-11-28. 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: Avenue Marnix 17, B-1000 Brussels

Ref. No. EN 61481-2:2014 E

Foreword

The text of document 78/1052/FDIS, future edition 1 of IEC 61481-2, prepared by IEC/TC 78 "Live working" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61481-2:2014.

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)	2015-08-28
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2017-11-28

This document supersedes EN 61481:2001 (partially).

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.

Endorsement notice

The text of the International Standard IEC 61481-2:2014 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	NOTE	Harmonized as EN 60038.
IEC 60071-1:2006	NOTE	Harmonized as EN 60071-1:2006 (not modified).
IEC 60743:2013	NOTE	Harmonized as EN 60743:2013 (not modified).
IEC 61235:1993	NOTE	Harmonized as EN 61235:1995 (modified).
IEC 61936-1:2010	NOTE	Harmonized as EN 61936-1:2010 (modified).
ISO/IEC 17025	NOTE	Harmonized as EN ISO/IEC 17025 (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 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

Publication	Year	Title	EN/HD	Year
CISPR 11	-	Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement	EN 55011	-
IEC 60060-1	2010	High-voltage test techniques - Part 1: General definitions and test requirements	EN 60060-1	2010
IEC 60068-1	-	Environmental testing - Part 1: General and guidance	EN 60068-1	-
IEC 60068-2-6	-	Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal)	EN 60068-2-6	-
IEC 60068-2-14	-	Environmental testing - Part 2-14: Tests - Test N: Change of temperature	EN 60068-2-14	-
IEC 60068-2-31	-	Environmental testing - Part 2-31: Tests - Test Ec: Rough handling shocks, primarily for equipment-type specimens	EN 60068-2-31	-
IEC 60068-2-75	-	Environmental testing - Part 2-75: Tests - Test Eh: Hammer tests	EN 60068-2-75	-
IEC 60417-DB	-	Graphical symbols for use on equipment	-	-
IEC 60942	-	Electroacoustics - Sound calibrators	EN 60942	-
IEC 61000-4-2	-	Electromagnetic compatibility (EMC) - Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	EN 61000-4-2	-
IEC 61000-4-3	-	Electromagnetic compatibility (EMC) - Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3	-

Publication	Year	Title	EN/HD	Year
IEC 61000-4-8	-	Electromagnetic compatibility (EMC) - Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test	EN 61000-4-8	-
IEC 61260	-	Electroacoustics - Octave-band and fractional-octave-band filters	EN 61260	-
IEC 61318	-	Live working - Conformity assessment applicable to tools, devices and equipment	EN 61318	-
IEC 61326-1	-	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements	EN 61326-1	-
IEC 61477	-	Live working - Minimum requirements for the utilization of tools, devices and equipment	EN 61477	-
IEC 61672-1	-	Electroacoustics - Sound level meters - Part 1: Specifications	EN 61672-1	-
ISO 3744	2010	Acoustics - Determination of sound power levels and sound energy levels of noise sources using sound pressure - Engineering methods for an essentially free field over a reflecting plane	EN ISO 3744	2010
CIE 15	-	Colorimetry	-	-

CONTENTS

INTRODUCTION

This International Standard has been prepared in accordance with the requirements of IEC 61477.

Taking into consideration the functioning principle of portable *phase comparators of resistive type* available on the market, the associated maximum a.c. *nominal voltage* is 36 kV.

The rationale for this maximum *nominal voltage* is:

- design of the *phase comparator* for operation by one person (see 4.4.2) – ergonomic consideration.

  With higher *nominal voltages*, the distance between phases of the installation increases and the positioning of the two poles of the *phase comparator* by one person becomes a limitation;
- correct performance of each component (including the connecting lead) under normal working conditions – performance consideration;
- possible contact of the connecting lead between the two poles of the *phase comparator* with a part of the installation at a phase or earth potential under normal working conditions.

The product covered by this standard may have an impact on the environment during some or all stages of its life cycle. These impacts can range from slight to significant, be short-term or long-term, and occur at the global, regional or local level.

In terms of environmental improvement, this standard includes neither requirements nor test provisions for the manufacturers of the product nor recommendations to the users of the product. However, all parties intervening in its design, manufacture, packaging, distribution, use, maintenance, repair, reuse, recovery and disposal are invited to take account of environmental considerations.