



BSI Standards Publication

Safety of machinery — Electro-sensitive protective equipment

Part 1: General requirements and tests

bsi.

This is a preview. [Click here to purchase the full publication.](#)

National foreword

This British Standard is the UK implementation of EN IEC 61496-1:2020. It is identical to IEC 61496-1:2020. It supersedes BS EN 61496-1:2013, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee MCE/3, Safeguarding of machinery.

A list of organizations represented on this committee can be obtained on request to its committee manager.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2020
Published by BSI Standards Limited 2020

ISBN 978 0 539 01013 8

ICS 29.260.99; 13.110

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 September 2020.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

EUROPEAN STANDARD

EN IEC 61496-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2020

ICS 13.110; 29.260.99

Supersedes EN 61496-1:2013 and all of its amendments
and corrigenda (if any)

English Version

**Safety of machinery - Electro-sensitive protective equipment -
Part 1: General requirements and tests
(IEC 61496-1:2020)**Sécurité des machines - Équipements de protection
électrosensibles - Partie 1: Exigences générales et essais
(IEC 61496-1:2020)Sicherheit von Maschinen - Berührungslos wirkende
Schutzeinrichtungen - Teil 1: Allgemeine Anforderungen
und Prüfungen
(IEC 61496-1:2020)

This European Standard was approved by CENELEC on 2020-08-18. 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, 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, Turkey and the United Kingdom.

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**

European foreword

The text of document 44/874/FDIS, future edition 4 of IEC 61496-1, prepared by IEC/TC 44 "Safety of machinery - Electrotechnical aspects" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61496-1:2020.

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) 2021-05-18
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-08-18

This document supersedes EN 61496-1:2013 and all of its amendments and corrigenda (if any).

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.

Endorsement notice

The text of the International Standard IEC 61496-1:2020 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 60447	NOTE	Harmonized as EN 60447
IEC 60812	NOTE	Harmonized as EN IEC 60812
IEC 61000-6-2	NOTE	Harmonized as EN IEC 61000-6-2
IEC 61000-6-7:2014	NOTE	Harmonized as EN 61000-6-7:2015 (not modified)
IEC 61010-1	NOTE	Harmonized as EN 61010-1
IEC 61025	NOTE	Harmonized as EN 61025
IEC 61131-2:2017	NOTE	Harmonized as EN 61131-2:2017 ¹ (not modified)
IEC 62046	NOTE	Harmonized as EN IEC 62046

¹ To be published. Stage at the time of publication: EN 61131-2:2017.

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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2-6	-	Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal)	EN 60068-2-6	-
IEC 60068-2-27	-	Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock	EN 60068-2-27	-
IEC 60204-1 (mod)	2016	Safety of machinery - Electrical equipment of machines - Part 1: General requirements	EN 60204-1	2018
IEC 60417	-	Graphical symbols for use on equipment. Index, survey and compilation of the single sheets.	-	-
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 60721-3-5	-	Classification of environmental conditions - Part 3: Classification of groups of environmental parameters and their severities - Section 5: Ground vehicle installations	EN 60721-3-5	-

EN IEC 61496-1:2020 (E)

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC/TR 60721-4-3	-	Classification of environmental conditions - Part 4-3: Guidance for the correlation and transformation of environmental condition classes of IEC 60721-3 to the environmental tests of IEC 60068 - Stationary use at weatherprotected locations	-	-
IEC 60947-1	2007	Low-voltage switchgear and controlgear - Part 1: General rules	EN 60947-1	2007
+ A2	2014		+ A2	2014
IEC 61000-4-2	2008	Electromagnetic compatibility (EMC) - Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	EN 61000-4-2	2009
IEC 61000-4-3	2006	Electromagnetic compatibility (EMC) - Part 4-3 : Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3	2006
+ A1	2007		+ A1	2008
+ A2	2010		+ A2	2010
IEC 61000-4-4	2012	Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	EN 61000-4-4	2012
IEC 61000-4-5	2014	Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test	EN 61000-4-5	2014
+ A1	2017		+ A1	2017
IEC 61000-4-6	2013	Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	EN 61000-4-6	2014
IEC 61000-4-11	2020	Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests for equipment with input current up to 16 A per phase	EN IEC 61000-4-11	2020
IEC 61000-4-29	2000	Electromagnetic compatibility (EMC) - Part 4-29: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations on d.c. input power port immunity tests	EN 61000-4-29	2000

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61508	series	Functional safety of electrical/electronic/programmable electronic safety-related systems	EN 61508	series
IEC 62061	-	Safety of machinery - Functional safety of safety-related control systems	-	-
ISO 12100	-	Safety of machinery - General principles for design - Risk assessment and risk reduction	EN ISO 12100	-
ISO 13849-1	-	Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design	EN ISO 13849-1	-
ISO 13849-2	2012	Safety of machinery - Safety-related parts of control systems - Part 2: Validation	EN ISO 13849-2	2012