SVENSK STANDARD SS-EN 61496-3

Fastställd	Utgåva	Sida	Ingår i
2001-08-28	1	1 (1+55)	SEK Område 44

Svenska Elektriska Kommissionen, SEK

Maskinsäkerhet – Elektriskt avkännande skyddsanordningar – Del 3: Särskilda fordringar på utrustning med aktiv optoelektronik, känslig för diffus reflexion (AOPDDR)

Safety of machinery – Electro-sensitive protective equipment – Part 3: Particular requirements for Active Opto-electronic Protective Devices responsive to Diffuse Reflection (AOPDDR)

Som svensk standard gäller europastandarden EN 61496-3:2001. Den svenska standarden innehåller den officiella engelska språkversionen av EN 61496-3:2001.

Nationellt förord

Europastandarden EN 61496-3:2001

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC

– **IEC 61496-3, First edition, 2001 - Safety of machinery - Electro-sensitive protective equipment - Part 3: Particular requirements for Active Opto-electronic Protective Devices responsive to Diffuse Reflection (AOPDDR)**

utarbetad inom International Electrotechnical Commission, IEC.

Standarden skall användas tillsammans med SS-EN 61496-1, utgåva 1, 1998.

ICS 13.110; 29.260

Denna standard är fastställd av Svenska Elektriska Kommissionen, SEK,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
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EUROPEAN STANDARD **EN 61496-3**

NORME EUROPÉENNE

EUROPÄISCHE NORM May 2001

ICS 13.110; 29.260

English version

Safety of machinery - Electro-sensitive protective equipment Part 3: Particular requirements for Active Opto-electronic Protective Devices responsive to Diffuse Reflection (AOPDDR)

(IEC 61496-3:2001)

Sécurité des machines - Equipements de protection électro-sensibles Partie 3: Prescriptions particulières pour les équipements utilisant des dispositifs protecteurs opto-électroniques actifs sensibles aux réflexions diffuses (AOPDDR)
(CEI 61496-3:2001)

Sicherheit von Maschinen - Berührungslos wirkende Schutzeinrichtungen Teil 3: Besondere Anforderungen an aktive optoelektronische diffuse Reflektion nutzende Schutzeinrichtungen (AOPDDR)
(IEC 61496-3:2001)

This European Standard was approved by CENELEC on 2001-03-06. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Ref. No. EN 61496-3:2001 E

Foreword

The text of document 44/287/FDIS, future edition 1 of IEC 61496-3, prepared by IEC TC 44, Safety of machinery - Electrotechnical aspects, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61496-3 on 2001-03-06.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2002-01-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2004-04-01

This standard is to be used in conjunction with EN 61496-1:1997

Annexes designated "normative" are part of the body of the standard.
Annexes designated "informative" are given for information only.
In this standard, annexes A, B and ZA are normative and annexes C, AA and BB are informative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61496-3:2001 was approved by CENELEC as a European Standard without any modification.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 60068-2-14	1984	Environmental testing Part 2: Tests - Test N: Change of temperature	EN 60068-2-14[1)]	1999
IEC 60068-2-75	1997	Part 2-75: Tests - Test Eh: Hammer tests	EN 60068-2-75	1997
IEC 60825-1	1993	Safety of laser products Part 1: Equipment classification, requirements and user's guide	EN 60825-1 + corr. February + A11	1994 1995 1996
IEC 61496-1	1997	Safety of machinery - Electro-sensitive protective equipment Part 1: General requirements and tests	EN 61496-1	1997
EN 471	1994	High-visibility warning clothing	-	-

1) EN 60068-2-14 includes A1:1986 to IEC 60068-2-14.

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SAFETY OF MACHINERY – ELECTRO-SENSITIVE PROTECTIVE EQUIPMENT –

Part 3: Particular requirements for Active Opto-electronic Protective Devices responsive to Diffuse Reflection (AOPDDR)

1 Scope

Replacement:

This part of IEC 61496 specifies additional requirements for the design, construction and testing of electro-sensitive protective equipment (ESPE) for the safeguarding of machinery, employing active opto-electronic protective devices responsive to diffuse reflection (AOPDDRs) for the sensing function. Special attention is directed to requirements which ensure that an appropriate safety-related performance is achieved. An ESPE may include optional safety-related functions, the requirements for which are given both in annex A of this part and in annex A of IEC 61496-1.

This part does not specify the dimensions or configurations of the detection zone and its disposition in relation to hazardous parts for any particular application, nor what constitutes a hazardous state of any machine. It is restricted to the functioning of the ESPE.

AOPDDRs are devices that have a detection zone specified in two dimensions wherein radiation in the near infrared range is emitted by a transmitter element(s). When the emitted radiation impinges on an object (for example, a person or part of a person), a portion of the emitted radiation is reflected to a receiving element(s) by diffuse reflection whereby the presence of the object can be detected.

NOTE Under certain circumstances, limitations of the sensor in relation to its use need to be considered. For example:

– Objects that generate mirror-like (specular) reflections may not be detected if the diffuse reflectance value is less than that specified for the "black" test piece.

– The determination of the minimal reflection factors for the detection of obstacles is based on the clothing of a person. Objects having a reflectivity lower than that considered in this part may not be detected.

Excluded from this part are AOPDDRs employing radiation of wavelength outside the range 820 nm to 946 nm, and those employing radiation other than that generated by the AOPDDR itself. For sensing devices that employ radiation of wavelengths outside this range, this part may be used as a guide. Also excluded are AOPDDRs having a stated detection capability outside the range 50 mm to 100 mm.

This part may be relevant to applications other than those for the protection of persons, for example, for the protection of machinery or products from mechanical damage. In such applications, additional requirements may be necessary, for example, when the materials that have to be detected by the sensing function have different properties from those of persons and their clothing.

This part does not deal with electromagnetic compatibility (EMC) emission requirements.

Opto-electronic devices that perform only one-dimensional spot-like distance measurements, for example, proximity switches, are not covered by this part.