STN	Bezpečnosť strojových zariadení Elektrosenzitívne ochranné zariadenia Časť 2: Osobitné požiadavky na zariadenia s aktívnymi optoelektronickými ochrannými prístrojmi (AOPD)	STN EN IEC 61496-2
		33 2205

Safety of machinery - Electro-sensitive protective equipment - Part 2: Particular requirements for equipment using active opto-electronic protective devices (AOPDs)

Táto norma obsahuje anglickú verziu európskej normy. This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 12/20

Obsahuje: EN IEC 61496-2:2020, IEC 61496-2:2020

Oznámením tejto normy sa od 19.08.2023 ruší STN EN 61496-2 (33 2205) z mája 2014

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EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN IEC 61496-2

September 2020

ICS 13.110; 29.260.99

Supersedes EN 61496-2:2013 and all of its amendments and corrigenda (if any)

English Version

Safety of machinery - Electro-sensitive protective equipment -Part 2: Particular requirements for equipment using active optoelectronic protective devices (AOPDs) (IEC 61496-2:2020)

Securité des machines - Equipements de protection électrosensibles - Partie 2: Exigences particulières à un équipement utilisant des dispositif protecteurs optoélectroniques actifs (AOPD) (IEC 61496-2:2020) Sicherheit von Maschinen - Berührungslos wirkende Schutzeinrichtungen - Teil 2: Besondere Anforderungen an Einrichtungen, die aktive optoelektronische Schutzeinrichtungen (AOPD) verwenden (IEC 61496-2:2020)

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European foreword

The text of document 44/875/FDIS, future edition 4 of IEC 61496-2, 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 61496-2:2020.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2021-05-19 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2023-08-19 document have to be withdrawn

This document supersedes EN 61496-2:2013 and all of its amendments and corrigenda (if any).

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Endorsement notice

The text of the International Standard IEC 61496-2:2020 was approved by CENELEC as a European Standard without any modification.

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: <u>www.cenelec.eu</u>.

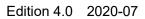
Annex ZA of Part 1 is applicable except as follows:

Add the following references:

Publication	Year	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60825-1	-	Safety of laser products - Part 1: Equipment classification and requirements	EN 60825-1	-
IEC 61496-1	2020	Safety of machinery - Electro-sensitive protective equipment - Part 1: General requirements and tests	EN IEC 61496-1	2020
IEC 62471	-	Photobiological safety of lamps and lamp systems	EN 62471	-
ISO 13855	-	Safety of machinery - Positioning of safeguards with respect to the approach speeds of parts of the human body	EN ISO 13855	-
ISO 20471	-	High-visibility clothing - Test methods and requirements	EN ISO 20471	-







INTERNATIONAL STANDARD



Safety of machinery – Electro-sensitive protective equipment – Part 2: Particular requirements for equipment using active opto-electronic protective devices (AOPDs)





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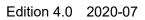
The world's leading online dictionary on electrotechnology, containing more than 22 000 terminological entries in English and French, with equivalent terms in 16 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

IEC Glossary - std.iec.ch/glossary

67 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.







INTERNATIONAL STANDARD



Safety of machinery – Electro-sensitive protective equipment – Part 2: Particular requirements for equipment using active opto-electronic protective devices (AOPDs)

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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- 2 -

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CONTENTS

FOF	REWORD	4
INT	RODUCTION	6
1	Scope	7
2	Normative references	7
3	Terms and definitions	8
4	Functional, design and environmental requirements	9
5	Testing	. 14
6	Marking for identification and safe use	.40
7	Accompanying documents	.41
Ann	ex A (normative) Optional functions of the ESPE	.42
Ann	ex AA (informative) Type 2 AOPD periodic test configurations	.46
Figu	re 1 – Limit area for the protection against the risk of beam bypass	.12
Figu	re 2 – Limit of vertical and horizontal misalignment	.13
Figu	re 3 – Test piece at 45°	. 18
Figu	re 4 – Test piece at 90°	. 18
dete	re 5 – Verifying sensing function by moving the test piece (TP) through the ection zone near the emitter, near the receiver/retro-reflector target and at the point	19
	re 6 – Limit values for the effective aperture angle (EAA)	
-	re 7 – Determination of the minimum detection capability	
-	re 8 – Measuring method for EAA (direction)	
-	re 9 – Prism test to measure EAA of each beam	
-	re 10 – EAA test using prism	
-	re 11 – Example of optical subsystem	
-	re 12 – Example of SMD LED Model	
Ŭ	re 13 – Example of intensity distribution of emitting element	
-	re 14 – Example of emitter model with beams internally blocked by aperture stop	
Figu	re 15 – Example of receiving unit with off axis beam portion reflected internally on hanical elements	
	re 16 – Example of test piece inside model of optical subsystem with passing ation on the receiver	. 30
Figu	re 17 – Example of emitting unit adjusted at the limit	.31
Figu	re 18 – Extraneous reflection test with mirror outside of limit area	. 32
Figu	re 19 – AOPD misalignment test	. 34
Figu	re 20 – Light interference test – Direct method	.36
Figu	re 21 – Light interference test – Test set-up with incandescent light source	.37
Figu	re 22 – Light interference test – Test set-up with fluorescent light source	.38
Figu	re 23 – Light interference test – Test set-up with flashing beaconlight source	.39
Figu	re AA.1 – Single beam sensing device	.46
Figu	re AA.2 – Series connection of single beam sensing devices	.46
Figu	re AA.3 – Assembly of multiple beams tested individually	.46
Figu	re AA.4 – Example of type 2 AOPD with internal test	.47

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Table 1 – Correspondences of requirements/testing and AOPD designs	15
Table 2 – Maximum permissible angle of misalignment (in degrees) for a type 2 ESPEdepending on the dimensions of the light curtain	32
Table 3 – Maximum permissible angle of misalignment (in degrees) for a type 3 ESPE depending on the dimensions of the light curtain	33
Table 4 – Maximum permissible angle of misalignment (in degrees) for a type 4 ESPE depending on the dimensions of the light curtain	33

- 3 -

- 4 -

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SAFETY OF MACHINERY – ELECTRO-SENSITIVE PROTECTIVE EQUIPMENT –

Part 2: Particular requirements for equipment using active opto-electronic protective devices (AOPDs)

FOREWORD

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International Standard IEC 61496-2 has been prepared by IEC technical committee 44: Safety of machinery – Electrotechnical aspects, in collaboration with CENELEC technical committee 44X: Safety of machinery – Electrotechnical aspects.

This fourth edition cancels and replaces the third edition published in 2013. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) Requirements and test procedures in Part 2 that were found to be common to all ESPEs have been moved to Part 1. Test procedures that are dependent on the sensing technology remain in Part 2.

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- 5 -

The text of this International Standard is based on the following documents:

FDIS	Report on voting
44/875/FDIS	44/878/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

This standard has the status of a product family standard and can be used as a normative reference in a dedicated product standard for the safety of machinery.

This standard is to be used in conjunction with IEC 61496-1:2020.

This part supplements or modifies the corresponding clauses in IEC 61496-1:2020.

Where a particular clause or subclause of IEC 61496-1:2020 is not mentioned in this Part 2, that clause or subclause applies as far as is reasonable. Where this part states "*Addition*", "*Modification*" or "*Replacement*", the relevant text of IEC 61496-1:2020 is adapted accordingly.

Clauses and subclauses which are additional to those of Part 1 are numbered sequentially, following on the last available number in Part 1. Terminological entries (in Clause 3) which are additional to those in Part 1 are numbered starting from 3.201. Additional annexes are lettered from AA onwards.

A list of all parts in the IEC 61496 series, published under the general title *Safety of machinery – Electro-sensitive protective equipment*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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- 6 -

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INTRODUCTION

Electro-sensitive protective equipment (ESPE) is applied to machinery that presents a risk of personal injury. It provides protection by causing the machine to revert to a safe condition before a person can be placed in a hazardous situation.

This document provides particular requirements for the design, construction and testing of electro-sensitive protective equipment (ESPE) for the safeguarding of machinery, employing active opto-electronic protective devices (AOPDs) for the sensing function.

Each type of machine presents its own particular hazards, and it is not the purpose of this document to recommend the manner of application of the ESPE to any particular machine. The application of the ESPE should be a matter for agreement between the equipment supplier, the machine user and the enforcing authority; in this context, attention is drawn to the relevant guidance established internationally, for example, ISO 12100.

Due to the complexity of the technology of ESPEs, there are many issues that are highly dependent on analysis and expertise in specific test and measurement techniques. In order to provide a high level of confidence, independent review by relevant expertise is recommended.

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- 7 -

SAFETY OF MACHINERY – ELECTRO-SENSITIVE PROTECTIVE EQUIPMENT –

Part 2: Particular requirements for equipment using active opto-electronic protective devices (AOPDs)

1 Scope

This clause of Part 1 is replaced by the following:

This part of IEC 61496 specifies requirements for the design, construction and testing of electro-sensitive protective equipment (ESPE) designed specifically to detect persons as part of a safety-related system, employing active opto-electronic protective devices (AOPDs) for the sensing function. Special attention is directed to features which ensure that an appropriate safety-related performance is achieved. An ESPE can include optional safety-related functions, the requirements for which are given in Annex A of IEC 61496-1:2020 and of this document.

This document 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 and how it interfaces with the machine.

Excluded from this document are AOPDs employing radiation at wavelengths outside the range 400 nm to 1 500 nm.

This document can be relevant to applications other than those for the protection of persons, for example, the protection of machinery or products from mechanical damage. In those applications, additional requirements can be necessary, for example, when the materials that are to be recognized by the sensing function have different properties from those of persons.

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

2 Normative references

This clause of Part 1 is applicable except as follows:

Addition:

IEC 60825-1, Safety of laser products – Part 1: Equipment classification and requirements

IEC 61496-1:2020, Safety of machinery – Electro-sensitive protective equipment – Part 1: General requirements and tests ¹

IEC 62471, Photobiological safety of lamps and lamp systems

ISO 13855, Safety of machinery – Positioning of safeguards with respect to the approach speeds of parts of the human body

ISO 20471, High-visibility clothing – Test methods and requirements

¹ To be published.

- 8 -

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