

English version

**Safety of machinery -
Application of protective equipment
to detect the presence of persons
(IEC/TS 62046:2008)**

Sécurité des machines -
Application des équipements de protection
à la détection de la présence
de personnes
(CEI/TS 62046:2008)

Sicherheit von Maschinen -
Anwendung von Schutzausrüstungen zur
Anwesenheitserkennung von Personen
(IEC/TS 62046:2008)

This Technical Specification was approved by CENELEC on 2008-05-01.

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CENELEC

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

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Foreword

The text of document 44/534/CDV, future edition 2 of IEC/TS 62046, prepared by IEC TC 44, Safety of machinery - Electrotechnical aspects, was submitted to the IEC-CENELEC Parallel Unique Acceptance Procedure and was approved by CENELEC as CLC/TS 62046 on 2008-05-01.

This Technical Specification supersedes CLC/TS 62046:2005.

CLC/TS 62046:2008 includes further examples of interfacing and muting techniques.

The following date was fixed:

- latest date by which the existence of the CLC/TS
has to be announced at national level (doa) 2008-08-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the Technical Specification IEC/TS 62046:2008 was approved by CENELEC as a Technical Specification without any modification.

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

ISO 13857

NOTE Harmonized as EN ISO 13857:2008 (not modified).

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Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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 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 60204-1 (mod)	-	Safety of machinery - Electrical equipment of machines - Part 1: General requirements	EN 60204-1	2006 ²⁾
IEC 61496-1 (mod)	2004	Safety of machinery - Electro-sensitive protective equipment - Part 1: General requirements and tests	EN 61496-1	2004
IEC 61496-2	1997	Safety of machinery - Electro-sensitive protective equipment - Part 2: Particular requirements for equipment using active opto-electronic protective devices (AOPD)	CLC/TS 61496-2 ³⁾	2003
IEC 61496-3	2001	Safety of machinery - Electro-sensitive protective equipment - Part 3: Particular requirements for Active Opto-electronic Protective Devices responsive to Diffuse Reflection (AOPDDR)	CLC/TS 61496-3 ⁴⁾	2003
IEC 62061	- ¹⁾	Safety of machinery - Functional safety of safety-related electrical, electronic and programmable electronic control systems	EN 62061	2005 ²⁾
ISO 12100-1	2003	Safety of machinery - Basic concepts, general principles for design - Part 1: Basic terminology, methodology	EN ISO 12100-1	2003
ISO 12100-2	2003	Safety of machinery - Basic concepts, general principles for design - Part 2: Technical principles	EN ISO 12100-2	2003
ISO 13849	Series	Safety of machinery - Safety-related parts of control systems	EN ISO 13849	Series
ISO 13855	2002	Safety of machinery - Positioning of protective equipment with respect to the approach speeds of parts of the human body	-	-
ISO 13856-1	2001	Safety of machinery - Pressure-sensitive protective devices - Part 1: General principles for design and testing of pressure-sensitive mats and pressure-sensitive floors	-	-
ISO 14121	Series	Safety of machinery - Risk assessment	EN ISO 14121	Series

¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

³⁾ CLC/TS 61496-2 is superseded by CLC/TS 61496-2:2006, which is based on IEC 61496-2:2006.

⁴⁾ CLC/TS 61496-3 is superseded by CLC/TS 61496-3:2008, which is based on IEC 61496-3:2008.

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INTRODUCTION

This Technical Specification provides information on the application of protective equipment, which employs a sensing device(s) to detect person(s) in or approaching an area, in order to reduce or minimize a risk from hazardous parts of machinery, without providing a physical barrier.

The objective of this specification is to assist: standards writing committees responsible for developing machine standards ("C" Standards), machine designers, manufacturers and refurbishers, machine safety certification organizations, workplace authorities and others on the proper application of protective equipment to machinery.

Figures 1 and 2 show the general context and the intended use of this specification.

Clauses 1 to 5, 7 and 8 of this specification apply to all protective equipment included in the scope, Clause 6 contains guidance for the application of specific kinds of protective equipment.

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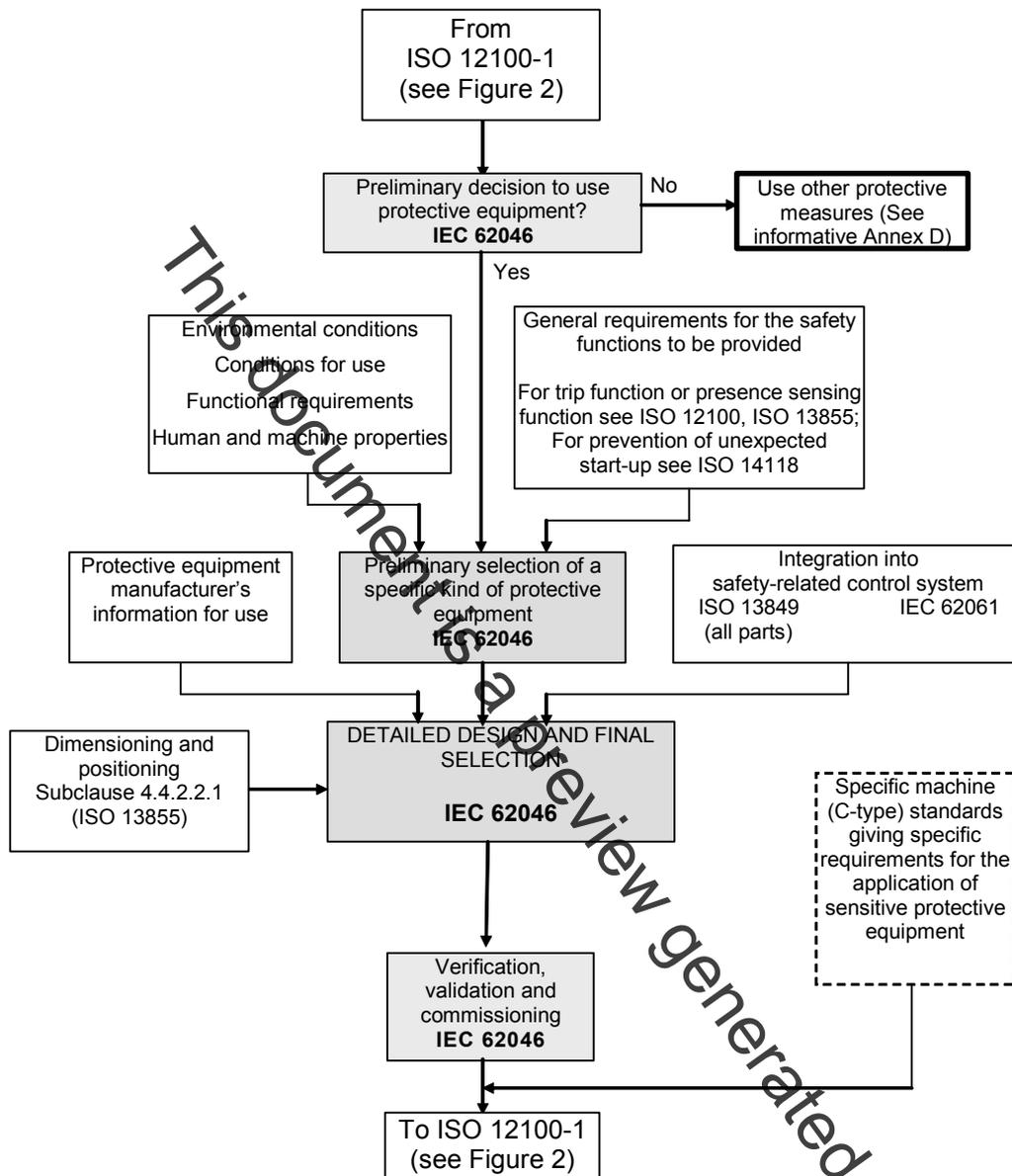


Figure 1 – Relationship of this Technical Specification to other standards

(see also Figure 2)

SAFETY OF MACHINERY – APPLICATION OF PROTECTIVE EQUIPMENT TO DETECT THE PRESENCE OF PERSONS

1 Scope

This Technical Specification specifies requirements for the selection, positioning, configuration and commissioning of protective equipment to detect the presence of persons in order to protect those persons from dangerous part(s) of machinery in industrial applications. This standard covers the application of electro-sensitive protective equipment (ESPE) specified in IEC 61496 (all parts) and pressure sensitive mats and floors specified in ISO 13856-1.

It takes into account the characteristics of the machinery, the protective equipment, the environment and human interaction by persons of 14 years and older.

2 Normative references

The following referenced documents are indispensable for the application 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.

IEC 60204-1, *Safety of machinery – Electrical equipment of machines – Part 1: General requirements*

IEC 61496-1:2004, *Safety of Machinery – Electro-sensitive protective equipment – General requirements and tests*

IEC 61496-2:1997, *Safety of machinery – Electro-sensitive protective equipment – Part 2: Particular requirements for equipment using active opto-electronic protective devices (AOPDs)*

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

IEC 62061, *Safety of machinery – Functional safety of safety related electrical, electronic and programmable control systems*

ISO 12100-1: 2003, *Safety of machinery – Basic concepts, general principles for design – Part 1: Basic terminology, methodology*

ISO 12100-2: 2003, *Safety of machinery – Basic concepts, general principles for design – Part 2: Technical principles*

ISO 13849 (all parts), *Safety of Machinery – Safety-related parts of control systems*

ISO 13855:2002, *Safety of machinery – Positioning of protective equipment with respect to the approach speeds of parts of the human body*

ISO 13856-1:2001, *Safety of machinery – Pressure-sensitive protective devices – Part 1: General principles for design and testing of pressure-sensitive mats and pressure-sensitive floors*

ISO 14121 (all parts), *Safety of machinery – Risk assessment*