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**Varnost strojev - Funkcijska varnost na varnost vezanih električnih, elektronskih in programirljivih elektronskih krmilnih sistemov (IEC 62061:2005/A1:2012)**

Safety of machinery - Functional safety of safety-related electrical, electronic and programmable electronic control systems (IEC 62061:2005/A1:2012)

Sicherheit von Maschinen - Funktionale Sicherheit sicherheitsbezogener elektrischer, elektronischer und programmierbarer elektronischer Steuerungssysteme (IEC 62061:2005/A1:2012)

Sécurité des machines - Sécurité fonctionnelle des systèmes de commande électriques, électroniques et électroniques programmables relatifs à la sécurité (CEI 62061:2005/A1:2012)

**Ta slovenski standard je istoveten z: EN 62061:2005/A1:2013**

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**ICS:**

13.110	Varnost strojev	Safety of machinery
25.040.40	Merjenje in krmiljenje industrijskih postopkov	Industrial process measurement and control

**SIST EN 62061:2005/A1:2013** en

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 62061/A1**

February 2013

ICS 13.110; 25.040.99; 29.020

English version

**Safety of machinery -  
Functional safety of safety-related electrical, electronic and programmable  
electronic control systems  
(IEC 62061:2005/A1:2012)**

Sécurité des machines -  
Sécurité fonctionnelle des systèmes de  
commande électriques, électroniques et  
électroniques programmables relatifs à la  
sécurité  
(CEI 62061:2005/A1:2012)

Sicherheit von Maschinen -  
Funktionale Sicherheit  
sicherheitsbezogener elektrischer,  
elektronischer und programmierbarer  
elektronischer Steuerungssysteme  
(IEC 62061:2005/A1:2012)

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This amendment A1 modifies the European Standard EN 62061:2005: it was approved by CENELEC on 2012-12-18. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

**CENELEC**

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

**Management Centre: Avenue Marnix 17, B - 1000 Brussels**

## Foreword

The text of document 44/655/CDV, future edition 1 of IEC 62061:2005/A1, prepared by IEC TC 44 "Safety of machinery - Electrotechnical aspects" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62061:2005/A1:2013.

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) 2013-09-18
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-12-18

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 62061:2005/A1:2012 was approved by CENELEC as a European Standard without any modification.

[SIST EN 62061:2005/A1:2013](https://standards.iteh.ai/catalog/standards/sist/442b5a6c-04ae-46ab-904a-f1f7b963bb3/sist-en-62061-2005-a1-2013)

<https://standards.iteh.ai/catalog/standards/sist/442b5a6c-04ae-46ab-904a-f1f7b963bb3/sist-en-62061-2005-a1-2013>

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

*Make the following modifications to Annex ZA of EN 62061:2005:*

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
<b>Replace ISO 12100-1:2003 and ISO 12100-2:2003 by ISO 12100:2010</b>				
ISO 12100	2010	Safety of machinery - General principles for design - Risk assessment and risk reduction	EN ISO 12100	2010
<b>Replace ISO 13849-1:1999 by ISO 13849-1:2006</b>				
ISO 13849-1	2006	Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design	EN ISO 13849-1	2008

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IEC 62061

Edition 1.0 2012-11

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

AMENDMENT 1  
AMENDEMENT 1

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

**Sécurité des machines – Sécurité fonctionnelle des systèmes de commande  
électriques, électroniques et électroniques programmables relatifs à la sécurité**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
INTERNATIONALE

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## FOREWORD

This amendment has been prepared by IEC technical committee 44: Safety of machinery – Electrotechnical aspects.

The text of this amendment is based on the following documents:

CDV	Report on voting
44/655/CDV	44/663/RVC

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

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

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

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## INTRODUCTION

[SIST EN 62061:2005/A1:2013](https://standards.iteh.ai/catalog/standards/sist/442b5a6c-04ae-46ab-904a-11d1-4050917c9038/sist-en-62061-2005-a1-2013)

[https://standards.iteh.ai/catalog/standards/sist/442b5a6c-04ae-46ab-904a-](https://standards.iteh.ai/catalog/standards/sist/442b5a6c-04ae-46ab-904a-11d1-4050917c9038/sist-en-62061-2005-a1-2013)

*Delete the tenth paragraph of this clause.*

*Delete the following text below Figure 1:*

**Information on the recommended application of IEC 62061 and ISO 13849-1  
(under revision)**

*Replace the text of the paragraph above Table 1 by the following:*

IEC 62061 and ISO 13849-1 specify requirements for the design and implementation of safety-related control systems of machinery. The use of either of these standards, in accordance with their scopes, can be presumed to fulfil the relevant essential safety requirements. IEC/TR 62061-1 provides guidance on the application of IEC 62061 and ISO 13849-1 in the design of safety-related control systems for machinery.

*Delete the note above Table 1.*

*Delete Table 1.*

## 1 Scope

*Replace the text of Note 2 by the following:*

NOTE 2 In this standard, it is presumed that the design of complex programmable electronic subsystems or subsystem elements conforms to the relevant requirements of IEC 61508 and uses Route 1<sub>H</sub> (see IEC 61508-2:2010, 7.4.4.2). It is considered that Route 2<sub>H</sub> (see IEC 61508-2:2010, 7.4.4.3) is not suitable for



general machinery. Therefore, this standard does not deal with Route 2<sub>H</sub>. This standard provides a methodology for the use, rather than development, of such subsystems and subsystem elements as part of a SRECS.

## 2 Normative references

*Replace the references to ISO 12100-1:2003 and ISO 12100-2:2003 by the following new reference:*

ISO 12100:2010, *Safety of machinery – General principles for design – Risk assessment and risk reduction*

*Replace the existing reference to ISO 13849-1 by the following new reference:*

ISO 13849-1:2006, *Safety of machinery – Safety-related parts of control systems – Part 1: General principles for design*

### 3.2.5 subsystem

*Replace definition 3.2.5 by the following new definition:*

### 3.2.5 subsystem

entity of the top-level architectural design of the SRECS where a dangerous failure of any subsystem will result in a dangerous failure of a safety-related control function

[IEC 61508-4, 3.4.4 modified] (standards.iteh.ai)

NOTE 1 A complete subsystem can be made up from a number of identifiable and separate subsystem elements, which when put together implement the function blocks allocated to the subsystem.

NOTE 2 This differs from common language where “subsystem” may mean any sub-divided part of an entity, the term “subsystem” is used in this standard within a strongly defined hierarchy of terminology: “subsystem” is the first level subdivision of a system. The parts resulting from further subdivision of a subsystem are called “subsystem elements”.

### 3.2.7 low complexity component

*Replace the reference above Note 1 by the following new reference:*

[IEC 61508-4, 3.4.3 modified]

### 3.2.9 functional safety

*Replace the reference by the following new reference:*

[IEC 61508-4, 3.1.12 modified]

### 3.2.10 hazard (from machinery)

*Replace the reference by the following new reference:*

[ISO 12100, 3.6 modified]

### 3.2.11 hazardous situation

*Replace the reference by the following new reference:*

[ISO 12100, 3.10 modified]