

SVENSK STANDARD

SS-EN ISO 14119:2013



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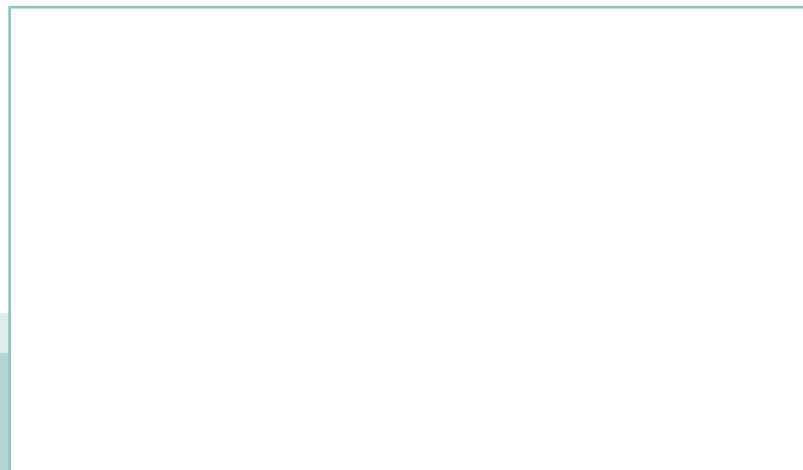
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Maskinsäkerhet – Förreglingsanordningar för skydd – Principer för konstruktion och val (ISO 14119:2013)

Safety of machinery – Interlocking devices associated with guards – Principles for design and selection (ISO 14119:2013)



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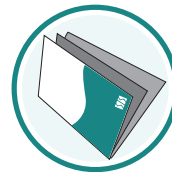
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Europastandarden EN ISO 14119:2013 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN ISO 14119:2013.

Denna standard ersätter SS-EN 1088+A2:2008, utgåva 1.

The European Standard EN ISO 14119:2013 has the status of a Swedish Standard. This document contains the official version of EN ISO 14119:2013.

This standard supersedes the Swedish Standard SS-EN 1088+A2:2008, edition 1.

**Denna korrigerade version innehåller följande rättning/
This corrected version contains the following correction:**

På framsidan är "Utgåva 2" rättat till "Utgåva 1".
On frontpage is "Edition 2" corrected to "edition 1".

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Information about the content of the standard is available from the Swedish Standards Institute (SIS), telephone +46 8 555 520 00. Standards may be ordered from SIS Förlag AB, who can also provide general information about Swedish and foreign standards.

Denna standard är framtagen av kommittén för Maskinsäkerhet, SIS/TK 282.

Har du synpunkter på innehållet i den här standarden, vill du delta i ett kommande revideringsarbete eller vara med och ta fram andra standarder inom området? Gå in på www.sis.se - där hittar du mer information.

English Version

Safety of machinery - Interlocking devices associated with guards - Principles for design and selection (ISO 14119:2013)

Sécurité des machines - Dispositifs de verrouillage
associés à des protecteurs - Principes de conception et de
choix (ISO 14119:2013)

Sicherheit von Maschinen - Verriegelungseinrichtungen in
Verbindung mit trennenden Schutzeinrichtungen - Leitsätze
für Gestaltung und Auswahl (ISO 14119:2013)

This European Standard was approved by CEN on 24 August 2013.

CEN 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 CEN 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 CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Contents

Page

Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Operating principles and typical forms of interlocking devices associated with guards	6
4.1 General	6
4.2 Principles of guard interlocking without guard locking	8
4.3 Principles of guard interlocking with guard locking	8
5 Requirements for the design and the installation of interlocking devices with and without guard locking	11
5.1 General	11
5.2 Arrangement and fastening of position switches	11
5.3 Arrangement and fastening of actuators	12
5.4 Actuation modes of interlocking devices	12
5.5 Interface to control systems	13
5.6 Mechanical stop	13
5.7 Additional requirements on guard locking devices	13
6 Selection of an interlocking device	18
6.1 General	18
6.2 Selection of a guard locking device	19
6.3 Environmental conditions considerations	21
7 Design to minimize defeat possibilities of interlocking devices	21
7.1 General	21
7.2 Additional measures to minimize defeat possibilities of interlocking devices	23
8 Control requirements	26
8.1 General	26
8.2 Assessment of faults	26
8.3 Prevention of common cause failures	27
8.4 Release of guard locking device	29
8.5 Fault exclusion	29
8.6 Logical series connection of interlocking devices	29
8.7 Electrical and environmental conditions	30
9 Information for use	30
9.1 General	30
9.2 Information for use given by the manufacturer of interlocking devices	30
9.3 Information for use given by the manufacturer of the machine	32
Annex A (informative) Type 1 interlocking device — Examples	33
Annex B (informative) Type 2 interlocking device — Examples	38
Annex C (informative) Type 3 interlocking device — Example	43
Annex D (informative) Type 4 interlocking devices — Examples	45
Annex E (informative) Examples of other interlocking devices	48
Annex F (informative) Example of guard locking devices	49
Annex G (informative) Application examples of interlocking devices used within a safety function	55
Annex H (informative) Motivation to defeat interlocking device	61

Annex I (informative) Examples for maximum static action forces	66
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC	* ,
Bibliography	6

Foreword

This document (EN ISO 14119:2013) has been prepared by Technical Committee ISO/TC 199 "Safety of machinery" in collaboration with Technical Committee CEN/TC 114 "Safety of machinery" the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2014, and conflicting national standards shall be withdrawn at the latest by April 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 1088:1995+A2:2008.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive.

For relationship with EU Directive, see informative Annex ZA, which is an integral part of this document.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 14119:2013 has been approved by CEN as EN ISO 14119:2013 without any modification.

Introduction

The structure of safety standards in the field of machinery is as follows:

- a) Type-A standards (basic safety standards) giving basic concepts, principles for design, and general aspects that can be applied to all machinery;
- b) Type-B standards (generic safety standards) dealing with one safety aspect or one type of safeguard that can be used across a wide range of machinery:
 - Type-B1 standards on particular safety aspects (e.g. safety distances, surface temperature, noise);
 - Type-B2 standards on safeguards (e.g. two-hand controls, interlocking devices, pressure-sensitive devices, guards);
- c) Type-C standards (machine safety standards) dealing with detailed safety requirements for a particular machine or group of machines.

This document is a type-B2 standard as stated in ISO 12100.

The requirements of this document can be supplemented or modified by a type-C standard.

For machines which are covered by the scope of a type-C standard and which have been designed and built according to the requirements of that standard, the requirements of that type-C standard take precedence.

This International Standard has been prepared to give guidance to machinery designers and writers of product safety standards on how to design and select interlocking devices associated with guards.

Relevant clauses of this International Standard, used alone or in conjunction with provisions from other standards, may be used as a basis for verification procedures for the suitability of a device for interlocking duties.

The informative [Annexes A to F](#) describe the technology and the typical characteristics of the defined 4 types of interlocking devices. Other solutions may be adopted, provided that they comply with the principles of this standard. The informative [Annexes G to I](#) give information on particular aspects like interlocking devices used within safety functions, risk assessment considering the motivation to defeat and static action forces. ISO/TR 24119 is under preparation and will give information on the masking of faults in series connection of interlocking devices.

Safety of machinery — Interlocking devices associated with guards — Principles for design and selection

1 Scope

This International Standard specifies principles for the design and selection — independent of the nature of the energy source — of interlocking devices associated with guards.

This International Standard covers the parts of guards which actuate interlocking devices.

NOTE ISO 14120 specifies general requirements for the design and construction of guards provided primarily to protect persons from mechanical hazards. The processing of the signal from the interlocking device to stop and immobilize the machine is dealt with in ISO 13849-1 or IEC 62061.

This International Standard does not necessarily provide all the specific requirements for trapped key systems.

This International Standard provides measures to minimize defeat of interlocking devices in a reasonably foreseeable manner.

2 Normative references

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.

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

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

ISO 13849-2:2012, *Safety of machinery — Safety-related parts of control systems — Part 2: Validation*

IEC 60204-1:2009, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements*

IEC 60947-5-3, *Low-voltage switchgear and controlgear — Part 5-3: Control circuit devices and switching elements — Requirements for proximity devices with defined behaviour under fault conditions (PDF)*

IEC 62061:2012, *Safety of machinery — Functional safety of safety-related electrical, electronic and programmable electronic control systems*