



BSI Standards Publication

Safety of machinery — Trapped key interlocking devices — Principles for design and selection

National foreword

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**Safety of machinery — Trapped key
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design and selection**

*Sécurité des machines — Dispositifs à verrouillage à clé captive —
Principes de conception et sélection*



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 199, *Safety of machinery*.

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Safety of machinery — Trapped key interlocking devices — Principles for design and selection

1 Scope

This document specifies principles for the design, selection and application of trapped key interlocking devices and systems for machinery applications, independent of the type of energy used to control them or that they control.

The requirements of this document apply to the safety related aspects of trapped key interlocking devices and systems. ISO 14119 always applies unless an exception is given in this document.

This document is intended to be used in conjunction with ISO 14119.

This document does not provide testing requirements.

NOTE Documents addressing testing requirements can be found in the Bibliography.

2 Normative references

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.

ISO 14119:2013, *Safety of machinery — Interlocking devices associated with guards — Principles for design and selection*

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

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

IEC 60947-1:2008, *Low-voltage switchgear and controlgear — Part 1: General rules*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1 trapped key interlocking system

system fulfilling safety function(s) or part of safety function(s) and comprising of at least two trapped key interlocking devices which work together through the transfer of a key

3.2

key

element used to operate a trapped key interlocking device with matched coding