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Draft Indian Standard

**SAFETY OF MACHINERY – GUIDELINES ON FUNCTIONAL SAFETY OF SAFETY-RELATED
CONTROL SYSTEM**

Safety of Machinery- Electrotechnical Aspects
Sectional Committee ETD 44

Last Date of Comments:
8-April-2024

NATIONAL FOREWORD

This draft Indian Standard which is identical with IEC TS 63394:2023 ‘Safety of Machinery – Guidelines on Functional Safety of Safety-Related Control System’ issued by the International Electrotechnical Commission (IEC) will be adopted by the Bureau of Indian Standards on the recommendation of the Safety of Machinery Electrotechnical Aspects Sectional Committee and approval of the Electrotechnical Division Council.

The text of the IEC Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words ‘International Standard’ appears referring to this standard, they should be read as ‘Indian Standard’.
- b) Comma (,) has been used as a decimal marker, while in Indian Standards the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to International Standards for which Indian Standards also exists. The corresponding Indian Standards, which are to be substituted, are listed below along with their degree of equivalence for the editions indicated:

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
IEC 62061:2021, Safety of machinery – Functional safety of safety-related control systems	IS 16501 : 2023 Safety of machinery Functional safety of safety-related control systems	Identical with IEC 62061:2021
IEC TR 63074:2019, Safety of machinery – Security aspects related to functional safety of safety-related control systems	IS 17520 : 2021 Safety of machinery Security aspects related to functional safety of safety-related control systems	Identical with IEC TR 63074:2019
ISO 12100:2010, Safety of machinery – General principles for design – Risk assessment and risk reduction	IS 16819 : 2018 Safety of machinery - General principles for design - Risk assessment and risk reduction	Identical with ISO 12100:2010
ISO 13849-1:2015, Safety of machinery – Safety-related parts of control systems – Part 1: General principles for design	IS 16810 (Part 1) : 2018 Safety of machinery - Safety related parts of control systems: Part 1 general principles for design	Identical with ISO 13849-1 : 2015
ISO 13850:2015, Safety of machinery – Emergency stop function – Principles for design	IS 16818 : 2018 Safety of machinery - Emergency stop function - Principles for design	Identical with ISO 13850 : 2015
ISO 13851:2019, Safety of machinery – Two-hand control devices – Principles for design and selection	IS 16817 : 2020 Safety of Machinery — Two-Hand Control Devices — Principles for Design and Selection (<i>First Revision</i>)	Identical with ISO 13851 : 2019
ISO 14118:2017, Safety of machinery – Prevention of unexpected start-up	IS 16813 : 2019 Safety of Machinery - Prevention of unexpected start - Up	Identical with ISO 14118 : 2017
ISO 14119:2013, Safety of machinery – Interlocking devices associated with guards – Principles for design and selection	IS 16812 : 2018 Safety of machinery - Interlocking devices associated with guards - Principles for design and selection	Identical with ISO 14119 : 2013

Only English language text has been retained while adopting it in this Indian Standard, and as such the page numbers given here are not the same as in the International Standard.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated expressing the result of a test, shall be rounded off in accordance with IS 2: 2022 ‘Rules for rounding off numerical values (*second revision*)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Note: The technical content of the document is not available on website. For details, please refer the corresponding IEC TS 63394:2023 or kindly contact:

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