ICS 29.130.20 SLOVENSKÁ TECHNICKÁ NORMA Január 2026

STN	**Nízkonapäťové spínacie a riadiace zariadenia Požiadavky na bezpečnosť**	**STN EN IEC 63208** 35 4101

Low-voltage switchgear and controlgear and their assemblies - Security requirements

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 12/25

Obsahuje: EN IEC 63208:2025, IEC 63208:2025

obsahuje farebné strany

141640

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 63208

October 2025

ICS 29.130.20

English Version

Low-voltage switchgear and controlgear and their assemblies - Security requirements (IEC 63208:2025)

Appareillages et ensembles d'appareillages à basse tension - Exigences de sécurité (IEC 63208:2025)

Niederspannungsschaltgeräte und deren Niederspannungs-Schaltgerätekombinationen - Security Aspekte (IEC 63208:2025)

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN IEC 63208:2025 E

European foreword

The text of document 121/221/FDIS, future edition 1 of IEC 63208, prepared by TC 121 "Switchgear and controlgear and their assemblies for low voltage" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 63208:2025.

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) 2026-10-31
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2028-10-31

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Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 63208:2025 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standard indicated:

IEC 60204-1:2016	NOTE	Approved as EN 60204-1:2018
IEC 60364-1	NOTE	Approved as HD 60364-1
IEC 60364-4-41	NOTE	Approved as HD 60364-4-41
IEC 60364-4-43	NOTE	Approved as HD 60364-4-43
IEC 60870-5 (series)	NOTE	Approved as EN 60870-5 (series)
IEC 60947-2	NOTE	Approved as EN IEC 60947-2
IEC 60947-4-1	NOTE	Approved as EN IEC 60947-4-1
IEC 60947-4-2	NOTE	Approved as EN IEC 60947-4-2
IEC 60947-4-3	NOTE	Approved as EN IEC 60947-4-3
IEC 60947-5-1	NOTE	Approved as EN IEC 60947-5-1
IEC 60947-5-2	NOTE	Approved as EN IEC 60947-5-2
IEC 60947-5-3	NOTE	Approved as EN 60947-5-3
IEC 60947-5-5	NOTE	Approved as EN 60947-5-5
IEC 60947-5-7	NOTE	Approved as EN IEC 60947-5-7
IEC 60947-6-1	NOTE	Approved as EN IEC 60947-6-1

IEC 60947-6-2	NOTE	Approved as EN IEC 60947-6-2
IEC 61439-1:2020	NOTE	Approved as EN IEC 61439-1:2021 (not modified)
IEC 61508-2	NOTE	Approved as EN 61508-2
IEC 61439-2	NOTE	Approved as EN IEC 61439-2
IEC 62061	NOTE	Approved as EN IEC 62061
IEC 62264-1	NOTE	Approved as EN 62264-1
IEC 62351 (series)	NOTE	Approved as EN IEC 62351 (series)
IEC 62351-5	NOTE	Approved as EN IEC 62351-5
IEC 62351-6	NOTE	Approved as EN IEC 62351-6
IEC 62351-8	NOTE	Approved as EN IEC 62351-8
IEC 62351-9	NOTE	Approved as EN IEC 62351-9
IEC 62443 (series)	NOTE	Approved as EN IEC 62443 (series)
IEC 62443-2-1	NOTE	Approved as EN IEC 62443-2-1
IEC 62443-2-4	NOTE	Approved as EN IEC 62443-2-4
IEC 62443-3-3:2013	NOTE	Approved as EN IEC 62443-3-3:2019 (not modified)
IEC 62559-2:2015	NOTE	Approved as EN 62559-2:2015 (not modified)
IEC/TR 63069	NOTE	Approved as CLC IEC/TR 63069
IEC/TR 63201:2019	NOTE	Approved as CLC IEC/TR 63201:2020 (not modified)
ISO/IEC 15408-1:2022	NOTE	Approved as EN ISO/IEC 15408-1:2023 (not modified)
ISO/IEC 15408-2:2022	NOTE	Approved as EN ISO/IEC 15408-2:2023 (not modified)
ISO/IEC 27000:2018	NOTE	Approved as EN ISO/IEC 27000:2020 (not modified)
ISO/IEC 27002:2022	NOTE	Approved as EN ISO/IEC 27002:2022 (not modified)
ISO/TS 14441:2013	NOTE	Approved as CEN ISO/TS 14441:2013 (not modified)

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cencenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60364-7-729	-	Low-voltage electrical installations - Part 7-729: Requirements for special installations or locations - Operating or maintenance gangways	HD 60364-7-729	-
IEC 60947-1	2020	Low-voltage switchgear and controlgear - Part 1: General rules	EN IEC 60947-1	2021
IEC 61439-1	2020	Low-voltage switchgear and controlgear assemblies - Part 1: General rules	EN IEC 61439-1	2021
IEC 62443-3-2	2020	Security for industrial automation and control systems - Part 3-2: Security risk assessment for system design	EN IEC 62443-3-2	2020
IEC 62443-4-1	2018	Security for industrial automation and control systems - Part 4-1: Secure product development lifecycle requirements	EN IEC 62443-4-1	2018
IEC 62443-4-2	2019	Security for industrial automation and control systems - Part 4-2: Technical security requirements for IACS components	EN IEC 62443-4-2	2019
IEC/TS 62443-6-2	2025	Security for industrial automation and control systems - Part 6-2: Security evaluation methodology for IEC 62443-4-2	-	-
ISO/IEC 27001	2022	Information security, cybersecurity and privacy protection - Information security management systems - Requirements	EN ISO/IEC 27001	2023
+ A1	2024		+ A1	2024
ISO/IEC 27005	2022	Information security, cybersecurity and privacy protection - Guidance on managing information security risks	EN ISO/IEC 27005	2024
ISO/IEC 27402	2023	Cybersecurity - IoT security and privacy - Device baseline requirements	-	-

IEC 63208

Edition 1.0 2025-08

INTERNATIONAL STANDARD

Low-voltage switchgear and controlgear and their assemblies - Security requirements

ICS 29.130.20 ISBN 978-2-8327-0604-6

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CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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Low-voltage switchgear and controlgear and their assemblies - Security requirements

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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IEC 63208 has been prepared by IEC technical committee 121: Switchgear and controlgear and their assemblies for low voltage. It is an International Standard.

This first edition cancels and replaces the first edition IEC TS 63208 published in 2020. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) Risk assessment: Attack levels, impact assessment, relationship with safety;
b) Risk objectives: Determination of the equipment security level;
c) Countermeasures referring to IEC 62443-4-2;
d) Conformance verification and testing;
e) Security protection profiles.

The text of this International Standard is based on the following documents:

Draft	Report on voting
121/221/FDIS	121/230/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

INTRODUCTION

The growing use of data communication capabilities by switchgear, controlgear and their assemblies (called "equipment" in this document) automatically increases cybersecurity risks. In addition, information technology is more often interconnected to and even integrated into industrial systems which therefore increase this risk.

Very often, switchgear such as circuit-breakers, or controlgear such as overload relays or proximity switches, are equipped with data communication interface. They can be connected to a logic controller or remote display, with local and remote connectivity for giving access to data such as settings, actual power supply values, monitoring data, data logging, control and firmware update.

For these typical applications of electrical distribution and machinery, minimum cybersecurity requirements are necessary for maintaining an acceptable level of safety integrity of the main functions for equipment, with or without data communication capability. These requirements are intended to limit the vulnerability of the data communication interfaces. To keep the largest freedom of innovation, the relevant requirements for a defined application are determined preferably by a systematic risk assessment approach.

The intention of this document is to:

1) provide minimum sets of cybersecurity requirements called security protection profiles for equipment to mitigate the likelihood of unintended operation and loss of protective functions in the context of electrical distribution installations and control systems of machinery;
2) provide the test methods for verifying the implementation of the cybersecurity countermeasure within the equipment;
3) provide guidance to avoid impairing the main function of the equipment, in all operating modes, as a consequence of the implementation of security countermeasures.

This document gives guidance on countermeasures applicable to the design of the equipment (hardware, firmware, network interface, access control, system) and on additional countermeasures to be considered for the implementation and instruction for use.

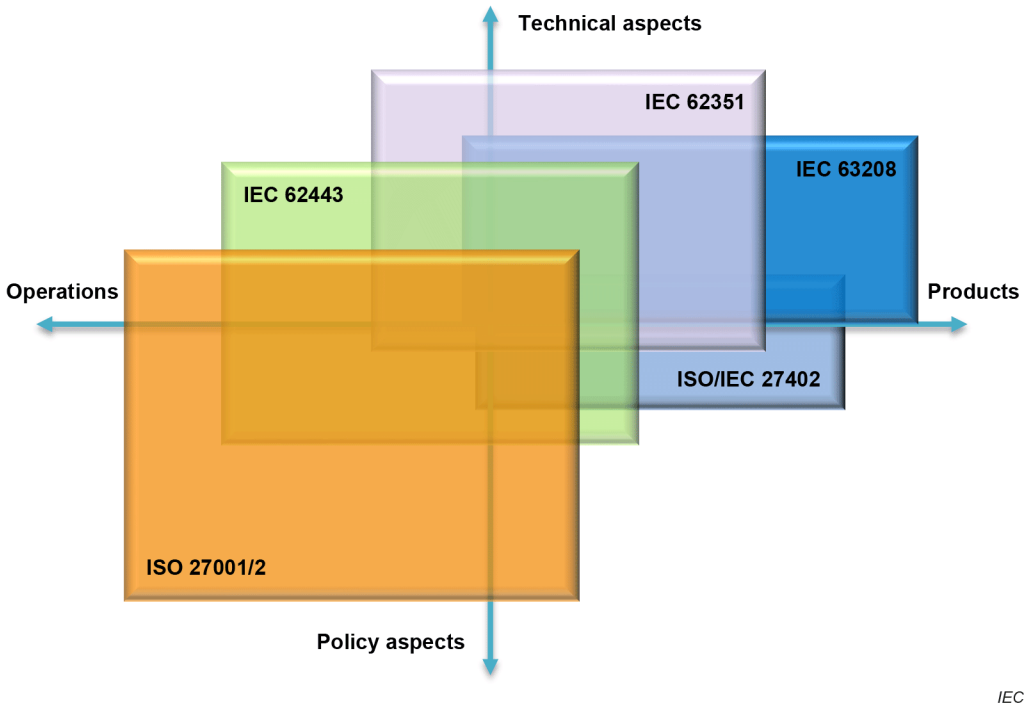

Figure 1 – Standard landscape

Figure 1 positions the landscape of the standards considered in this document with respect to governance and policy aspects, cybersecurity operation aspects, technical details and product requirements. ISO/IEC 27001 and its family of standards are used in many organisations for managing the cybersecurity of information systems and general business. The cybersecurity of industrial control systems is more focussed on maintaining the integrity and the availability of its main functions. IEC 62443 is currently specialised on the generic requirements for process automation system at activity levels 2 and 3 of IEC 62264-1. This document considers the use of the equipment in the activity level 1 of IEC 62264-1 with the cybersecurity of electrical distribution boards and machinery with secured power control and control switching end components. As an example, the principle of systematic and uniformed Security Level requirements SL-1 to SL-4 of IEC 62443-4-2 for the automation components of a control system in a process zone is not relevant for switchgear, controlgear and their assemblies because of their associated cybersecurity risks mainly depending on their limited levels of functionality and their wide possible levels of exposure. Consequently, this document provides minimum cybersecurity requirements depending on these conditions.

This document uses relevant references to the base security publication ISO/IEC 27001 for general aspects and for consistency with the cybersecurity management system of IT systems, to the sector specific standard IEC 62443 for managing aspects related to OT systems, to ISO/IEC 27402 for IoT functionalities and to the applicable security techniques from IEC 62351 (all parts).

Product specific requirements are given in the form of security protection profiles (6.7.6) by category of equipment. Their structure is following Annex B of ISO/IEC 15408-1:2022 and their content can include additional requirements to IEC 62443 standards.

NOTE These product security protection profiles are not equivalent to IEC 62443 security profile defined by IEC TS 62443-1-5 which are limited to the existing content of IEC 62443 standards.

The content of this document is intended to be referenced by product standards.

1 Scope

This document applies to the main functions of switchgear and controlgear and their assemblies, called equipment, in the context of operational technology (OT 3.1.34). It is applicable to equipment with wired or wireless data communication means and their physical accessibility, within their limits of environmental conditions. It is intended to achieve the appropriate physical and cybersecurity mitigation against vulnerabilities to security threats.

This document provides requirements on the appropriate:

– security risk assessment to be developed including the attack levels, the typical threats, the impact assessment and the relationship with safety;
– levels of exposure of the communication interface and the determination of the equipment security level;
– assessment of the exposure level of the communication interfaces;
– assignment of the required security measures for the equipment;
– countermeasures for the physical access and the environment derived from ISO/IEC 27001;
– countermeasures referring to IEC 62443-4-2 with their criteria of applicability;
– user instructions for installation, operation and maintenance;
– conformance verification and testing, and
– security protection profiles by family of equipment (Annex E to Annex I).

In particular, it focuses on potential vulnerabilities to threats resulting in:

– unintended operation, which can lead to hazardous situations;
– unavailability of the protective functions (overcurrent, earth fault, etc.);
– other degradation of main function.

It also provides guidance on the cybersecurity management with the:

– roles and responsibilities (Table 4);
– typical architectures (Annex A);
– use cases (Annex B);
– development methods (Annex C);
– recommendations to be provided to users and for integration into an assembly (Annex D);
– bridging references to cybersecurity management systems (Annex K).

This document does not cover security requirements for:

– information technology (IT);
– industrial automation and control systems (IACS), engineering workstations and their software applications;
– critical infrastructure or energy management systems;
– network device (communication network switch or virtual private network terminator), or
– data confidentiality other than for critical security parameters;
– design lifecycle management. For this aspect, see IEC 62443-4-1, ISO/IEC 27001 or other security lifecycle management standards.

This document, as a product security publication, follows IEC Guide 120.

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.

IEC 60364-7-729, *Low-voltage electrical installations - Part 7-729: Requirements for special installations or locations - Operating or maintenance gangways*

IEC 60947-1:2020, *Low-voltage switchgear and controlgear - Part 1: General rules*

IEC 61439-1:2020, *Low-voltage switchgear and controlgear assemblies - Part 1: General rules*

IEC 62443-3-2:2020, *Security for industrial automation and control systems - Part 3-2: Security risk assessment for system design*

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IEC TS 62443-6-2:2025, *Security for industrial automation and control systems - Part 6-2: Security evaluation methodology for IEC 62443-4-2*

ISO/IEC 27001:2022, *Information security, cybersecurity and privacy protection - Information security management systems – Requirements*
ISO/IEC 27001:2022/AMD1:2024

ISO/IEC 27005:2022, *Information security, cybersecurity and privacy protection - Guidance on managing information security risks*

ISO/IEC 27402:2023, *Cybersecurity - IoT security and privacy - Device baseline requirements*