

ELEKTRILISED AUTOMAATJUHTIMISSEADMED. OSA
2-8: MEHAANILISED NING MUUD ERIOMASED NÕUDED
ELEKTRILISELT KÄITATAVATELE VEEVENTIILIDELE

Automatic electrical controls - Part 2-8: Particular
requirements for electrically operated water valves,
including mechanical requirements

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>See Eesti standard EVS-EN IEC 60730-2-8:2025 sisaldab Euroopa standardi EN IEC 60730-2-8:2025 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 11.07.2025.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN IEC 60730-2-8:2025 consists of the English text of the European standard EN IEC 60730-2-8:2025.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 11.07.2025.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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ICS 97.120

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EUROPEAN STANDARD

EN IEC 60730-2-8

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2025

ICS 97.120

Supersedes EN IEC 60730-2-8:2020; EN IEC 60730-2-8:2020/A1:2021

English Version

**Automatic electrical controls - Part 2-8: Particular requirements
for electrically operated water valves, including mechanical
requirements
(IEC 60730-2-8:2025)**

Dispositifs de commande électrique automatiques - Partie
2-8: Exigences particulières pour les électrovannes
hydrauliques, y compris les exigences mécaniques
(IEC 60730-2-8:2025)

Automatische elektrische Regel- und Steuergeräte - Teil 2-
8: Besondere Anforderungen an elektrisch betriebene
Wasserventile, einschließlich mechanischer Anforderungen
(IEC 60730-2-8:2025)

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European foreword

The text of document 72/1478/FDIS, future edition 4 of IEC 60730-2-8, prepared by TC 72 "Automatic electrical controls" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60730-2-8:2025.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2026-07-31 level by publication of an identical national standard or by endorsement
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INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Automatic electrical controls –
Part 2-8: Particular requirements for electrically operated water valves, including
mechanical requirements**

**Dispositifs de commande électrique automatiques –
Partie 2-8: Exigences particulières pour les électrovannes hydrauliques, y
compris les exigences mécaniques**



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AUTOMATIC ELECTRICAL CONTROLS –**Part 2-8: Particular requirements for electrically operated water valves,
including mechanical requirements**

FOREWORD

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IEC 60730-2-8 has been prepared by IEC technical committee 72: Automatic electrical controls. It is an International Standard.

This fourth edition cancels and replaces the third edition published in 2018 and Amendment 1:2021. This edition constitutes a technical revision.

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

- a) adoption of IEC 60730-1:2022 with all of its significant changes to IEC 60730-1:2013, IEC 60730-1:2013/AMD1:2015 and IEC 60730-1:2013/AMD2:2020.

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

Draft	Report on voting
72/1478/FDIS	72/1482/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.

A list of all parts of the IEC 60730 series, under the general title: *Automatic electrical controls*, can be found on the IEC website.

This part 2-8 is intended to be used in conjunction with IEC 60730-1. It was established on the basis of the sixth edition of that standard (2022). Consideration may be given to future editions of, or amendments to, IEC 60730-1.

This part 2-8 supplements or modifies the corresponding clauses in IEC 60730-1, so as to convert that publication into the IEC standard: Particular requirements for electrically operated water valves, including mechanical requirements.

Where this part 2-8 states "addition", "modification" or "replacement", the relevant requirement, test specification or explanatory matter in part 1 should be adapted accordingly.

Where no change is necessary, part 2-8 indicates that the relevant clause or subclause applies.

In the development of a fully international standard it has been necessary to take into consideration the differing requirements resulting from practical experience in various parts of the world and to recognize the variation in national electrical systems and wiring rules.

The reader's attention is drawn to the fact that Annex R to Annex T list all of the "in-some-country" clauses on differing practices of a less permanent nature relating to the subject of this document.

In this publication:

- 1) The following print types are used:
 - requirements proper: in roman type;
 - *test specifications: in italic type*;
 - notes: in smaller roman type.
 - Defined terms: **bold type**.
- 2) Subclauses, notes or items which are additional to those in Part 1 are numbered starting from 101, additional annexes are lettered AA, BB, etc.

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,
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- revised.

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AUTOMATIC ELECTRICAL CONTROLS –

Part 2-8: Particular requirements for electrically operated water valves, including mechanical requirements

1 Scope

Replacement:

This document applies to **electrically operated water valves**

- for use in, on, or in association with equipment for household appliance and similar use;

NOTE 1 Throughout this document, the word "equipment" means "appliance and equipment" and "control" means "**electrically operated water valve**".

EXAMPLE 1 **Electrically operated water valves** for appliances within the scope of IEC 60335.

- for building automation within the scope of ISO 16484 series and IEC 63044 series (HBES/BACS);

EXAMPLE 2 Independently mounted **water valves**, controls in smart grid systems and controls for building automation systems within the scope of ISO 16484-2.

- for equipment that is used by the public, such as equipment intended to be used in shops, offices, hospitals, farms and commercial and industrial applications;

EXAMPLE 3 **Electrically operated water valves** for commercial catering, heating and air-conditioning equipment.

- that are **smart enabled electrically operated water valves**;

EXAMPLE 4 Smart grid control, remote interfaces and controls of energy-consuming equipment including computer or smart phone.

- that are AC or DC powered **electrically operated water valves** with a **rated voltage** not exceeding 690 V AC or 600 V DC;
- used in, on, or in association with equipment that uses electricity, gas, oil, solid fuel, solar thermal energy, etc., or a combination thereof;
- utilized as part of a **control system** or **controls** which are mechanically integral with **multifunctional controls** having non-electrical outputs;
- using NTC or **PTC thermistors** and to discrete **thermistors**, requirements for which are contained in Annex J of Part 1;
- responsive to or controlling such characteristics as temperature, pressure, passage of time, humidity, light, electrostatic effects, flow, or liquid level, current, voltage, acceleration, or combinations thereof;
- in which **actuators** and **valve** bodies are designed to be fitted to each other.
- as well as manual controls when such are electrically or mechanically integral with automatic controls.

NOTE 2 Requirements for manually actuated mechanical switches not forming part of an automatic control are contained in IEC 61058-1-1.

This document applies to

- the inherent safety of **electrically operated water valves**, and
- functional safety of **electrically operated water valves** and safety related systems,
- controls where the performance (for example the effect of EMC phenomena) of the product can impair the overall safety and performance of the controlled system,
- the operating values, operating times, and operating sequences where such are associated with equipment safety.

This document specifies the requirements for construction, operation and testing of **electrically operated water valves** used in, on, or in association with an equipment.

This document contains requirements for electrical features of **water valves** and requirements for mechanical features of **valves** that affect their intended operation.

This document does not

- apply to **electrically operated water valves** intended exclusively for industrial process applications unless explicitly mentioned in the relevant Part 2 or the equipment standard. However, this document can be applied to evaluate automatic electrical controls intended specifically for industrial applications in cases where no relevant safety standard exists.
- apply to
 - **electrically operated water valves** of nominal connection size above DN 50;
 - **electrically operated water valves** for admissible **nominal pressure rating** above 1,6 MPa;
 - food dispensers;
 - detergent dispensers;
 - steam **valves**;
- take into account the **response value** of an **automatic action** of a **electrically operated water valve**, if such a **response value** is dependent upon the method of mounting the control in the equipment. Where a **response value** is of significant purpose for the protection of the **user**, or surroundings, the value defined in the appropriate equipment standard or as determined by the manufacturer will apply.
- address the integrity of the output signal to the network devices, such as interoperability with other devices unless it has been evaluated as part of the control system.
- cover the prevention of contamination of drinking water as a result of contact with materials.

Throughout this document, where it can be used unambiguously, the term:

- "**valve**" is used to denote an **electrically operated water valve** (including **actuator** and **valve body assembly**);
- "**actuator**" means "electrically operated mechanism or prime mover";
- "**valve body**" means "**valve body assembly**";
- "equipment" includes "appliance" and "control system".

2 Normative references

This clause of Part 1 is applicable except as follows.

Addition:

IEC 60730-1:2022, *Automatic electrical controls – Part 1: General requirements*

ISO 7-1:1994, *Pipe threads where pressure-tight joints are made on the threads – Part 1: Dimensions, tolerances and designation*

ISO 65:1981, *Carbon steel tubes suitable for screwing in accordance with ISO 7-1*¹

ISO 228-1:2000, *Pipe threads where pressure-tight joints are not made on the threads – Part 1: Dimensions, tolerances and designation*

ISO 630-2:2011, *Structural steels – Part 2: Technical delivery conditions for structural steels for general purposes*²

ISO 1179-1:2013, *Connections for general use and fluid power – Ports and stud ends with ISO 228-1 threads with elastomeric or metal-to-metal sealing – Part 1: Threaded ports*

ISO 4144:2003, *Pipework – Stainless steel fittings threaded in accordance with ISO 7-1*

3 Terms and definitions

This clause of Part 1 is applicable except as follows.

3.2 Definitions of types of control according to purpose

3.2.13 electrically operated valve

Additional Note to entry:

Note 1 to entry: A semi-automatic valve that is opened manually and closes automatically or vice versa is also covered by this definition.

Additional definitions:

3.2.13.101 valve

device consisting of an **actuator** connected to a **valve body assembly** and used to stop or regulate the flow of fluid by the closure or partial closure of an orifice

3.2.13.102 water valve

valve intended to be connected to a water supply and to control water flow

3.2.13.103 heating-water valve

valve intended to control the water circulation in heating systems

¹ Withdrawn.

² Withdrawn. A newer edition was published in 2021, but the listed edition applies.