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Automatiska elektriska styr- och reglerdon – Del 2-15: Särskilda fordringar på reglerdon och givare för luftflöde, vattenflöde och vattennivå

Automatic electrical controls –

Part 2-15: Particular requirements for automatic electrical air flow, water flow and water level sensing controls

Som svensk standard gäller europastandarden EN IEC 60730-2-15:2019. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 60730-2-15:2019.

Nationellt förord

Europastandarden EN IEC 60730-2-15:2019

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 60730-2-15, Third edition, 2017 - Automatic electrical controls - Part 2-15: Particular requirements for automatic electrical air flow, water flow and water level sensing controls**

utarbetad inom International Electrotechnical Commission, IEC.

Standarden ska användas tillsammans med SS-EN 60730-1, utgåva 5, 2016 och dess separat utgivna tillägg.

Tidigare fastställd svensk standard SS-EN 60730-2-15, utgåva 2, 2010, gäller ej fr o m 2022-04-05.

Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a mätning, säkerhet och provning och för utförande, skötsel och dokumentation av elprodukter och elanläggningar.

Genom att utforma sådana standarder blir säkerhetsfordringar tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

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English Version

**Automatic electrical controls - Part 2-15: Particular requirements
for automatic electrical air flow, water flow and water level
sensing controls
(IEC 60730-2-15:2017)**

Dispositifs de commande électrique automatiques - Partie
2-15: Exigences particulières pour les dispositifs de
commande électrique automatiques détecteurs de débit
d'air, de débit d'eau et de niveau d'eau
(IEC 60730-2-15:2017)

Automatische elektrische Regel- und Steuergeräte - Teil 2-
15: Besondere Anforderungen an automatische elektrische
luftstrom-, wasserstrom- und wasserstandsabhängige
Regel- und Steuergeräte
(IEC 60730-2-15:2017)

This European Standard was approved by CENELEC on 2018-10-23. CENELEC 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 CENELEC 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 CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

European foreword

The text of document (72/1080/FDIS), future edition 3 of IEC 60730-2-15, prepared by IEC/TC 72 "Automatic electrical controls" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60730-2-15:2019.

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) 2019-10-05
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-04-05

This document supersedes EN 60730-2-15:2010.

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

Endorsement notice

The text of the International Standard IEC 60730-2-15:2017 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 standards indicated:

IEC 60364-7-702 NOTE Harmonized as HD 60364-7-702
IEC 60669 series NOTE Harmonized as EN 60669 series
IEC 60730-2-6 NOTE Harmonized as EN 60730-2-6

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

AUTOMATIC ELECTRICAL CONTROLS –**Part 2-15: Particular requirements for automatic electrical
air flow, water flow and water level sensing controls**

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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International Standard IEC 60730-2-15 has been prepared by IEC committee 72: Automatic electrical controls.

This third edition cancels and replaces the second edition published in 2008. This edition constitutes a technical revision.

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

- a) changes to align with the fifth edition of 60730-1, including the revised title.

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

FDIS	Report on voting
72/1080/FDIS	72/1101/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

This Part 2-15 is intended to be used in conjunction with IEC 60730-1. It was established on the basis of the fifth edition of that standard (2013). Consideration may be given to future editions of, or amendments to, IEC 60730-1.

This Part 2-15 supplements or modifies the corresponding clauses in IEC 60730-1 so as to convert that publication into the IEC standard: Particular requirements for automatic electrical air flow, water flow and water level sensing controls.

Where this document 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, this document indicates that the relevant clause or subclause of Part 1 applies.

In the development of a fully international standard to cover automatic controls for household and similar use, 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 "in some countries" notes regarding differing national practices are contained in the following subclauses:

- 10.1.4,
- 12.1.101.

In this publication:

1) The following print types are used:

- Requirements proper: in roman type;
- *Test specifications: in italic type;*
- Notes: in small roman type;
- Words defined in Clause 2: **bold**.

2) Subclauses, notes, tables and figures which are additional to those in part 1 are numbered starting from 101, additional annexes are lettered AA, BB, etc.

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

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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

AUTOMATIC ELECTRICAL CONTROLS –

Part 2-15: Particular requirements for automatic electrical air flow, water flow and water level sensing controls

1 Scope and normative references

This clause of Part 1 is applicable except as follows:

1.1 Scope

Replacement:

This part of IEC 60730 applies to automatic electrical air flow, water flow and water level sensing controls for use in, or in association with, boilers with a maximum pressure rating of 2 000 kPa (20 bar) and equipment for general household and similar use including controls for heating, air-conditioning and similar applications.

NOTE Examples are water flow and water level sensing controls of the float or electrode-sensor type used in boiler applications and air flow, water flow and water level sensing controls for swimming pool pumps, water tank pumps, cooling towers, dishwashers, washing machines, air conditioning chillers and ventilation applications.

This document also applies to automatic electrical air flow, water flow and water level sensing controls for equipment that may be used by the public, such as equipment intended to be used in shops, offices, hospitals, farms and commercial and industrial applications.

1.1.1

Replacement:

This document applies to the inherent safety, to the operating values, operating sequences where such are associated with equipment protection, and to the testing of automatic electrical air flow, water flow and water level sensing controls used in, or in association with, equipment.

This document is also applicable to controls for appliances within the scope of IEC 60335-1.

Automatic electrical air flow, water flow and water level sensing controls for equipment not intended for normal household use, but which nevertheless may be used by the public, such as equipment intended to be used by laymen in shops, in light industry and on farms, are within the scope of this document.

This document is also applicable to individual controls utilized as part of a control system or controls which are mechanically integral with multifunctional controls having non-electrical outputs.

This document is not applicable to pressure sensing controls, requirements for which are contained in IEC 60730-2-6¹.

¹ IEC 60730-2-6, *Automatic electrical controls – Part 2-6: Particular requirements for automatic electrical pressure sensing controls including mechanical requirements*.

This document does not apply to air flow, water flow and water level sensing controls designed exclusively for industrial applications unless explicitly mentioned in the relevant equipment standard.

NOTE Throughout this document, the word "equipment" means "appliance and equipment".

1.1.2 Addition:

This document applies to automatic electrical controls, mechanically or electrically operated, responsive to or controlling air flow, water flow and water level.

1.1.3 Not applicable.

NOTE Requirements for manual switches not forming part of an automatic control are contained in IEC 60669 and IEC 61058-1.

1.1.5 Replacement:

This document applies to a.c. or d.c. automatic electrical air flow, water flow and water level sensing controls with a rated voltage not exceeding 690 V a.c. or 600 V d.c.

1.1.6 Replacement:

This document takes into account the response value of an automatic action of a control where such a response value is dependent upon the method of mounting the control. Where a response value is of significant purpose for the protection of the user, or surroundings, the value defined in the appropriate household equipment standard or as determined by the manufacturer shall apply.

1.1.7 Replacement:

This document applies also to controls incorporating electronic devices, requirements for which are contained in Annex H.

This document applies also to controls using NTC and PTC thermistors, requirements for which are contained in Annex J.