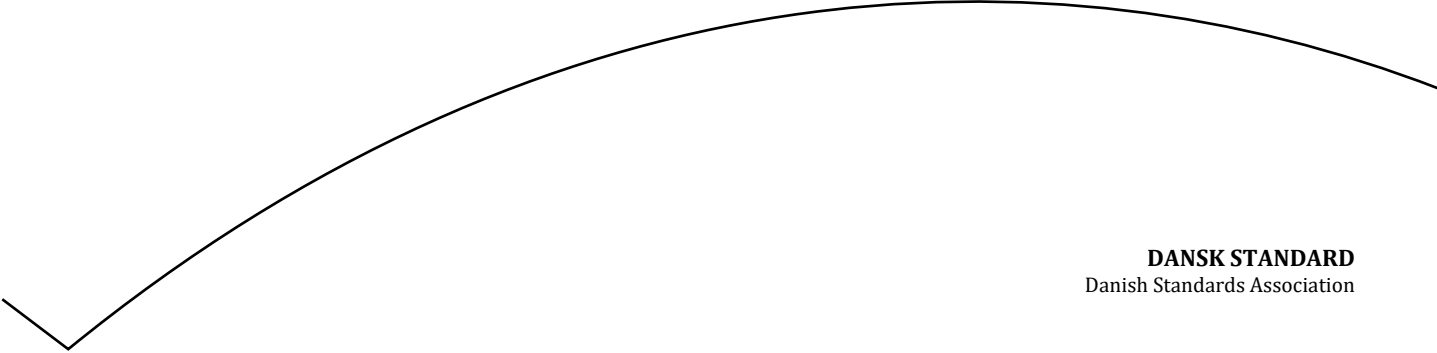


2026-07-06

Automatiske elektriske styringer – Del 2-15: Særlige krav til automatiske elektriske følere til styring af luft- og vandgennemstrømning samt vandniveau

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



DANSK STANDARD
Danish Standards Association

Göteborg Plads 1
DK-2150 Nordhavn

Tel: +45 39 96 61 01
dansk.standard@ds.dk
www.ds.dk

DS/EN IEC 60730-2-15:2026

København

DS projekt: M386734

ICS: 97.120

Første del af denne publikations betegnelse er:

DS/EN IEC, hvilket betyder, at det er en international standard, der har status som europæisk og dansk standard.

Denne publikations overensstemmelse er:

IDT med: EN IEC 60730-2-15:2026

IDT med: IEC 60730-2-15:2026 ED4

DS-publikationen er på engelsk.

Denne publikation erstatter: [DS/EN IEC 60730-2-15:2019](#)

I tilfælde af redaktionelle fejl i DS-publikationen kan der skrives til:

editorial-mistakes@ds.dk

ADVARSEL: DS-publikationer revideres over tid. Derudover kan sådanne publikationer ændres ved rettelsesblade og/eller tillæg.

Der kan også udgives rettelsesblade, der udelukkende angår oversættelsen af en publikation. Det er derfor vigtigt at sikre sig, at man benytter en gældende udgave, medmindre fx lovgivning kræver andet. Den enkelte publikations status fremgår af

<https://webshop.ds.dk/>. Her kan man desuden tilmelde sig en gratis notifikationservice og følge en udgivet DS-publikations udvikling ved at klikke på "Følg".

En oversigt over forskellige DS-publikationstyper og -betegnelser findes her:

<https://www.ds.dk/publikationstyper>

Indholdet i dette dokument er ophavsretligt beskyttet, herunder tekst, grafik, billeder og lyd. Fonden Dansk Standard forbeholder sig udtrykkeligt alle rettigheder til at udnytte indholdet til tekst- og datamining, jf. ophavsretslovens § 11 b, stk. 2, og artikel 4 i direktiv (EU) 2019/790. Enhver udnyttelse af indholdet i dette dokument til tekst- og dataminingformål kræver forudgående skriftlig, specifik tilladelse fra Fonden Dansk Standard.

In case of editorial errors in the DS publication, please write to:

editorial-mistakes@ds.dk

NOTICE: DS publications are revised over time. In addition, such publications may be altered by corrigenda and/or amendments. Also, corrigenda may be published solely in relation to the translation of a publication. It is therefore important to ensure that the edition used is valid, unless, for example, legislation requires otherwise. The status of each publication can be found at

<https://webshop.ds.dk/>. Here you can also sign up for a free notification service and follow the progress of a published DS publication by clicking on "Follow".

An overview of different DS publication types and designations can be found here:

<https://www.ds.dk/publikationstyper>

The content of this document, including text, graphics, images, and audio, is protected by copyright. The Danish Standards Foundation explicitly reserves all rights regarding the use of its content for text and data mining purposes in accordance with Section 11b(2) of the Danish Copyright Act and Article 4 of Directive (EU) 2019/790. Any use of the content of this document for text and data mining purposes requires prior, written, specific permission from the Danish Standards Foundation.

EUROPÄISCHE NORM

July 2026

ICS 97.120

Supersedes EN IEC 60730-2-15:2019

English Version

Automatic electrical controls - Part 2-15: Particular requirements
for automatic electrical air flow, water flow and water level
sensing controls
(IEC 60730-2-15:2026)

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 60730-2-15:2026)

Automatische elektrische Regel- und Steuergeräte -
Teil 2-15: Besondere Anforderungen an automatische
elektrische luftstrom-, wasserstrom- und
wasserstandsabhängige Regel- und Steuergeräte
(IEC 60730-2-15:2026)

This European Standard was approved by CENELEC on 2026-05-15. 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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye 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

This is a preview of DS/EN IEC 60730-2-15:2026. [Click here to purchase the full version from the ANSI store.](#)

European foreword

The text of document 72/1524/FDIS, future edition 4 of IEC 60730-2-15, prepared by TC 72 "Automatic electrical controls" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60730-2-15:2026.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2027-07-31 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2029-07-31 document have to be withdrawn

This document supersedes EN IEC 60730-2-15:2019 and all of its amendments and corrigenda (if any).

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.

This document is read in conjunction with EN IEC 60730-1.

This document has been prepared under a standardization request addressed to CENELEC by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

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 60730-2-15:2026 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 60730-2-6 NOTE Approved as EN IEC 60730-2-6



INTERNATIONAL STANDARD

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

This is a preview of DS/EN IEC 60730-2-15:2026. Click [here](#) to purchase the full version from the ANSI store.



THIS PUBLICATION IS COPYRIGHT PROTECTED

Copyright © 2026 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

IEC Secretariat
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigendum or an amendment might have been published.

IEC publications search -

webstore.iec.ch/advsearchform

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee, ...). It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and once a month by email.

IEC Customer Service Centre - webstore.iec.ch/csc

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: sales@iec.ch.

IEC Products & Services Portal - products.iec.ch

Discover our powerful search engine and read freely all the publications previews, graphical symbols and the glossary. With a subscription you will always have access to up to date content tailored to your needs.

Electropedia - www.electropedia.org

The world's leading online dictionary on electrotechnology, containing more than 22 500 terminological entries in English and French, with equivalent terms in 25 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

Warning! Make sure that you obtained this publication from an authorized distributor.

This is a preview of DS/EN IEC 60730-2-15:2026. [Click here to purchase the full version from the ANSI store.](#)

FOREWORD	3
1 Scope	6
2 Normative references	7
3 Terms and definitions	7
4 General	9
5 Required technical information	10
6 Protection against electric shock	11
7 Provision for protective earthing	11
8 Terminals and terminations.....	12
9 Constructional requirements	12
10 Threaded parts and connections.....	13
11 Creepage distances, clearances and distances through solid insulation.....	13
12 Components	13
13 Fault assessment on electronic circuits	13
14 Moisture and dust resistance	14
15 Electric strength and insulation resistance	15
16 Heating.....	15
17 Manufacturing deviation and drift.....	15
18 Environmental stress	15
19 Endurance	16
20 Mechanical strength	17
21 Resistance to heat, fire and tracking.....	19
22 Resistance to corrosion	19
23 Electromagnetic compatibility (EMC) requirements – Emission	19
24 Normal operation	19
25 Electromagnetic compatibility (EMC) requirements – Immunity	19
26 Abnormal operation tests	20
Annex H (normative) Requirements related to functional safety	21
Annex Q (informative) Regional differences relevant for the member countries of CENELEC.....	35
Annex R (informative) National differences relevant in the United States of America.....	36
Annex S (informative) National differences relevant in Japan	37
Annex T (informative) National differences relevant in Canada	38
Annex AA (normative) Independently mounted controls for boiler applications	39
Annex BB (normative) Requirements for response delay.....	40
Annex CC (normative) Independently mounted air flow and water flow sensing controls	41
Bibliography.....	42
Table 1 – Required technical information and methods of providing these information	10
Table H.1 – Additional items to Table 1.....	21
Table AA.1 – Number of cycles	39
Table BB.1 – Deviation and drift limits	40

This is a preview of DS/EN IEC 60730-2-15:2026. [Click here to purchase the full version from the ANSI store.](#)

**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.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at <https://patents.iec.ch>. IEC shall not be held responsible for identifying any or all such patent rights.

IEC 60730-2-15 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 2017. This edition constitutes a technical revision.

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

- a) adoption to 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.

This is a preview of DS/EN IEC 60730-2-15:2026. Click here to purchase the full version from the ANSI store.

Draft	Report on voting
72/1524/FDIS	72/1533/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.

This part 2-15 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 2-15 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 part 2-15 states "addition", "modification" or "replacement", the relevant requirement, test specification or explanatory matter in Part 1 should be adapted accordingly.

When a particular subclause of Part 1 is not mentioned in this Part 2, that 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 Q, Annex R, Annex S, and 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, the following print types are used:

- requirements proper: in roman type;
- *test specifications: in italic type*;
- explanatory matter: in smaller roman type.
- Defined terms: **bold type**.

Subclauses, notes or items 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 of the IEC 60730 series, under the general title: *Automatic electrical controls*, can be found on the IEC website.

This is a preview of DS/EN IEC 60730-2-15:2026. Click [here](#) to purchase the full version from the ANSI store.

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.

This is a preview of DS/EN IEC 60730-2-15:2026. [Click here to purchase the full version from the ANSI store.](#)

This clause of Part 1 is replaced by the following:

This part of IEC 60730 applies to automatic electrical air flow, water flow and water level sensing controls

- for use in, on, 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 1 Throughout this document, the word "equipment" means "appliance and equipment" and "controls" means "automatic electrical air flow, water flow and water level sensing controls".

EXAMPLE 1 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.

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

EXAMPLE 2 Independently mounted air flow, water flow and water level sensing 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 Controls for commercial boilers, heating and air-conditioning equipment.

- that are smart enabled controls;

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

- that are AC or DC powered controls with a rated voltage not exceeding 690 V AC or 600 V DC;
- used in, on, or in association with equipment that use 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;
- that are mechanically or electrically operated, responsive to or controlling air flow, water flow and water level;
- as well as manual controls when such are electrically and/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 automatic electrical air flow, water flow and water level sensing controls, and
- functional safety of automatic air flow, water flow and water level sensing electrical controls 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 is a preview of DS/EN IEC 60730-2-15:2026. [Click here to purchase the full version from the ANSI store.](#)

electrical air flow, water flow and water level sensing controls used in, on, or in association with an equipment.

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 applies.

This document does not

- apply to air flow, water flow and water level sensing **controls** 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 air flow, water flow and water level sensing **controls** intended specifically for industrial applications in cases where no relevant safety standard exists;
- 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;
- apply to pressure sensing controls, the requirements for which are contained in IEC 60730-2-6.

2 Normative references

This clause of Part 1 is applicable.

3 Terms and definitions

This clause of Part 1 is applicable except as follows:

3.2 Definitions of types of control according to purpose

Additional definitions:

3.2.101

boiler water level cut-out

water level **sensing control** of the float or electrode-sensor type for boiler applications intended to respond to a low water level during abnormal operating conditions and which has no provision for **setting by the user**

Note 101 to entry: A water level cut-out can be of the automatic or of the manual reset type. A boiler water level cutout has a type 2 action, it is a type of **water level protective control** (see 3.2.105).

3.2.102

boiler water level limiter

water level **sensing control** of the float or electrode-sensor type for boiler applications which is intended to keep a water level below or above one particular value during normal operating conditions and which can have provision for **setting by the user**

Note 101 to entry: A **boiler water level limiter** has a type 2 action and is normally of the automatic reset type.

This is a preview of DS/EN IEC 60730-2-15:2026. [Click here to purchase the full version from the ANSI store.](#)

boiler water feed control

water level **sensing control** of the float or electrode-sensor type for boiler applications which is intended to keep the water level in a boiler above one particular value during normal operating conditions and which can have provision for **setting by the user**

Note 101 to entry: A **boiler water feed control** is of the automatic reset type and has a type 1 action. A **boiler water feed control** is used on a boiler to cycle a feeder pump or feeder water valve. For the purposes of this document, a type 2 **boiler water feed control** is considered to be a **boiler water level limiter**.

3.2.104**water level operating control**

control which is intended to keep the water level below or above one particular value during normal operating conditions and which can have provision for **setting by the user**

Note 101 to entry: A **water level operating control** is of the automatic reset type.

3.2.105**water level protective control**

control which is intended to prevent a hazardous situation during abnormal **operation** of the equipment either by

- a) keeping the water level below or above one or more particular values, or by
- b) energizing or de-energizing the associated equipment at one or more particular values of water level

3.2.106**water flow operating control**

flow **sensing control** intended to sense or maintain the water flow between two particular values during normal operating conditions and which can have provision for **setting by the user**

Note 101 to entry: A **water flow operating control** is of the automatic reset type.

3.2.107**air flow operating control**

flow **sensing control** intended to sense or maintain the air flow between two particular values during normal operating conditions and which can have provision for **setting by the user**

Note 101 to entry: An **air flow operating control** is of the automatic reset type.

3.2.108**water flow cut-out**

flow **sensing control** intended to respond to a lack of water flow during abnormal operating conditions and which has no provision for **setting by the user**

Note 101 to entry: A **water flow cut-out** is of the automatic or manual reset type.

3.2.109**air flow cut-out**

flow **sensing control** intended to respond to a lack of air flow during abnormal operating conditions and which has no provision for **setting by the user**

Note 101 to entry: An **air flow cut-out** is of the automatic or manual reset type.

Additional definition:

3.3.101

response delay

delay provided to increase the response value of a **water level operating control** for the purpose of preventing unnecessary cycling of the equipment due to fluctuating liquid level

Note 101 to entry: This is usually expressed in units of time.

3.22 Definitions relating to functional safety

Additional definitions:

3.22.101

permanent operation

continuous monitoring of the protective function during the operation of the appliance or system for longer than 24 h

Note 101 to entry: 24 h is considered the typical time interval between a first and a second fault.

3.22.102

non-permanent operation

continuous monitoring of the protective function during the operation of the appliance or system for less than 24 h

Note 101 to entry: 24 h is considered the typical time interval between a first and a second fault.