



**Automatiska elektriska styr- och reglerdon för hushållsbruk –
Del 2: Särskilda fordringar på vattennivågivare av flottör- eller
elektroddtyp för användning i värmepannor och liknande**

*Automatic electrical controls for household and similar use –
Part 2: Particular requirements for automatic electrical water level
sensing controls of the float or electrode-sensor type used in boiler
applications*

Som svensk standard gäller europastandarden EN 60730-2-15: 1995. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60730-2-15: 1995.

Nationellt förord

Europastandarden EN 60730-2-15: 1995

består av:

– europastandardens ikraftsättningsdokument, utarbetat inom CENELEC

– IEC 730-2-15, First edition, 1994 – **Automatic electrical controls for household and similar use –
Part 2: Particular requirements for automatic electrical water level
sensing controls of the float or electrode-sensor type used in boiler
applications**

utarbetad inom International Electrotechnical Commission, IEC.

SS-EN 60730-2-15 skall användas tillsammans med SS-EN 60730-1, utgåva 1, 1991, och dess separat utgivna tillägg SS-EN 60730-1 T1, T2 och A14.

Descriptors: Household electrical appliances, control devices, automatic control, detectors, level: quantity, water, boilers, safety requirements, protection against electric shocks, insulation resistance, temperature rise, mechanical strength

English version

**Automatic electrical controls for household and similar use
Part 2: Particular requirements for automatic electrical water
level sensing controls of the float or electrode-sensor type
used in boiler applications
(IEC 730-2-15:1994)**

Dispositifs de commande électrique
automatiques à usage domestique et
analogue
Partie 2: Règles particulières pour les
dispositifs de commande électrique
automatiques détecteurs du niveau
d'eau du type à flotteur ou à électrode
utilisés dans les réalisations de
chaudières
(CEI 730-2-15:1994)

Automatische elektrische Regel- und
Steuergeräte für den Hausgebrauch und
ähnliche Anwendungen
Teil 2: Besondere Anforderungen für
automatische elektrische
wasserstandsabhängige Regel- und
Steuergeräte in Schwimm- oder
Elektrodenfühler-Ausführung für den
Gebrauch in Wasserboilern
(IEC 730-2-15:1994)

This European Standard was approved by CENELEC on 1995-03-06. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

This European Standard consists of the text of IEC 730-2-15:1994, which has been prepared by the Technical Committee IEC TC 72, Automatic controls for household use.

The draft was submitted to the IEC-CENELEC parallel vote as document 72(CO)145 and was approved by CENELEC as EN 60730-2-15 on 1995-03-06.

The following dates were fixed:

- | | | |
|--|-------|------------|
| - latest date of publication of an identical national standard | (dop) | 1996-03-01 |
| - latest date of withdrawal of conflicting national standards | (dow) | 1996-03-01 |

For products which have complied with the relevant national standard before 1996-03-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2001-03-01.

This Part 2 is to be used in conjunction with EN 60730-1:1991, Automatic electrical controls for household and similar use - Part 1: General requirements, and its amendments A1:1991, A11:1991 and A12:1993. Consideration may be given to future editions of, or amendments to, EN 60730-1.

Where a particular subclause of Part 1 is not mentioned in this Part 2, that subclause applies as far as is reasonable. Where this part 2 states "addition", "modification" or "replacement", the relevant text of Part 1 is to be adapted accordingly.

Subclauses which are in addition to those in IEC 730-1 are numbered 101, 102, etc.; additional annexes are labelled AA, BB, etc. CENELEC annexes are labelled ZA, ZB, etc.

There are no special national conditions (snc) causing a deviation from this European Standard other than those listed in annex ZA of EN 60730-1.

Where reference is made to other international or harmonized standards, the edition of that standard quoted in annex ZB (normative) is applicable.

Endorsement notice

The text of the International Standard IEC 730-2-15:1994 was approved by CENELEC as a European Standard without any modification.

Annex ZB (normative)

**Other international publications quoted in this standard
the reference of the relevant European publications**

Additions to annex ZB of EN 60730-1:1991

Add under IEC Publication:

730-2-1 (mod)	1989	Automatic electrical controls for household and similar use - Part 2: Particular requirements for electrical controls for electrical household appliances	EN 60730-2-1 + A11 + A12 + A13	1991 1992 1993 1995
730-2-6 (mod)	1991	Part 2: Particular requirements for automatic electrical pressure sensing controls including mechanical requirements	EN 60730-2-6	1995

CONTENTS

Clause	Page
1 Scope and normative references	9
2 Definitions	11
3 General requirements	13
4 General notes on tests	13
5 Rating	15
6 Classification	15
7 Information	15
8 Protection against electric shock	17
9 Provision for protective earthing	17
10 Terminals and terminations	17
11 Constructional requirements	17
12 Moisture and dust resistance	19
13 Electric strength and insulation resistance	19
14 Heating	21
15 Manufacturing deviation and drift	21
16 Environmental stress	21
17 Endurance	21
18 Mechanical strength	23
19 Threaded parts and connections	25
20 Creepage distances, clearances and distances through insulation	25
21 Resistance to heat, fire and tracking	25
22 Resistance to corrosion	25
23 Radio interference suppression	27
24 Components	27
25 Normal operation	27
26 Operation with mains-borne perturbations, magnetic, and electromagnetic disturbances	27
27 Abnormal operation	27
28 Guidance on the use of electronic disconnection	27
Figures	27
Annexes	29

AUTOMATIC ELECTRICAL CONTROLS FOR HOUSEHOLD AND SIMILAR USE -

Part 2: Particular requirements for automatic electrical water level sensing controls of the float or electrode-sensor type used in boiler applications

1 Scope and normative references

This clause of part 1 is replaced as follows:

1.1 This part of International Standard IEC 730 applies to automatic electrical water level sensing controls of the float and electrode-sensor type for use in, on or in association with, boilers with a maximum pressure rating of 2 000 kPa (20 bar), for household and similar use.

1.1.1 This part 2 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 water level sensing controls used in, on or in association with, household and similar equipment.

This part 2 is also applicable to controls for appliances within the scope of IEC 335-1. IEC 730-2-1 does not apply to such controls.

Automatic electrical 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 part 2.

This part 2 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 part 2 is not applicable to pressure-operated water level sensing controls, requirements for which are contained in IEC 730-2-6.

This part 2 does not apply to water level sensing controls designed exclusively for industrial applications.

Throughout this part 2, the term "water level sensing control" means "water level cut-out, water level limiter or boiler water feed control".

Throughout this part 2, the word "equipment" means "appliance and equipment".

1.1.2 This part 2 applies to automatic electrical controls, mechanically or electrically operated, responsive to or controlling a water level.

1.1.3 This part 2 contains requirements for electrical features of water level sensing controls and requirements for mechanical features that may affect their intended operation.

1.1.4 This part 2 applies to manual controls when such are electrically and/or mechanically integral with water level sensing controls.

Requirements for manual switches not forming part of an automatic control are contained in IEC 1058-1.

1.1.5 In general, these water level sensing controls are integrated or incorporated with the equipment or are intended to be integrated or incorporated in or on the equipment. This part 2 also covers controls when they are independently mounted. In-line cord controls are not covered by this part 2.

1.2 This part 2 applies to controls with a rated voltage not exceeding 660 V and a rated current not exceeding 63 A.

1.3 This part 2 does not take into account the response value of an automatic action of a control, if such a response value is dependent upon the method of mounting the control in the equipment. If a response value is of significant purpose for the safety of the user, or surroundings, the value defined in the appropriate household equipment standard or as determined by the manufacturer shall apply.

1.4 This part 2 applies also to controls incorporating electronic devices, requirements for which are contained in annex H.

1.5 *Normative references*

This subclause of part 1 is applicable, except as follows:

1.5.101 *Additional references*

IEC 730-2-1: 1989, *Automatic electrical controls for household and similar use – Part 2: Particular requirements for electrical controls for electrical household appliances*

IEC 730-2-6: 1991, *Automatic electrical controls for household and similar use – Part 2: Particular requirements for automatic electrical pressure sensing controls including mechanical requirements*

2 **Definitions**

This clause of part 1 is applicable except as follows: