

Automatic electrical controls for household and similar use —

Part 2: Particular requirements for automatic electrical water and air flow sensing controls, including mechanical requirements

The European Standard EN 60730-2-18:1999, with the incorporation of amendment A11:2005, has the status of a British Standard

ICS 97.120

National foreword

This British Standard is the English language version of EN 60730-2-18:1999, including amendment A11:2005. It was derived by CENELEC from IEC 60730-2-18:1997.

The CENELEC common modifications have been implemented at the appropriate places in the text. The start and finish of each common modification is indicated in the text by tags **[C]** **[C]**. Where a common modification has been introduced by amendment, the tags carry the number of the amendment. For example, the common modifications introduced by CENELEC amendment A11 are indicated by **[C11]** **[C11]**.

The UK participation in its preparation was entrusted to Technical Committee, CPL/72, Electrical control devices for household equipment and appliances, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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Cross-references

Attention is drawn to the fact that CEN and CENELEC Standards normally include an annex which lists normative references to international publications with their corresponding European publications. The British Standards which implement international or European publications referred to in this document may be found in the *BSI Catalogue* under the section entitled “International Standards Correspondence Index”, or by using the “Search” facility of the *BSI Electronic Catalogue* or of British Standards Online.

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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 20, an inside back cover and a back cover.

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English version

Automatic electrical controls for household and similar use
Part 2: Particular requirements for automatic electrical water and
air flow sensing controls, including mechanical requirements
(IEC 60730-2-18:1997, modified)

Dispositifs de commande électrique
automatiques à usage domestique et
analogue
Partie 2: Règles particulières pour les
dispositifs de commande électrique
automatiques détecteurs du débit d'eau
et d'air, y compris les prescriptions
mécaniques
(CEI 60730-2-18:1997, modifiée)

Automatische elektrische Regel- und
Steuergeräte für den Hausgebrauch und
ähnliche Anwendungen
Teil 2: Besondere Anforderungen an
automatische elektrische Wasser- und
Luftfluß-Regel- und Steuergeräte
einschließlich mechanischer
Anforderungen
(IEC 60730-2-18:1997, modifiziert)

This European Standard was approved by CENELEC on 1999-04-01. 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.

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CENELEC

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

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Foreword

The text of the International Standard IEC 60730-2-18:1997, prepared by IEC TC 72, Automatic controls for household use, together with common modifications prepared by the Technical Committee CENELEC TC 72, Automatic controls for household use, was submitted to the formal vote and was approved by CENELEC as EN 60730-2-18 on 1999-04-01.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2000-04-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2002-04-01

This part 2 is to be used in conjunction with EN 60730-1:1995, Automatic electrical controls for household and similar use - Part 1: General requirements, and its amendments. Consideration may be given to future editions of EN 60730-1.

This document supplements or modifies the corresponding clauses of EN 60730-1 so as to convert it into the European Standard: Particular requirements for automatic electrical water and air flow sensing controls, including mechanical requirements.

Where a particular clause or subclause of part 1 is not mentioned in this part 2, that clause or 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, notes, tables and figures which are in addition to those in part 1 are numbered 101, 102, etc.

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

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

Foreword to amendment A11

This amendment to the European Standard EN 60730-2-18:1999 was prepared by the Technical Committee CENELEC TC 72, Automatic controls for household use.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as amendment A11 to EN 60730-2-18:1999 on 2004-12-07.

This amendment was prepared in order to make EN 60730-2-1 not applicable for controls covered by this standard. EN 60730-2-1:1997 will be withdrawn at the latest date of withdrawal of the last Part 2 for which it is applicable (i.e. 2009-03-01 applicable to EN 60730-2-2:2002).

The following dates were fixed:

- latest date by which the amendment has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2006-01-01
- latest date by which the national standards conflicting
with the amendment have to be withdrawn (dow) 2009-03-01

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AUTOMATIC ELECTRICAL CONTROLS FOR HOUSEHOLD AND SIMILAR USE –

Part 2: Particular requirements for automatic electrical water and air flow sensing controls, including mechanical requirements

1 Scope and normative references

This clause of part 1 is replaced as follows:

Replacement:

1.1 This part of International Standard IEC 730 applies to automatic electrical water and air flow sensing controls for use in, on or in association with equipment for household and similar use including controls for heating, air-conditioning and similar applications. The equipment may use electricity, gas, oil, solid fuel, solar thermal energy etc., or a combination thereof.

Examples are pressurized boilers, air conditioning chillers and ventilation applications.

1.1.1 This part 2 applies to the inherent safety, to the operating values, operating times, and operating sequences where such are associated with equipment protection, and to the testing of automatic electrical water and air flow 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.

Automatic electrical water and air flow 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 sensing controls, requirements for which are contained in IEC 730-2-6.

This part 2 does not apply to automatic electrical water and air flow sensing controls designed exclusively for industrial applications.

 EN 60730-2-1 is not applicable to electrical water and air flow sensing controls. 

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 an air or water flow.

1.1.3 This part 2 contains requirements for electrical features of water and air flow sensing controls and requirements for mechanical features that may affect their electrical safety.

1.1.4 In general, these water and air flow 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 these 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 clause of part 1 is applicable, except as follows:

Addition:

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:

2.2 Definitions of types of control according to purpose

2.2.19 Add an explanatory note:

See 2.2.101 and 2.2.102.

2.2.20 Add an explanatory note:

See 2.2.103 and 2.2.104

Additional definitions:

2.2.101 water flow operating control: A water flow sensing control intended to sense or maintain the water flow between two particular values during normal operating conditions and which may have provision for setting by the user.

A water flow operating control is of the automatic reset type.

2.2.102 air flow operating control: An air flow sensing control intended to sense or maintain the air flow between two particular values during normal operating conditions and which may have provision for setting by the user.

An air flow operating control is of the automatic reset type.

2.2.103 water flow cut-out: A water 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.

A water flow cut-out is of the automatic or manual reset type.

2.2.104 air flow cut-out: An air 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.

An air flow cut-out is of the automatic or manual reset type.

3 General requirements

This clause of part 1 is applicable.

4 General notes on tests

This clause of part 1 is applicable except as follows:

4.1 Conditions of test

4.1.7 The rate of flow change declared in table 7.2 and used in clause 17 (i.e., α_1 , β_1 , α_2 , β_2) shall have test tolerances as declared by the manufacturer.

Additional subclause:

4.101 The values in annex AA apply for the testing of independently mounted water and air flow sensing controls in clause 17, unless otherwise declared. Values for integrated and incorporated controls are specified in the appropriate equipment standard.

5 Rating

This clause of part 1 is applicable.