

Automatic electrical controls for household and similar use —

Part 2-2: Particular requirements for thermal motor protectors

The European Standard EN 60730-2-2:1991 with the incorporation of its amendments A11:1995, A1:1997 and A2:1997 has the status of a British Standard

ICS 97.120

Cooperating organizations

The European Committee for Electrotechnical Standardization (CENELEC), under whose supervision this European Standard was prepared, comprises the National Committees of the following countries.

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Ireland	United Kingdom

This British Standard, having been prepared under the direction of the Light Electrical Engineering Standards Policy Committee, was published under the authority of the Standards Board and comes into effect on 15 September 1992

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The following BSI references relate to the work on this standard:
Committee reference LEL/96
Draft for comment 88/20624 DC

Amendments issued since publication

Amd. No.	Date	Comments
8792	September 1995	See national foreword
9554	September 1997	
9802	February 1998	
13266 Corr. No.1	4 March 2002	See national foreword

ISBN 0 580 20435 9

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National foreword

This British Standard has been prepared by Technical Committee CPL/72 (formerly LEL/96) and is the English language version of EN 60730:1991 *Automatic electric controls for household and similar use — Part 2-2: Particular requirements for thermal motor protectors* and its amendments A11, A1 and A2, and corrigendum March 2001, published by the European Committee for Electrotechnical Standardization (CENELEC). It was derived from IEC 60730-2-2:1990, first edition, including amendment 1:1995 and amendment 2:1997, published by the International Electrotechnical Commission (IEC).

CENELEC corrigendum March 2001 changes the latest date of withdrawal of conflicting national standards in the forewords to amendments A1 and A2.

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 foreword and preface of IEC Publication 60730-2-2 (1990) first edition and the deleted parts of the original IEC text which do not form part of the text of EN 60730-2-2 have been quoted in National appendix NA. Annexes designated “normative” are part of the body of the standard. Annexes designated “informative” are given for information only. National appendices are designated “informative”.

The foreword of EN 60730-2-2 makes reference to the “date of withdrawal”, date, of the relevant national standard. In this case the relevant national standard is BS 3955 which will cease to be applicable to thermal motor protectors within the scope of BS EN 60730-2-2 on 1 January 1996. Certification and marks will not be awarded after this date with respect to BS 3955. However, such certification and marks, already awarded, may continue to apply to production until 1 January 2000. BS 3955 will be progressively amended to delete specific controls at the dates of withdrawal agreed.

This British Standard is to be read in conjunction with BS EN 60730-1:1995 *General requirements*, which it supplements or modifies. The many references to Part 1 should be read as references to BS EN 60730-1, which is the English language version of EN 60730-1 which was derived from IEC Publication 60730-1 (1983) second edition.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN title page, pages 2 to 21 and a back cover.

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Descriptors: Electrical household appliance, control, automatic control, motor, protector, rating, requirement, test

English version

Automatic electrical controls for household and similar use — Part 2-2: Particular requirements for thermal motor protectors

(IEC 60730-2-2:1990 + A1:1995 + A2:1997, modified)
(includes amendments A11:1995 + A1:1997 + A2:1997)

Dispositifs de commande électrique
automatiques à usage domestique et
analogue—

Partie 2-2: Règles particulières pour les
dispositifs thermiques de protection des
moteurs

(CEI 60730-2-2:1990 + A1:1995 + A2:1997,
modifiée)

(inclut les amendements A11:1995 + A1:1997 +
A2:1997)

Automatische elektrische Regel- und
Steuergeräte für den Hausgebrauch und
ähnliche Anwendungen —

Teil 2-2: Besondere Anforderungen für
thermische wirkende
Motorschutzeinrichtungen

(IEC 60730-2-2:1990 + A1:1995 + A2:1997,
modifiziert)

(enthält Änderungen A11:1995 + A1:1997 +
A2:1997)

This European Standard was approved by CENELEC on 1 May 1991. 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

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Ref. No. EN 60730-2-2:1991 + A1:1995 + A2:1997 + E

Foreword

The International Standard IEC 730-2-2:1990, together with the common modifications prepared by the CENELEC Technical Committee TC 72: Automatic controls for household use, was submitted to the CENELEC Unique Acceptance Procedure (UAP) in September 1990.

The text of the draft was approved by CENELEC on 1 May 1991 (confirmed by 68 BT).

The following dates were fixed:

- latest date of publication of an identical national standard (dop) 1993-01-01
- latest date of withdrawal of conflicting standards (dow) 1996-01-01

For products which have complied with the relevant national standard before 1996-01-01 as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2000-01-01.

This document supplements or modifies the corresponding clauses of IEC 730-2-2:1990, so as to convert it into the European Standard EN-60730-2-2.

This Part 2 has 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 and A11:1991. 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 standard 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 appendices are labelled AA, BB, etc. CENELEC annexes are numbered 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.

NOTE In this document, the following print types are used:

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

Foreword to amendment A11

This amendment 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 60730-2-2:1991 on 1995-02-15.

This document modifies the corresponding clause of EN 60730-2-2:1991.

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) 1996-03-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 1996-03-01

Foreword to amendment A1

The text of amendment 1:1995 to the International Standard IEC 730-2-2:1990, prepared by IEC TC 72, Automatic controls for household use, was submitted to the Unique Acceptance Procedure and was approved by CENELEC as amendment A1 to EN 60730-2-2:1991 on 1996-10-01 without any modification.

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) 1997-09-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2002-09-01

For products which have complied with EN 60730-2-2:1991 and its amendment A11:1995 before 2002-09-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2002-09-01.

Foreword to amendment A2

The text of document 72/361/FDIS, future amendment 2 to IEC 60730-2-2:1990, prepared by IEC TC 72, Automatic controls for household use, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A2 to EN 60730-2-2:1991 on 1997-07-01.

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) 1998-04-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2004-04-01

NOTE EN 60730-2-2 originally referred to EN 60730-1:1991 and its amendments A1:1991 and A11:1991. This amendment enables EN 60730-2-2, including its amendments A11:1995 and A1:1997, to be used with EN 60730-1:1995 and its amendments A11:1996, A12:1996 and A1:1997. Consideration may be given to future editions of, or amendments to, EN 60730-1.

Annexes designated “normative” are part of the body of the standard. In this standard, Annex ZA is normative. Annex ZA has been added by CENELEC.

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1 Scope

This clause of Part 1 is replaced by the following:

1.1 This standard applies to the partial evaluation of the thermal motor protectors as defined in **EN 60730-1** for household and similar use including heating, air conditioning and similar applications.

A thermal motor protector is an integrated control which is dependent on its correct mounting and fixing in or on a motor and which can only be fully tested in combination with the relevant motor.

Requirements concerning the testing of the combination of motor and thermal motor protector are given in Appendix AA for information and include requirements taken from other standards.

This part applies to thermal motor protectors using NTC or PTC thermistors, including thermal motor protectors using thermistors, additional requirements for which are contained in Annex J.

NOTE Regarding requirements for thermistors, see IEC 730-1, Annex J.

1.1.1 This standard applies to the inherent safety, to the operating values, operating times and operating sequences where such are associated with equipment safety and to the testing of thermal motor protectors used in or on household or similar equipment.

This standard is also applicable to thermal motor protectors for appliances within the scope of **EN 60335**.

Throughout this standard the word “equipment” means “appliance and equipment”.

Throughout the mandatory text of this standard, the words “not applicable” mean that the test is not applicable to the evaluation of the thermal motor protector submitted separately. However, the test may be applicable to the evaluation of the thermal motor protector in combination with the motor.

Thermal motor protectors 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.

This part does not apply to thermal motor protectors designed exclusively for industrial applications.

1.1.2 This standard does not apply to other means of motor protection.

1.1.3 This standard does not apply to a manual device for opening the circuit.

1.1.4 This standard does not apply to thermal motor protectors for hermetic or semi-hermetic motor compressors.

1.2 This standard applies to thermal motor protectors for use with electric motors with a rated voltage equal to or less than 660 V and a rated output of 11 kW or less.

1.5 Normative references

This subclause of part 1 is applicable except as follows:

IEC 60269-3:1987, *Low-voltage fuses — Part 3: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household and similar applications)*.

2 Definitions

This clause of Part 1 is applicable, except as follows:

2.6 Addition

2.6.101

type 3 action

type 3 action denotes an automatic action for which reliability of the operating characteristics can only be evaluated in terms of measurements made on the protected motor

3 General requirements

This clause of Part 1 is applicable.