

SLOVENSKI STANDARD

SIST EN IEC 60730-2-22:2020

01-maj-2020

Nadomešča:

SIST EN 60730-2-2:2002

SIST EN 60730-2-2:2002/A1:2006

SIST EN 60730-2-2:2002/A11:2005

SIST EN 60730-2-4:2008

Avtomatske električne krmilne naprave - 2-22. del: Posebne zahteve za naprave za toplotno zaščito motorjev

Automatic electrical controls for household and similar use - Part 2-22: Particular requirements for thermal motor protectors

Automatische elektrische Regel- und Steuergeräte für den Hausgebrauch und ähnliche Anwendungen - Teil 2-22: Besondere Anforderungen an thermisch wirkende Motorschutzeinrichtungen

Dispositifs de commande électrique automatiques à usage domestique et analogue - Partie 2-2: Règles particulières pour les dispositifs thermiques de protection des moteurs

Ta slovenski standard je istoveten z: EN IEC 60730-2-22:2020

ICS:

97.120	Avtomatske krmilne naprave za dom	Automatic controls for household use
--------	-----------------------------------	--------------------------------------

SIST EN IEC 60730-2-22:2020

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN IEC 60730-2-22:2020

<https://standards.iteh.ai/catalog/standards/sist/cce8efa8-03a6-4930-a20c-d210a4417618/sist-en-iec-60730-2-22-2020>

EUROPEAN STANDARD

EN IEC 60730-2-22

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2020

ICS 97.120

Supersedes EN 60730-2-2:2002, EN 60730-2-4:2007
and all of their amendments and corrigenda (if any)

English Version

**Automatic electrical controls - Part 2-22: Particular requirements
for thermal motor protectors
(IEC 60730-2-22:2014)**Dispositifs de commande électrique automatiques - Partie
2-22: Exigences particulières pour les protecteurs
thermiques
(IEC 60730-2-22:2014)Automatische elektrische Regel- und Steuergeräte - Teil 2-
22: Besondere Anforderungen an thermisch wirkende
Motorschutzeinrichtungen
(IEC 60730-2-22:2014)

This European Standard was approved by CENELEC on 2019-10-14. 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.

[SIST EN IEC 60730-2-22:2020](https://standards.iteh.ai/catalog/standards/sist/cce8efa8-03a6-4930-a20c-62041a010100/iec-60730-2-22-2014)

[https://standards.iteh.ai/catalog/standards/sist/cce8efa8-03a6-4930-a20c-](https://standards.iteh.ai/catalog/standards/sist/cce8efa8-03a6-4930-a20c-62041a010100/iec-60730-2-22-2014)

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, 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

EN IEC 60730-2-22:2020 (E)**European foreword**

The text of document 72/941/FDIS, future edition 1 of IEC 60730-2-22, prepared by IEC/TC 72 "Automatic electrical controls" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60730-2-22:2020.

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) 2020-08-14
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-02-14

This document supersedes EN 60730-2-4:2007 and EN 60730-2-2:2002 and all of their 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.

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Endorsement notice

SIST EN IEC 60730-2-22:2020

The text of the International Standard IEC 60730-2-22:2014 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 60034-11:2004	NOTE	Harmonized as EN 60034-11:2004 (not modified)
IEC 60335 (series)	NOTE	Harmonized as EN 60335 (series)
IEC 60730 (series)	NOTE	Harmonized as EN IEC 60730 (series)
IEC 60730-2-9:2008	NOTE	Harmonized as EN 60730-2-9:2010 (modified)

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60269-3	-	Low-voltage fuses - Part 3: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household or similar applications) - Examples of standardized systems of fuses A to F	HD 60269-3	-
IEC 60335-2-34	2012	Household and similar electrical appliances - Safety - Part 2-34: Particular requirements for motor-compressors	EN 60335-2-34	2013

<https://standards.iteh.ai/catalog/standards/sist/cce8efa8-03a6-4930-a20c-d210a4417618/sist-en-iec-60730-2-22-2020>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN IEC 60730-2-22:2020

<https://standards.iteh.ai/catalog/standards/sist/cce8efa8-03a6-4930-a20c-d210a4417618/sist-en-iec-60730-2-22-2020>



IEC 60730-2-22

Edition 1.0 2014-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Automatic electrical controls – Part 2-22: Particular requirements for thermal motor protectors

(standards.iteh.ai)

**Dispositifs de commande électrique automatiques –
Partie 2-22: Exigences particulières pour les protecteurs thermiques**

d210a4417618/sist-en-iec-60730-2-22-2020

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

PRICE CODE
CODE PRIX

U

ICS 97.120

ISBN 978-2-8322-1577-7

**Warning! Make sure that you obtained this publication from an authorized distributor.
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.**

CONTENTS

FOREWORD.....	4
1 Scope and normative references	7
2 Definitions	8
3 General requirements	8
4 General notes on tests	8
5 Rating.....	8
6 Classification.....	9
7 Information	10
8 Protection against electric shock	10
9 Provision for protective earthing	11
10 Terminals and terminations.....	11
11 Constructional requirements	11
12 Moisture and dust resistance	11
13 Electric strength and insulation resistance	12
14 Heating.....	12
15 Manufacturing deviation and drift	12
16 Environmental stress	12
17 Endurance	12
18 Mechanical strength	14
19 Threaded parts and connections	15
20 Creepage distances, clearances and distances through solid insulation.....	15
21 Resistance to heat, fire and tracking.....	15
22 Resistance to corrosion	15
23 Electromagnetic compatibility (EMC) requirements – emission.....	16
24 Components	16
25 Normal operation	16
26 Electromagnetic compatibility (EMC) requirements – immunity	16
27 Abnormal operation	16
28 Guidance on the use of electronic disconnection	16
Annexes	17
Annex E (normative) Circuit for measuring leakage current.....	17
Annex AA (informative) Endurance test for thermal motor protectors as components, i.e. not installed on a motor.....	18
Annex BB (informative) Testing of the combination of motor and thermal motor protectors (not applicable to sealed motor-compressors)	20
Annex CC (informative) Additional information on the application of motor protectors in pollution degree 1, 2 and 3.....	27
Bibliography.....	28
Figure 101 – Limited short circuit test scheme	14

Table 1	10
Table 101 – Limited short-circuit capacity (applicable in Canada and the USA).....	13
Table BB.101 – Additional required information and methods of providing information	21
Table BB.201 – Maximum allowable temperatures on running loads	23
Table BB.202 – Maximum continuous running overload current permitted by thermal protector as percentage of nominal full load motor current	23
Table BB.203 – Maximum allowable temperatures for locked rotor conditions	24
Table CC.1	27

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN IEC 60730-2-22:2020](https://standards.iteh.ai/catalog/standards/sist/cce8efa8-03a6-4930-a20c-d210a4417618/sist-en-iec-60730-2-22-2020)

<https://standards.iteh.ai/catalog/standards/sist/cce8efa8-03a6-4930-a20c-d210a4417618/sist-en-iec-60730-2-22-2020>

INTERNATIONAL ELECTROTECHNICAL COMMISSION

AUTOMATIC ELECTRICAL CONTROLS–**Part 2-22: Particular requirements for thermal motor protectors**

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

International Standard IEC 60730-22 has been prepared by IEC technical committee 72: Automatic electrical controls.

The text of this standard is based on the following documents:

FDIS	Report on voting
72/941/FDIS	72/950/RVD

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

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

This Part 2-22 is intended to be used in conjunction with IEC 60730-1. It was established on the basis of the fourth edition (2010) of that standard¹. Consideration may be given to future editions of, or amendments to, IEC 60730-1.

This Part 2-22 supplements or modifies the corresponding clauses in IEC 60730-1 so as to convert that publication into the IEC standard: Safety requirements for automatic electrical thermal motor protectors.

Where this Part 2-22 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 Part 2-22 indicates that the relevant clause or 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 "in some countries" notes regarding differing national practice are contained in the following subclauses:

- 7.2.6 (Canada, USA)
- 12.2 (Canada, Japan, USA)
- 17.101.2.1.2 (Canada, USA)
- 18.1.3.101.2 (Canada, USA)
- BB17.205.1.2 (Canada, USA)

STANDARD PREVIEW
(standards.iteh.ai)

In this publication:

- [SIST EN IEC 60730-2-22:2020](https://standards.iteh.ai/catalog/standards/sist/cce8efa8-03a6-4930-a20c-d210a4417618/sist-en-iec-60730-2-22-2020)
- 1) The following print types are used:
 - Requirements proper: in roman type,
 - *Test specifications: in italic type;*
 - Explanatory matter; 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 of the IEC 60730 series, under the general title *Automatic electrical controls for household and similar use*, can be found on the IEC website.

¹ A fifth edition of IEC 60730-1 was published in 2013.

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

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

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN IEC 60730-2-22:2020](https://standards.iteh.ai/catalog/standards/sist/cce8efa8-03a6-4930-a20c-d210a4417618/sist-en-iec-60730-2-22-2020)

<https://standards.iteh.ai/catalog/standards/sist/cce8efa8-03a6-4930-a20c-d210a4417618/sist-en-iec-60730-2-22-2020>