

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Automatic electrical controls –
Part 2-9: Particular requirements for temperature sensing control**

**Dispositifs de commande électrique automatiques –
Partie 2-9: Exigences particulières pour les dispositifs de commande
thermosensibles**



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

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

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CONTENTS

FOREWORD	4
1 Scope and normative references	7
2 Terms and definitions	8
3 General requirements	10
4 General notes on tests	10
5 Rating	11
6 Classification	11
7 Information	12
8 Protection against electric shock	14
9 Provision for protective earthing	14
10 Terminals and terminations	14
11 Constructional requirements	14
12 Moisture and dust resistance	17
13 Electric strength and insulation resistance	18
14 Heating	18
15 Manufacturing deviation and drift	19
16 Environmental stress	20
17 Endurance	20
18 Mechanical strength	26
19 Threaded parts and connections	28
20 Creepage distances, clearances and distances through solid insulation	28
21 Resistance to heat, fire and tracking	28
22 Resistance to corrosion	28
23 Electromagnetic compatibility (EMC) requirements – Emission	28
24 Components	29
25 Normal operation	29
26 Electromagnetic compatibility (EMC) requirements – Immunity	29
27 Abnormal operation	29
28 Guidance on the use of electronic disconnection	29
Annexes	30
Annex G (normative) Heat and fire resistance tests	30
Annex H (normative) Requirements for electronic controls	31
Annex J (normative) Requirements for thermistor elements and controls using thermistors	38
Annex AA (informative) Maximum manufacturing deviation and drift ^{a, b}	39
Annex BB (informative) Time factor	40
Annex CC (informative) Number of cycles	43
Annex DD (normative) Controls for use in agricultural confinement buildings	44
Annex EE (informative) Guide to the application of temperature sensing controls within the scope of IEC 60730-2-9	47
Bibliography	63

Figure 101 – Impact tool	16
Figure 102 – Aluminium cylinder for temperature change method	26
Figure BB.1 – Determination of time factor in the case of a sudden temperature change	41
Figure BB.2 – Determination of time factor in the case of a linear rise of test-bath temperature	42
Figure EE.1 – Thermostat	55
Figure EE.2 – Self-resetting temperature limiter	56
Figure EE.3 – Non-self-resetting temperature limiter	57
Figure EE.4 – Self-resetting thermal cut-out	58
Figure EE.5 – Manual reset thermal cut-out	58
Figure EE.6 – Single operation device	60
Figure EE.7 – Three-stage control system	61
Table 1 – Required information and methods of providing information	13
Table H.101 – Compliance criteria	33
Table BB.1 – Method to determine and verify time factor values (see H.101)	42
Table EE.1 – Typical examples of the classification of temperature sensing controls in accordance with IEC 60730-2-9	62

INTERNATIONAL ELECTROTECHNICAL COMMISSION

AUTOMATIC ELECTRICAL CONTROLS –**Part 2-9: Particular requirements for temperature sensing controls**

FOREWORD

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International Standard IEC 60730-2-9 has been prepared by technical committee TC 72: Automatic electrical controls.

This bilingual version (2019-10) corresponds to the monolingual English version, published in 2015-10.

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

FDIS	Report on voting
72/990/FDIS	72/998/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.

The French version of this standard has not been voted upon.

This fourth edition cancels and replaces the third edition published in 2008, and its Amendment 1:2011. This edition constitutes a technical revision. This edition includes alignment with the text of 60730-1 fifth edition and the following significant technical changes with respect to the previous edition:

- a) modification of heating-freezing tests in Clause 12;
- b) alignment of the EMC requirements in H.26 to those in other part 2 standards;
- c) addition of requirements in Clause H.27 to cover class B and C control functions of temperature sensing controls;

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

This Part 2-9 is intended to be used in conjunction with IEC 60730-1. It was established on the basis of the fifth edition (2013) of that publication. Consideration may be given to future editions of, or amendments to, IEC 60730-1.

This Part 2-9 supplements or modifies the corresponding clauses in IEC 60730-1 so as to convert that publication into the IEC standard: Particular requirements for temperature sensing controls.

Where this Part 2-9 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 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 practices are contained in the following subclauses:

4.1.101	17.8.101	Annex AA
7.2, Table 1	17.10.101	Clause CC.2
11.4.101	17.16.102	DD.9.2
11.101	17.16.105	EE.3.6
12.101.3	18.102.3	
13.2	23.101	

In this publication:

- 1) The following print types are used:
 - Requirements proper: in roman type;
 - *Test specifications: in italic type;*
 - Notes; 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, published under the title *Automatic electrical controls* can be found on the IEC website.

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.

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AUTOMATIC ELECTRICAL CONTROLS –

Part 2-9: Particular requirements for temperature sensing controls

1 Scope and normative references

This clause of Part 1 is applicable except as follows:

1.1 Scope

Replacement:

This part of IEC 60730 applies to automatic electrical temperature **sensing controls** for use in, on or in association with equipment, including **electrical 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.

NOTE Throughout this standard, the word "equipment" includes "appliance" and "control system".

This standard is applicable to automatic electrical temperature **sensing controls** forming part of a building automation **control system** within the scope of IEC 616484.

This standard also applies to automatic electrical temperature **sensing controls** for equipment that may be used by the public, such as equipment intended to be used in shops, offices, hospitals, farms and commercial and industrial applications.

This standard does not apply to automatic electrical temperature **sensing controls** intended exclusively for industrial process applications, unless explicitly mentioned in the relevant equipment standard.

1.1.1

Replacement:

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 automatic electrical temperature **sensing control** devices used in, or in association with, equipment.

NOTE Examples of such **controls** include **boiler thermostats, fan controls, temperature limiters and thermal cut-outs**.

This standard is also applicable to the functional safety of low complexity safety-related temperature **sensing controls** and **systems**.

1.1.2

Addition:

This standard also applies to the electrical safety of temperature sensing controls with non-electrical outputs such as refrigerant flow and gas **controls**.