

This is a preview of "BS EN 60730-2-6:2016". [Click here to purchase the full version from the ANSI store.](#)

BS EN 60730-2-6:2016



BSI Standards Publication

Automatic electrical controls

Part 2-6: Particular requirements for automatic electrical pressure sensing controls including mechanical requirements

bsi.

...making excellence a habit.™

This is a preview of "BS EN 60730-2-6:2016". [Click here to purchase the full version from the ANSI store.](#)

This British Standard is the UK implementation of EN 60730-2-6:2016. It is identical to IEC 60730-2-6:2015. It supersedes BS EN 60730-2-6:2008 which will be withdrawn on 27 May 2018.

The UK participation in its preparation was entrusted to Technical Committee CPL/72, Electrical control devices for household equipment and appliances.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2016.

Published by BSI Standards Limited 2016

ISBN 978 0 580 86167 3

ICS 97.120

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 March 2016.

Amendments/corrigenda issued since publication

Date	Text affected
-------------	----------------------

This is a preview of "BS EN 60730-2-6:2016". [Click here to purchase the full version from the ANSI store.](#)

EUROPÄISCHE NORM

February 2016

ICS 97.120

Supersedes EN 60730-2-6:2008

English Version

Automatic electrical controls - Part 2-6: Particular requirements
for automatic electrical pressure sensing controls including
mechanical requirements
(IEC 60730-2-6:2015)

Dispositifs de commande électrique automatiques -
Partie 2-6: Exigences particulières pour les dispositifs de
commande électrique automatiques sensibles à la pression
y compris les exigences mécaniques
(IEC 60730-2-6:2015)

Automatische elektrische Regel- und Steuergeräte -
Teil 2-6: Besondere Anforderungen an automatische
elektrische Druckregel- und Steuergeräte einschließlich
mechanischer Anforderungen
(IEC 60730-2-6:2015)

This European Standard was approved by CENELEC on 2015-05-27. 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.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, 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: Avenue Marnix 17, B-1000 Brussels

This is a preview of "BS EN 60730-2-6:2016". [Click here to purchase the full version from the ANSI store.](#)

European foreword

The text of document 72/980/FDIS, future edition 3 of IEC 60730-2-6, prepared by IEC/TC 72 "Automatic electrical controls" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60730-2-6:2016.

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) 2016-08-26
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-02-26

This document supersedes EN 60730-2-6:2008.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive 2004/108/EC, see informative Annex ZZ, which is an integral part of this document.

Endorsement notice

The text of the International Standard IEC 60730-2-6:2015 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated :

IEC 60079 NOTE Harmonized in EN 60079 series (modified).

This is a preview of "BS EN 60730-2-6:2016". [Click here to purchase the full version from the ANSI store.](#)

(informative)

Coverage of Essential Requirements of EU Directives

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and within its scope the standard covers all relevant essential requirements as given in Article 1 of Annex I of the EU Directive EMC (2004/108/EC).

Compliance with this standard provides one means of conformity with the specified essential requirements of the Directive concerned.

WARNING: Other requirements and other EU Directives may be applicable to the products falling within the scope of this standard.

This is a preview of "BS EN 60730-2-6:2016". [Click here to purchase the full version from the ANSI store.](#)

CONTENTS

FOREWORD	4
1 Scope and normative references	7
2 Terms and definitions	8
3 General requirements	9
4 General notes on tests	10
5 Rating.....	10
6 Classification	10
7 Information	11
8 Protection against electric shock	11
9 Provision for protective earthing	11
10 Terminals and terminations.....	11
11 Constructional requirements	12
12 Moisture and dust resistance	14
13 Electric strength and insulation resistance	14
14 Heating.....	14
15 Manufacturing deviation and drift.....	14
16 Environmental stress	15
17 Endurance	15
18 Mechanical strength	16
19 Threaded parts and connections.....	17
20 Creepage distances, clearances and distances through solid insulation.....	17
21 Resistance to heat, fire and tracking.....	17
22 Resistance to corrosion	18
23 Electromagnetic compatibility (EMC) requirements – Emission	18
24 Components	18
25 Normal operation	18
26 Electromagnetic compatibility (EMC) requirements – Immunity	18
27 Abnormal operation	18
28 Guidance on the use of electronic disconnection	18
Annexes	19
Annex H (normative) Requirements for electronic controls	20
Annex AA (normative) Number of cycles	27
AA.1 Number of cycles for independently mounted controls.....	27
AA.2 Cycling rate for independently mounted controls	27
Annex BB (informative) Stainless steel for bellows, bourdon tubes or similar elements	28
Annex CC (informative) Deviation and drift requirements for pressure operating controls.....	31
Bibliography.....	32

This is a preview of "BS EN 60730-2-6:2016". [Click here to purchase the full version from the ANSI store.](#)

Table 1 (7.2 of edition 3) – Required information and methods of providing information	11
Table H.101 – Compliance criteria	22
Table BB.1 – Stainless steel for bellows, bourdon tubes or similar elements (<i>1 of 3</i>).....	28

This is a preview of "BS EN 60730-2-6:2016". [Click here to purchase the full version from the ANSI store.](#)

INTERNATIONAL ELECTROTECHNICAL COMMISSION

AUTOMATIC ELECTRICAL CONTROLS –

Part 2-6: Particular requirements for automatic electrical pressure sensing controls including mechanical requirements

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 60730-2-6 has been prepared IEC technical committee 72: Automatic electrical controls.

This third edition cancels and replaces the second edition published in 2007. This edition constitutes a technical revision. This edition includes the following significant technical changes with respect to the previous edition:

- a) aligns the text with IEC 60730-1, Edition 5;
- b) modifies requirements for Class B control function (H.27.1.2.2);
- c) modifies requirements for Class C control function (H.27.1.2.3);
- d) modifies requirements for faults during lock-out or safety- shut-down.

This is a preview of "BS EN 60730-2-6:2016". [Click here to purchase the full version from the ANSI store.](#)

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

FDIS	Report on voting
72/980/FDIS	72/992/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 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 supplements or modifies the corresponding clauses in IEC 60730-1 so as to convert that publication into the IEC standard: Particular requirements for automatic electrical pressure sensing controls including mechanical requirements.

Where this part 2 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:

10.1.4

15.1.101

18.101

Annex CC

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.

This is a preview of "BS EN 60730-2-6:2016". [Click here to purchase the full version from the ANSI store.](#)

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.

A bilingual version of this publication may be issued at a later date.

AUTOMATIC ELECTRICAL CONTROLS –

Part 2-6: Particular requirements for automatic electrical pressure sensing controls including mechanical requirements

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 pressure **sensing controls** with a minimum gauge pressure rating of –60 kPa and a maximum gauge pressure rating of 4,2 MPa, for use in, on or in association with, equipment. 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 “appliances” and “control system”.

This standard is also applicable to individual pressure **sensing controls** utilized as part of a **control system** or pressure **sensing controls** which are mechanically integral with multi-functional controls having non-electrical outputs.

Automatic electrical pressure **sensing controls** for equipment 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 standard.

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

1.1.1 *Replacement:*

This standard applies to inherent safety, **operating values**, **operating sequences** where such are associated with equipment protection, and to the testing of automatic electrical pressure **sensing controls** used in, on or in association with equipment.

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

This standard is also applicable to pressure **sensing controls** for appliances within the scope of IEC 60335-1.

See also Annex J.

1.1.2 *Addition:*

This standard applies to automatic **electrical controls**, mechanically or electrically operated, responsive to or controlling a pressure or vacuum.

1.1.3 Not applicable.