

Automatic electrical controls for household and similar use —

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

ICS 97.120

National foreword

This British Standard is the UK implementation of EN 60730-2-6:2008. It was derived by CENELEC from IEC 60730-2-6:2007. It supersedes BS EN 60730-2-6:1995, which will be withdrawn on 1 July 2011.

The CENELEC common modifications have been implemented at the appropriate places in the text and are indicated by tags (e.g. [C] <C>).

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.

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

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Amendments/corrigenda issued since publication

Date	Comments

**Automatic electrical controls for household and similar use -
Part 2-6: Particular requirements for automatic electrical pressure
sensing controls including mechanical requirements**
(IEC 60730-2-6:2007, modified)

Dispositifs de commande électrique
automatiques à usage domestique
et analogue -
Partie 2-6: Règles particulières pour
les dispositifs de commande électrique
automatiques sensibles à la pression
y compris les exigences mécaniques
(CEI 60730-2-6:2007, modifiée)

Automatische elektrische Regel- und
Steuergeräte für den Hausgebrauch und
ähnliche Anwendungen -
Teil 2-6: Besondere Anforderungen an
automatische elektrische Druckregel- und
Steuergeräte einschließlich mechanischer
Anforderungen
(IEC 60730-2-6:2007, modifiziert)

This European Standard was approved by CENELEC on 2008-07-01. 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.

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, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the 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

Foreword

The text of the International Standard IEC 60730-2-6:2007, prepared by IEC TC 72, Automatic controls for household use, together with the common modifications prepared by the Technical Committee CENELEC TC 72, Automatic controls for household use, was submitted to the CENELEC formal vote and was approved by CENELEC as EN 60730-2-6 on 2008-07-01.

This European Standard supersedes EN 60730-2-6:1995 (+ corr. March 2001) + A1:1997 (+ corr. March 2001) + A2:1998 (+ corr. March 2001).

It incorporates amended requirements for electronic controls in Annex H.

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) 2009-07-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2011-07-01

This Part 2-6 is to be used in conjunction with EN 60730-1:2000 + A1:2004, Automatic electrical controls for household and similar use – Part 1: General requirements, and any subsequent amendments.

This Part 2-6 supplements or modifies the corresponding clauses in EN 60730-1 so as to convert that publication into the European Standard: Particular requirements for automatic electrical pressure sensing controls including mechanical requirements.

Where this Part 2-6 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 2-6 indicates that the relevant clause or subclause applies.

In this publication, the following print types are used:

- Requirements proper: in roman type.
- *Test specifications: in italic type.*
- Explanatory matter: in smaller roman type.

Subclauses, notes, tables or figures which are additional to those in Part 1 are numbered starting from 101.

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and covers essential requirements of EC Directive EMC (2004/108/EC). See Annex ZZ.

Annex ZZ has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60730-2-6:2007 was approved by CENELEC as a European Standard with agreed common modifications.

AUTOMATIC ELECTRICAL CONTROLS FOR HOUSEHOLD AND SIMILAR USE –

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 *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 for household and similar use that may use electricity, gas, oil, solid fuel, solar thermal energy, etc. or a combination thereof, including heating, air-conditioning and similar applications.

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, household and similar equipment.

Throughout this standard, the word "equipment" means "appliance and equipment".

This standard does not apply to pressure sensing controls intended exclusively for industrial applications.

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 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 standard.

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

See also Annex J.

1.1.2 *Replacement:*

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

1.1.3 Not applicable.

1.1.4 *Replacement:*

This standard applies to manual controls when such are electrically and/or mechanically integral with pressure sensing controls.

Requirements for manual switches not forming part of an automatic control are contained in IEC 61058-1.

Addition:

1.1.101 This standard contains requirements for electrical features of pressure sensing controls and requirements for mechanical features that affect their intended operation.

NOTE Subclause 18.101, as it pertains to gas and/or oil controls, is under consideration pending review or revision by ISO/TC 109 and ISO/TC 161.

1.1.102 In general, these pressure sensing controls are integrated or incorporated with the equipment or are intended to be integrated in, or on the equipment. This standard also covers these controls when they are independently mounted. In-line cord controls are not covered by this standard.

1.4 *Replacement:*

This standard applies also to pressure sensing controls incorporating electronic devices, requirements for which are contained in Annex H.

This standard applies also to pressure sensing controls using NTC or PTC thermistors, requirements for which are contained in Annex J.

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 the following explanatory note:*

See 2.2.102.

2.2.20 *Add the following explanatory note:*

See 2.2.103.

Additional definitions:

2.2.101

pressure limiter

pressure sensing control which is intended to keep a pressure below or above a predetermined value during normal operating conditions and which may have provision for setting by the user

A pressure limiter may be of the automatic or of the manual reset type. It does not make the reverse operation during the normal duty cycle of the equipment.

2.2.102

pressure operating control

pressure sensing control set at a high or low pressure, or both, between which limits the equipment is normally intended to operate

2.2.103

pressure cut-out

pressure sensing control intended to keep a pressure below or above one particular value during abnormal operating conditions of the equipment and which has no provisions for setting by the user

A pressure cut-out may be of the automatic or of the manual reset type.

Normally a pressure cut-out will provide a Type 2 action.

A pressure cut-out may have an adjustable stop intended to be set by the control manufacturer, the equipment manufacturer or the installer.

2.3 Definitions relating to the function of controls

Additional definitions:

2.3.101

pressure medium

the medium used to transmit the pressure to the pressure sensing element

Pressure medium as used in this standard refers to either gases or liquids.

2.3.102

differential pressure

the difference in a pressure between any two points in a system, between two systems or between a system and a reference pressure such as atmospheric pressure

An example is the difference in static pressure between the upstream side of an orifice and the downstream side.

2.8 Definitions relating to component parts of controls

Additional definitions:

2.8.101

vent limiting means

a means which limits the flow of air from or to the atmospheric side of the diaphragm chamber

2.8.102

vent

that opening from the atmospheric side of a diaphragm to the atmosphere through which air is discharged or drawn in when the control is functioning

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 Replacement:

The rates of pressure change declared in 7.2 and used in Clause 17 (i.e. $\alpha_1, \beta_1, \alpha_2, \beta_2$) shall have test tolerances as declared by the manufacturer.

4.3.1 Additional subclause:

4.3.1.101 The values in Annex AA apply for the testing of independently mounted pressure sensing controls in Clause 17. Values for integrated and incorporated controls are specified in the appropriate equipment standard.

5 Rating

This clause of Part 1 is applicable.

6 Classification

This clause of Part 1 is applicable except as follows:

6.3.9 Additional subclause:

6.3.9.101 – pressure sensing;

6.4.3 Additional subclause:

6.4.3.101 For sensing actions, no increase in the operating value as a result of any leakage from the sensing element or from parts connecting the sensing element to the switch head (Type 2.N).

6.5.2 Modification:

Instead of the second paragraph of the explanatory matter the following applies.

Preferred degrees of protection provided by enclosures are: IP20, IP30, IP40, IP54 and IP65.

Values differing from these values are allowed.

6.8.3 Replacement:

For an independently mounted control or a control integrated or incorporated in an assembly utilizing a non-electrical energy source:

7 Information

This clause of Part 1 is applicable except as follows:

Table 7.2

Information		Clause or subclause	Method
<i>Modification:</i>			
<i>Replace the following items by:</i>			
6	Purpose of control	2.2.101 to 2.2.103 4.3.5 6.3	D
26	Number of cycles of actuation (M) for each manual action	6.10, Annex AA	X
27	Number of automatic cycles (A) for each automatic action	6.11, Annex AA	X
34	Not applicable		
44	Not applicable		
48	Operating pressure (or pressures)	2.3.11, 15, 18	D
<i>Additional items:</i>			
101	Pressure medium	2.3.101	X
102	Operating differential	2.3.26	D
103	Maximum working pressure	2.3.29	D
<i>Addition to Note 4:</i> For pressure sensing controls, limits of activating quantity are specified either in the applicable household appliance part 2, by the appliance manufacturer or as declared by the pressure sensing control manufacturer (see 17.7 and 17.8).			

8 Protection against electric shock

This clause of Part 1 is applicable.

9 Provision for protective earthing

This clause of Part 1 is applicable.

10 Terminals and terminations

This clause of Part 1 is applicable except as follows:

10.1 Terminals and terminations for external copper conductors

☐ Text deleted ☐