

INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 2 AMENDEMENT 2

**Automatic electrical controls for household and similar use –
Part 2-17: Particular requirements for electrically operated gas valves, including
mechanical requirements**

**Dispositifs de commande électrique automatiques à usage domestique et
analogue –**

**Partie 2-17: Règles particulières pour les électrovannes de gaz, y compris les
prescriptions mécaniques**



THIS PUBLICATION IS COPYRIGHT PROTECTED

Copyright © 2007 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester.

If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

Droits de reproduction réservés. Sauf indication contraire, aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de la CEI ou du Comité national de la CEI du pays du demandeur.

Si vous avez des questions sur le copyright de la CEI ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de la CEI de votre pays de résidence.

IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland
Email: inmail@iec.ch
Web: www.iec.ch

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigenda or an amendment might have been published.

- Catalogue of IEC publications: www.iec.ch/searchpub

The IEC on-line Catalogue enables you to search by a variety of criteria (reference number, text, technical committee,...). It also gives information on projects, withdrawn and replaced publications.

- IEC Just Published: www.iec.ch/online_news/justpub

Stay up to date on all new IEC publications. Just Published details twice a month all new publications released. Available on-line and also by email.

- Electropedia: www.electropedia.org

The world's leading online dictionary of electronic and electrical terms containing more than 20 000 terms and definitions in English and French, with equivalent terms in additional languages. Also known as the International Electrotechnical Vocabulary online.

- Customer Service Centre: www.iec.ch/webstore/custserv

If you wish to give us your feedback on this publication or need further assistance, please visit the Customer Service Centre FAQ or contact us:

Email: csc@iec.ch

Tel.: +41 22 919 02 11

Fax: +41 22 919 03 00

A propos de la CEI

La Commission Electrotechnique Internationale (CEI) est la première organisation mondiale qui élabore et publie des normes internationales pour tout ce qui a trait à l'électricité, à l'électronique et aux technologies apparentées.

A propos des publications CEI

Le contenu technique des publications de la CEI est constamment revu. Veuillez vous assurer que vous possédez l'édition la plus récente, un corrigendum ou amendement peut avoir été publié.

- Catalogue des publications de la CEI: www.iec.ch/searchpub/cur_fut-f.htm

Le Catalogue en-ligne de la CEI vous permet d'effectuer des recherches en utilisant différents critères (numéro de référence, texte, comité d'études,...). Il donne aussi des informations sur les projets et les publications retirées ou remplacées.

- Just Published CEI: www.iec.ch/online_news/justpub

Restez informé sur les nouvelles publications de la CEI. Just Published détaille deux fois par mois les nouvelles publications parues. Disponible en-ligne et aussi par email.

- Electropedia: www.electropedia.org

Le premier dictionnaire en ligne au monde de termes électroniques et électriques. Il contient plus de 20 000 termes et définitions en anglais et en français, ainsi que les termes équivalents dans les langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International en ligne.

- Service Clients: www.iec.ch/webstore/custserv/custserv_entry-f.htm

Si vous désirez nous donner des commentaires sur cette publication ou si vous avez des questions, visitez le FAQ du Service clients ou contactez-nous:

Email: csc@iec.ch

Tél.: +41 22 919 02 11

Fax: +41 22 919 03 00

INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 2
AMENDEMENT 2

**Automatic electrical controls for household and similar use –
Part 2-17: Particular requirements for electrically operated gas valves, including
mechanical requirements**

**Dispositifs de commande électrique automatiques à usage domestique et
analogue –
Partie 2-17: Règles particulières pour les électrovannes de gaz, y compris les
prescriptions mécaniques**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

PRICE CODE
CODE PRIX

K

FOREWORD

This amendment has been prepared by IEC technical committee 72: Automatic controls for household use.

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

FDIS	Report on voting
72/744/FDIS	72/749/RVD

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

This amendment is based on IEC 60730-2-17, Edition 1 (1997), and its amendment 1 (2000).

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the maintenance result 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.

Page 3

CONTENTS

Replace the existing titles of Clauses 20, 23, and 26 by their respective new titles as follows:

- 20 Creepage distances, clearances and distances through solid insulation
- 23 Electromagnetic compatibility (EMC) requirements – emission
- 26 Electromagnetic compatibility (EMC) requirements – immunity

Replace the existing title of Table 27.2.101 by the new following title:

Maximum winding temperature (for test of blocked output conditions and valves declared under table 7.2, item 113)

Page 5

FOREWORD

Replace the second paragraph after the table indicating the Report on voting with the following new paragraph:

This Part 2-17 is intended to be used in conjunction with IEC 60730-1. It was established on the basis of the third edition of that standard (1999) and its amendment 1 (2003). Consideration may be given to future editions of, or amendments to IEC 60730-1.

Page 7

Replace the “in some countries” note with the following note:

The “in some countries” notes regarding differing national practice are contained in the following subclauses:

- 6.11.101
- 6.103
- 6.104
- Table 7.2, requirements 117 and 118
- Table 7.2, notes 103 and 104
- 11.102
- 11.103
- 11.104.3
- 11.104.5
- 11.104.11
- 11.104.14
- 11.105.1
- 11.105.2
- 11.105.3
- 11.105.6
- 11.106.1
- 11.115
- 17.16.101
- 18.102
- 18.103
- 27.2.101.1

Page 9

1.1.1

Replace the first paragraph by the following:

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 electrically operated gas valves used in, or in association with, household or similar equipment, but also extended to industrial purposes when no dedicated product standard exists, such as that for central heating, air conditioning, process heating, etc.

Page 11

1.5 Normative references

Delete the following references:

IEC 60335-1:1991, *Safety of household and similar electrical appliances – Part 1: General requirements*

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*

IEC 61058-1:1990, *Switches for appliances – Part 1: General requirements*

Modify the following references:

IEC 60730-2-14:2001, *Automatic electrical controls for household and similar use – Part 2: Particular requirements for electric actuators*

ISO 228-1:2000, *Pipe threads where pressure-tight joints are not made on the threads – Part 1: Dimensions, tolerances and designation*

Page 13

2 Definitions

2.3 Definitions relating to the function of controls

Add, after 2.3.103, the following new definitions:

2.3.103.1

semi-automatic normally open valve with latch

a valve which is closed when energized. When power is removed the valve will not open automatically and must be manually reset

2.3.103.2

normally open valve, automatic

a valve which is open when not electrically energized and when power is removed the valve will open automatically

Page 17

6 Classification

6.3.12.103 – normally open valve

Modify the existing subclause as follows:

6.3.12.103 – normally open valve;

6.3.12.103.1 – normally open valve, automatic;

6.3.12.103.2 – normally open valve, semi-automatic with latch;

Page 19

6.11.101

Replace, in the first paragraph, “In Europe” with “In the countries members of CEN/CENELEC”.

Page 21

6.103 According to nominal pipe size of end connections:

Replace the existing note with the following new note:

Nominal size designation corresponds to the nominal size flanges according to ISO 7005-1 or ISO 7005-2.

After subclause 6.103, add the following new additional subclause:

6.104 According to the sealing force:

In the countries members of CEN, valves can be further classified as Class A, B, C, D, E and J valves. See EN 161.

See also 11.106.1.

Page 23

Table 7.2

Add, on page 25, the following item:

Information	Clause or subclause	Method
118 In the countries members of CEN, class of valve A, B, C, D, E or J	6.104, 11.106.1	C

Page 25

Table 7.2

Replace, in notes 103 and 104, “In Europe” with “In the countries members of CENELEC”.

Page 27

11.102

Replace, in the note on page 29, “In Europe” with “In the countries members of CENELEC”.

Page 29

11.103

Replace the second paragraph by the following:

Compliance is checked by connecting the normally closed (normally open) valve to the supply at rated voltage, at room temperature and when mounted in the most unfavourable position declared in Table 7.2, requirement 31, and with or without air at the maximum working pressure connected to the valve inlet, whichever is more unfavourable. The voltage is then slowly reduced to 15 % of the minimum rated voltage. Before this value is reached, the valve shall have closed (opened) automatically.

Add the following note at the end of the subclause:

The value of 15% is based on the usual normally closed valves where remanence, friction and possible rest currents due to control and signalling circuits can influence the closing force.

11.104.1

Replace “normally closed valves” with “normally closed, normally open and safety shutoff valves of the automatic type”.

11.104.3

Replace, in the note, “In Europe” with “In the countries members of CENELEC”.

11.104.5

Replace, in the note, “In Europe” with “In the countries members of CENELEC”.

Page 31

11.104.7

Add, in the second paragraph, after “closing forces” the words “or opening forces in the case of normally open valves”.

11.104.9

Add, after “closing” the words “or opening in the case of normally open valves”.

Page 33

11.105.1

Replace, in the second paragraph, “ISO 274” with “the applicable dimensioning standard for copper tubing of circular section”.

11.105.3

Replace, in the first paragraph, “ISO 274, table 7.2” with “the applicable dimensioning standard for copper tubing of circular section”.

11.106.1

Replace item d), on page 35, by the following:

- d) if also declared as a semi-automatic valve, permanent blocking of the manual actuating means shall be discouraged by suitable means; and

Suitable means may be: strong actuating force, button or handle protected by a cover, recessed button with close tolerance with regard to enclosure.

Replace item e), by the following:

- e) shall not be equipped with a means for holding it in the open position except for the manual reset mechanism, if applicable; and

Replace, in the note, “In Europe” with “In the countries members of CENELEC”.

Page 37

Add, after 11.115, the following new subclause:

11.116 Normally open valves shall open and close independently of the energy supplied by gas flow through the valve.

Compliance is checked by the test of 27.3.

Page 41

17.16.101 Electrically operated valves

Replace, on page 43, in the additional note, “In Europe” with “In the countries members of CENELEC”.

Page 45

20 Creepage distances, clearances and distances through insulation

Replace the existing title with the following new title:

20 Creepage distances, clearances and distances through solid insulation

Page 47

23 Radio interference suppression

Replace the existing title with the following new title:

Condition	Temperature of insulation by class ^d							
	A	E	B	F	H	200	220	250
If impedance protected:	150	165	175	190	210	230	250	280
If protected by protective devices:								
During first hour								
– maximum value ^{a b}	200	215	225	240	260	280	300	330
After first hour								
– maximum value ^a	175	190	200	215	235	255	275	305
– arithmetic average ^{a c}	150	165	175	190	210	230	250	280

^a Applicable to actuators with thermal motor protection.

^b Applicable to actuators protected by incorporated fuses or thermal cut-outs.

^c Applicable to actuators with no protection.

^d These classifications correspond to the thermal classes specified in IEC 60085.