

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



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**Automatic electrical controls –  
Part 2-14: Particular requirements for electric actuators**

**Dispositifs de commande électrique automatiques –  
Partie 2-14: Exigences particulières pour les actionneurs électriques**



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Edition 2.2 2021-10  
CONSOLIDATED VERSION

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# VERSION REDLINE



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## CONTENTS

FOREWORD .....	3
1 Scope and normative references .....	6
2 Terms and definitions .....	8
3 General requirements .....	9
4 General notes on tests .....	9
5 Rating.....	9
6 Classification .....	9
7 Information .....	10
8 Protection against electric shock .....	11
9 Provision for protective earthing .....	11
10 Terminals and terminations.....	11
11 Constructional requirements .....	11
12 Moisture and dust resistance .....	12
13 Electric strength and insulation resistance .....	12
14 Heating.....	12
15 Manufacturing deviation and drift.....	13
16 Environmental stress .....	13
17 Endurance .....	13
18 Mechanical strength .....	14
19 Threaded parts and connections.....	14
20 Creepage distances, clearances and distances through solid insulation.....	14
21 Resistance to heat, fire and tracking.....	14
22 Resistance to corrosion .....	14
23 Electromagnetic compatibility (EMC) requirements – Emission .....	14
24 Components .....	14
25 Normal operation .....	14
26 Electromagnetic compatibility (EMC) requirements – Immunity .....	14
27 Abnormal operation .....	14
28 Guidance on the use of electronic disconnection .....	17
Annex H (normative) Requirements for electronic controls .....	18
Annex AA (normative) Regional differences .....	23
Annex BB (informative) Specific regional requirements in Japan .....	24
Bibliography.....	25
Table 1 – (7.2 of edition 3) – Required information and methods of providing information.....	10

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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### AUTOMATIC ELECTRICAL CONTROLS –

#### Part 2-14: Particular requirements for electric actuators

#### 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.
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**IEC 60730-2-14 edition 2.2 contains the second edition (2017-08) [documents 72/1079/FDIS and 72/1100/RVD], its amendment 1 (2019-03) [documents 72/1168/FDIS and 72/1175/RVD] and its amendment 2 (2021-10) [documents 72/1284/FDIS and 72/1286/RVD].**

**In this Redline version, a vertical line in the margin shows where the technical content is modified by amendments 1 and 2. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.**

International Standard IEC 60730-2-14 has been prepared by IEC technical committee 72: Automatic electrical controls.

This second edition constitutes a technical revision. This edition includes the following significant technical changes with respect to the previous edition:

- adapting it to the 5<sup>th</sup> Ed of IEC 60730-1,
- addition of checking electric actuators with action 1.AB or 2AB, and
- modification of tests under abnormal condition.

This part 2-14 is intended to be used in conjunction with IEC 60730-1. It was established on the basis of the fifth edition of that standard (2013) including its amendment 1 (2015) and amendment 2 (2021). Consideration may be given to future editions of, or amendments to, IEC 60730-1.

This part 2-14 supplements or modifies the corresponding clauses in IEC 60730-1, so as to convert that publication into the IEC standard: Particular requirements for electric actuators.

Where this part 2-14 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 part 2-14 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:~~

- ~~• Table 1,~~
- ~~• 27.2.3.1.~~

The reader's attention is drawn to the fact that Annex AA and Annex BB list all of the "in-some-country" clauses on differing practices of a less permanent nature relating to the subject of this document.

In this publication:

- 1) The following print types are used:
  - requirements proper: in roman type;
  - *test specifications: in italic type;*
  - explanatory matter: in smaller roman type.
  - Defined terms: **bold type.**
- 2) Subclauses, notes or items which are additional to those in Part 1 are numbered starting from 101, additional annexes are lettered AA, BB, etc.

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

The committee has decided that the contents of the base publication and its amendment 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 2-14: Particular requirements for electric actuators

#### 1 Scope and normative references

This clause of Part 1 is applicable except as follows:

##### 1.1 Replacement:

This part 2-14 applies to **electric actuators** for use in, on, or in association with equipment for household and similar use. The equipment may use electricity, gas, oil, solid fuel, solar thermal energy, etc., or a combination thereof.

NOTE Throughout this ~~standard~~ document the word "equipment" means "appliance and equipment".

EXAMPLE 1 **Electric actuators** for appliances within the scope of IEC 60335.

This ~~International Standard~~ document is applicable to ~~controls~~ **electric actuators** for building automation within the scope of ISO 16484.

This part 2-14 also applies to automatic **electrical 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.

EXAMPLE 2 **Controls** for commercial catering, heating and air-conditioning equipment.

This part 2-14 is also applicable to individual **electric actuators** utilized as part of a **control system** or **controls**, which are mechanically integral with **multifunctional controls** having non-electrical outputs.

EXAMPLE 3 Independently mounted water valves, **controls** in smart grid **systems** and **controls** for building automation systems within the scope of ISO 16484-2.

This part 2-14 does not apply to automatic **electric actuators** intended exclusively for industrial process applications unless explicitly mentioned in the relevant part 2 or the equipment standard.

This part 2-14 applies to **electric actuators** powered by primary or secondary batteries, requirements for which are contained within the standard, including Annex V.

##### 1.1.1 Replacement:

This part 2-14 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 **electric actuators** used in or in association with equipment.

NOTE Requirements for specific **operating values**, **operating times** and **operating sequences** ~~may~~ can be given in the standards for appliances and equipment.

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

This part 2-14 does not apply to **electric actuators** which are mechanically integrated with valves covered by a separate part 2, e.g. IEC 60730-2-8.