



SLOVENSKI STANDARD
oSIST prEN IEC 60730-2-14:2024
01-maj-2024

Avtomatske električne krmilne naprave - 2-14. del: Posebne zahteve za električna prožila

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

Automatische elektrische Regel- und Steuergeräte für den Hausgebrauch und ähnliche Anwendungen - Teil 2-14: Besondere Anforderungen an elektrische Stellantriebe

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

Ta slovenski standard je istoveten z: prEN IEC 60730-2-14:2024

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29.120.01	Električna dodatna oprema na splošno	Electrical accessories in general
97.120	Avtomatske krmilne naprave za dom	Automatic controls for household use

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72/1400/CDV

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SECRETARIAT: United States of America	SECRETARY: Ms Grace Roh
OF INTEREST TO THE FOLLOWING COMMITTEES:	PROPOSED HORIZONTAL STANDARD: <input type="checkbox"/> Other TC/SCs are requested to indicate their interest, if any, in this CDV to the secretary.
FUNCTIONS CONCERNED: <input checked="" type="checkbox"/> EMC <input type="checkbox"/> ENVIRONMENT <input type="checkbox"/> QUALITY ASSURANCE <input checked="" type="checkbox"/> SAFETY	
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TITLE:

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

PROPOSED STABILITY DATE: 2028

NOTE FROM TC/SC OFFICERS:

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

AUTOMATIC ELECTRICAL CONTROLS –

Part 2-14: Particular requirements for electric actuators

FOREWORD

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IEC 60730-2-14 has been prepared by IEC technical committee 72: automatic electrical controls. It is an International Standard.

This third edition of IEC 60730-2-14 cancels and replaces the second edition IEC 60730-2-14:2017, Amendment 1:2019 and Amendment 2:2021. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

adoption to IEC 60730-1:2022 with all its significant changes to IEC 60730-1:2013, Amendment 1:2015 and Amendment 2:2020.

108 The text of this International Standard is based on the following documents:

Draft	Report on voting
XX/XX/FDIS	XX/XX/RVD

109

110 Full information on the voting for its approval can be found in the report on voting indicated in
111 the above table.

112 The language used for the development of this International Standard is English.

113 This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in
114 accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available
115 at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are
116 described in greater detail at www.iec.ch/publications.

117 A list of all parts of the IEC 60730 series, under the general title: automatic electrical controls,
118 can be found on the IEC website.

119 This part 2-14 is intended to be used in conjunction with IEC 60730-1:2022. Consideration may
120 be given to future editions of, or amendments to, IEC 60730-1.

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

123 Where this part 2-14 states "addition", "modification" or "replacement", the relevant require-
124 ment, test specification or explanatory matter in part 1 should be adapted accordingly.

125 Where no change is necessary part 2-14 indicates that the relevant clause or subclause applies.

126 In the development of a fully international standard it has been necessary to take into
127 consideration the differing requirements resulting from practical experience in various parts of
128 the world and to recognize the variation in national electrical systems and wiring rules.

129 The reader's attention is drawn to the fact that Annex R to Annex T list all of the "in-some-
130 country" clauses on differing practices of a less permanent nature relating to the subject of this
131 document.

132 In this publication:

133 1) The following print types are used:

- 134 – requirements proper: in roman type;
- 135 – *test specifications: in italic type*;
- 136 – explanatory matter: in smaller roman type.
- 137 – Defined terms: **bold type**.

138 2) Subclauses, notes or items which are additional to those in Part 1 are numbered starting
139 from 101, additional annexes are lettered AA, BB, etc.

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143 The committee has decided that the contents of this document will remain unchanged until the
144 stability date indicated on the IEC website under webstore.iec.ch in the data related to the
145 specific document. At this date, the document will be

- 146 • reconfirmed,
- 147 • withdrawn,
- 148 • replaced by a revised edition, or
- 149 • amended.

150

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

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AUTOMATIC ELECTRICAL CONTROLS –

Part 2-14: Particular requirements for electric actuators

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159 **1 Scope**

160 *Replacement:*

161 This document applies to automatic **electric actuators**

- 162 • for use in, on, or in association with equipment for household appliance and similar use;

163 NOTE 1 Throughout this document, the word "equipment" means "appliance and equipment" and "control" means
164 "electric actuator".

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

- 166 • for building automation within the scope of ISO 16484 series and IEC 63044 series
167 (HBES/BACS).

168 EXAMPLE 2 Independently mounted **electric actuators**, controls in smart grid systems and controls for building
169 automation systems within the scope of ISO 16484-2.

- 170 • for equipment that is used by the public, such as equipment intended to be used in shops,
171 offices, hospitals, farms and commercial and industrial applications.

172 EXAMPLE 3 **Electric actuators** for commercial catering, heating, and air-conditioning equipment.

- 173 • that are **smart enabled electric actuators**.

174 EXAMPLE 4 Smart grid control, remote interfaces/control of energy-consuming equipment including computer or
175 smart phone.

- 176 • that are AC or DC powered **electric actuators** with a rated voltage not exceeding 690 V AC
177 or 600 V DC.

- 178 • used in, on, or in association with equipment that use electricity, gas, oil, solid fuel, solar
179 thermal energy, etc., or a combination thereof.

- 180 • utilized as part of a **control system** or **controls** which are mechanically integral with
181 **multifunctional controls** having non-electrical outputs.

- 182 • using NTC or **PTC thermistors** and to discrete **thermistors**, requirements for which are
183 contained in Annex J.

- 184 • that are mechanically or electrically operated, responsive to or controlling such
185 characteristics as temperature, pressure, passage of time, humidity, light, electrostatic
186 effects, flow, or liquid level, current, voltage, acceleration, or combinations thereof.

- 187 • as well as manual controls when such are electrically and/or mechanically integral with
188 automatic controls.

189 NOTE 2 Requirements for manually actuated mechanical switches not forming part of an automatic control are
190 contained in IEC 61058-1-1.

191 This document applies to

- 192 – the inherent safety of automatic **electric actuators**, and
- 193 – functional safety of automatic **electric actuators** and safety related systems,
- 194 – controls where the performance (for example the effect of EMC phenomena) of the product
195 can impair the overall safety and performance of the controlled system,
- 196 – the operating values, operating times, and operating sequences where such are associated
197 with equipment safety.

198 This document specifies the requirements for construction, operation and testing of automatic
199 **electric actuators** used in, on, or in association with an equipment.

200 This document does not

- 201 • apply to automatic **electric actuators** intended exclusively for industrial process
202 applications unless explicitly mentioned in the relevant part 2 or the equipment standard.
203 However, this document can be applied to evaluate automatic **electric actuators** intended
204 specifically for industrial applications in cases where no relevant safety standard exists.
- 205 • take into account the **response value** of an **automatic action** of an **electric actuator**, if
206 such a **response value** is dependent upon the method of mounting the **electric actuator** in
207 the equipment. Where a **response value** is of significant purpose for the protection of the
208 **user**, or surroundings, the value defined in the appropriate equipment standard or as
209 determined by the manufacturer will apply.
- 210 • address the integrity of the output signal to the network devices, such as interoperability
211 with other devices unless it has been evaluated as part of the control system.
- 212 • apply to **electric actuators** which are mechanically integrated with valves covered by a
213 separate part 2 (e.g. IEC 60730-2-8).
- 214 • apply to electric motors, requirements for which are contained in IEC 60034.

215 **2 Normative references**

216 This clause of Part 1 is applicable.

217 **3 Terms and definitions**

218 This clause of Part 1 is applicable except as follows:

219 **3.2 Definitions of types of control according to purpose**

220 *Add the following definition:*

221 **3.2.101**

222 **electric actuator**

223 device in which a **prime mover** is mechanically linked to a valve, damper or similar device and
224 which responds to **initiation** from a **control** or switch.

225 Note 1 to entry: The **electric actuator** moves the valve, damper or similar device to defined positions and may also
226 incorporate other functions, such as electric interlock switches and/or feedback.

227 **3.3 Definitions relating to the function of controls**

228 *Add the following definitions:*

229 **3.3.101**

230 **multi-position action**

231 action denoting that the **electric actuator** operates in such a manner that only two or more
232 defined positions can be reached

233 **3.3.102**

234 **modulating action**

235 action denoting that the **electric actuator** operates in such a manner that every position
236 between two defined limits can be reached