



**SLOVENSKI STANDARD**  
**oSIST prEN IEC 60730-2-15:2024**  
**01-september-2024**

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**Avtomatske električne krmilne naprave - 2-15. del: Posebne zahteve za avtomatska električna tipala, ki zaznavajo pretok zraka, pretok vode in vodni nivo**

Automatic electrical controls - Part 2-15: Particular requirements for automatic electrical air flow, water flow and water level sensing controls

Automatische elektrische Regel- und Steuergeräte - Teil 2-15: Besondere Anforderungen an automatische elektrische luftstrom-, wasserstrom- und wasserstandsabhängige Regel- und Steuergeräte

Dispositifs de commande électrique automatiques - Partie 2-15: Exigences particulières pour les dispositifs de commande électrique automatiques détecteurs de débit d'air, de débit d'eau et de niveau d'eau

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**ICS:**

97.120	Avtomatske krmilne naprave za dom	Automatic controls for household use
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# 72/1433/CDV

## COMMITTEE DRAFT FOR VOTE (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	
<input type="checkbox"/> SUBMITTED FOR CENELEC PARALLEL VOTING	<input checked="" type="checkbox"/> NOT SUBMITTED FOR CENELEC PARALLEL VOTING

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TITLE:

**Automatic electrical controls - Part 2-15: Particular requirements for automatic electrical air flow, water flow and water level sensing controls**

PROPOSED STABILITY DATE: 2028

NOTE FROM TC/SC OFFICERS:

1	<b>CONTENTS</b>		
2			
3	FOREWORD .....		5
4	1 Scope .....		8
5	2 Normative references .....		9
6	3 Terms and definitions .....		9
7	3.2 Definitions of types of control according to purpose .....		9
8	3.3 Definitions relating to the function of controls .....		11
9	4 General .....		11
10	4.3 General notes on tests .....		11
11	4.3.2 Conditions of tests .....		11
12	4.3.4 Instructions for test .....		11
13	5 Required technical information .....		11
14	5.2 Methods of providing technical information .....		11
15	6 Protection against electric shock .....		13
16	7 Provision for protective earthing .....		13
17	8 Terminals and terminations .....		13
18	9 Constructional requirements .....		13
19	9.4 Actions .....		13
20	9.4.11 Type 1.H or 2.H action (a trip-free mechanism in which the contacts		
21	cannot be prevented from opening and which can automatically be reset		
22	to the "closed" position after normal operation conditions have been		
23	restored if the reset means is held in the "reset" position) .....		13
24	9.4.12 Type 1.J or 2.J action (a trip-free mechanism in which the contacts		
25	cannot be prevented from opening and the control is not permitted to		
26	function as an automatic reset device if the reset means is held in the		
27	"reset" or "on" position) .....		13
28	9.4.101 Type 1.AJ or 2.AJ action .....		14
29	9.4.102 Type 2.D, 2.H or S.J action .....		14
30	9.7 Attachment of cords .....		14
31	9.7.1 Flexible cords .....		14
32	9.11 Requirements during mounting, use, maintenance and servicing .....		14
33	9.11.101 Levelling indicators .....		14
34	9.101 Construction requirements relating to operating mechanism .....		14
35	10 Threaded parts and connections .....		15
36	11 Creepage distances, clearances and distances through solid insulation .....		15
37	12 Components .....		15
38	13 Fault assessment on electronic circuits .....		15
39	14 Moisture and dust resistance .....		15
40	14.1 Protection against ingress of water and dust .....		15
41	15 Electric strength and insulation resistance .....		16
42	15.101 Electric strength of probes .....		16
43	16 Heating .....		16
44	17 Manufacturing deviation and drift .....		17
45	18 Environmental stress .....		17
46	19 Endurance .....		17

47	19.1	General requirements .....	17
48	19.1.2	All controls .....	17
49	19.1.5	Compliance criteria .....	17
50	19.15	Test for particular purpose controls .....	17
51	19.15.101	Boiler water level cut-out .....	17
52	19.15.102	Boiler water level limiter .....	18
53	19.15.103	Boiler water feed controls .....	18
54	19.15.104	Water level operating controls .....	18
55	19.15.105	Water level protective controls .....	19
56	19.15.106	Air and water flow sensing controls .....	19
57	20	Mechanical strength .....	19
58	20.8	Flexing – test .....	19
59	20.101	Boiler pressure test .....	20
60	20.102	Strength of parts (hydrostatic) .....	20
61	21	Resistance to heat, fire and tracking .....	21
62	22	Resistance to corrosion .....	21
63	23	Electromagnetic compatibility (EMC) requirements – Emission .....	21
64	24	Normal operation .....	21
65	25	Electromagnetic compatibility (EMC) requirements – Immunity .....	21
66	25.2	EMC test plan and report .....	21
67	25.2.3	Operation conditions of EUT during testing .....	21
68	25.3	Immunity requirements .....	21
69	25.3.1	Conditions during the test .....	21
70	25.4	Performance criteria .....	21
71	26	Abnormal operation tests .....	22
72	26.1	Abnormal temperature test .....	22
73	26.1.1	Burnout test .....	22
74	26.1.2	Blocked mechanical output test .....	22
75	Annex H (normative)	Requirements related to functional safety .....	23
76	H.3	Terms and definitions .....	23
77	H.3.22	Definitions relating to functional safety .....	23
78	H.5	Information .....	23
79	H.9	Constructional requirements .....	23
80	H.9.12	Controls using software .....	23
81	H.13	Fault assessment on electronic circuits .....	24
82	H.13.2	Fault assessment to ensure functional safety .....	24
83	H.17	Manufacturing deviation and drift .....	25
84	H.17.6	Additional subclause: .....	25
85	H.25	Electromagnetic compatibility (EMC) requirements – Immunity .....	25
86	H.25.4	Harmonics and interharmonics including mains signalling at AC power port, low frequency immunity test .....	26
87			
88	H.25.5	Voltage dips, voltage interruptions and voltage variations in the power supply network .....	27
89			
90	H.25.6	Test of influence of voltage unbalance .....	29
91	H.25.8	Surge immunity test .....	30
92	H.25.9	Electrical fast transient/burst immunity test .....	31
93	H.25.10	Electrostatic discharge test .....	32
94	H.25.11	Radio-frequency electromagnetic field immunity .....	33

95	H.25.12	Test of influence of supply frequency variations.....	35
96	H.25.13	Power frequency magnetic field immunity test .....	36
97	H.25.14	Evaluation of compliance .....	37
98	Annex R (informative)	National differences relevant in the United States of America.....	38
99	R.2	Normative references.....	38
100	Annex S (informative)	National differences relevant in Japan .....	39
101	S.2	Normative references.....	39
102	Annex T (informative)	National differences relevant in Canada .....	40
103	T.2	Normative references.....	40
104	Annex AA (normative)	Independently mounted controls for boiler applications .....	41
105	Annex BB (normative)	Requirements for response delay.....	42
106	Annex CC (normative)	Independently mounted air flow and water flow sensing controls .....	43
107	Bibliography.....		44
108			
109			
110	Table 1 – Required technical information and methods of providing these information .....		11
111	Table H.1 – Additional items to Table 1.....		23
112	Table AA.1 – Number of cycles.....		41
113	Table BB.1 – Deviation and Drift Limits.....		42
114	Table CC.1 – Number of cycles.....		43

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# INTERNATIONAL ELECTROTECHNICAL COMMISSION

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## AUTOMATIC ELECTRICAL CONTROLS –

### Part 2-15: Particular requirements for automatic electrical air flow, water flow and water level sensing controls

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IEC 60730-2-15 has been prepared by IEC technical committee 72: AUTOMATIC ELECTRICAL CONTROLS. It is an International Standard.

This 4.0 edition cancels and replaces the 3.0 edition published in 2017. This edition constitutes a technical revision.

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

- a) adoption to IEC 60730-1 Ed.6.0 with all of its significant changes to IEC 60730-1 Ed.5.0

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

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

171  
172 Full information on the voting for its approval can be found in the report on voting indicated in  
173 the above table.

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

175 This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in  
176 accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available  
177 at [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are  
178 described in greater detail at [www.iec.ch/publications](http://www.iec.ch/publications).

179 A list of all parts of the IEC 60730 series, under the general title: AUTOMATIC ELECTRICAL  
180 CONTROL, can be found on the IEC website.

181 This part 2-15 is intended to be used in conjunction with IEC 60730-1. It was established on the  
182 basis of the sixth edition of that standard (2022). Consideration may be given to future editions  
183 of, or amendments to, IEC 60730-1.

184 This part 2-15 supplements or modifies the corresponding clauses in IEC 60730-1, so as to  
185 convert that publication into the IEC standard: Particular requirements for electric actuators.

186 Where this part 2-15 states "addition", "modification" or "replacement", the relevant require-  
187 ment, test specification or explanatory matter in part 1 should be adapted accordingly.

188 Where no change is necessary part 2-15 indicates that the relevant clause or subclause applies.

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

192 The reader's attention is drawn to the fact that Annex Q, Annex R, Annex S, and Annex T list  
193 all of the "in-some-country" clauses on differing practices of a less permanent nature relating  
194 to the subject of this document.

195 In this publication:

196 1) The following print types are used:

- 197 – requirements proper: in roman type;
- 198 – *test specifications: in italic type;*
- 199 – explanatory matter: in smaller roman type.
- 200 – Defined terms: **bold type**.

201 2) Subclauses, notes or items which are additional to those in Part 1 are numbered starting  
202 from 101, additional annexes are lettered AA, BB, etc.  
203



204 The committee has decided that the contents of this document will remain unchanged until the  
205 stability date indicated on the IEC website under [webstore.iec.ch](https://webstore.iec.ch) in the data related to the  
206 specific document. At this date, the document will be

- 207 • reconfirmed,
- 208 • withdrawn,
- 209 • replaced by a revised edition, or
- 210 • amended.

211

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## AUTOMATIC ELECTRICAL CONTROLS –

### Part 2-15: Particular requirements for automatic electrical air flow, water flow and water level sensing controls

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#### 220 1 Scope

221 *This clause of Part 1 is replaced by the following:*

222 This document applies to automatic electrical air flow, water flow and water level sensing  
223 controls

- 224 • for use in, on, or in association with boilers with a maximum pressure rating of 2 000 kPa  
225 (20 bar) and equipment for general household and similar use including controls for heating,  
226 air-conditioning and similar applications;

227 NOTE 1 Throughout this document, the word "equipment" means "appliance and equipment" and „controls“ means  
228 „automatic electrical air flow, water flow and water level sensing controls“.

229 EXAMPLE 1 Water flow and water level sensing controls of the float or electrode-sensor type used in boiler  
230 applications and air flow, water flow and water level sensing controls for swimming pool pumps, water tank pumps,  
231 cooling towers, dishwashers, washing machines, air conditioning chillers and ventilation applications.

- 232 • for building automation within the scope of ISO 16484 series and IEC 63044 series  
233 (HBES/BACS);

234 EXAMPLE 2 Independently mounted air flow, water flow and water level sensing controls in smart grid systems and  
235 controls for building automation systems within the scope of ISO 16484-2.

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

238 EXAMPLE 3 Controls for commercial boilers, heating and air-conditioning equipment.

- 239 • that are **smart enabled controls**; [prEN IEC 60730-2-15:2024](https://standards.iteh.ai/catalog/standards/sist/e996de5c-5620-4527-97dc-7093976f5118/osist-pren-iec-60730-2-15-2024)

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

- 242 • that are AC or DC powered controls with a rated voltage not exceeding 690 V AC or 600 V  
243 DC where the DC source is provided by primary or secondary batteries;
- 244 • used in, on, or in association with equipment that use electricity, gas, oil, solid fuel, solar  
245 thermal energy, etc., or a combination thereof;
- 246 • utilized as part of a control system or controls which are mechanically integral with  
247 multifunctional controls having non-electrical outputs;
- 248 • using NTC or **PTC thermistors** and to discrete **thermistors**, requirements for which are  
249 contained in Annex J;
- 250 • that are mechanically or electrically operated, responsive to or controlling air flow, water  
251 flow and water level;
- 252 • as well as manual controls when such are electrically and/or mechanically integral with  
253 automatic controls.

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

256 This document applies to

- 257 – the inherent safety of automatic electrical air flow, water flow and water level sensing  
258 controls, and

- 259 – functional safety of automatic air flow, water flow and water level sensing electrical controls  
260 and safety related systems,
- 261 – controls where the performance (for example the effect of EMC phenomena) of the product  
262 can impair the overall safety and performance of the controlled system,
- 263 – the operating values, operating times, and operating sequences where such are associated  
264 with equipment safety.

265 This document specifies the requirements for construction, operation and testing of automatic  
266 electrical air flow, water flow and water level sensing controls used in, on, or in association with  
267 an equipment.

268 This document takes into account the response value of an automatic action of a control where  
269 such a response value is dependent upon the method of mounting the control. Where a  
270 response value is of significant purpose for the protection of the user, or surroundings, the  
271 value defined in the appropriate household equipment standard or as determined by the  
272 manufacturer shall apply.

273 This document does not

- 274 • apply to air flow, water flow and water level sensing **controls** intended exclusively for  
275 industrial process applications unless explicitly mentioned in the relevant part 2 or the  
276 equipment standard. However, this document can be applied to evaluate air flow, water flow  
277 and water level sensing **controls** intended specifically for industrial applications in cases  
278 where no relevant safety standard exists.
- 279 • address the integrity of the output signal to the network devices, such as interoperability  
280 with other devices unless it has been evaluated as part of the control system.
- 281 • apply to pressure sensing controls, the requirements for which are contained in IEC 60730-  
282 2-6.

## 283 2 Normative references

284 This clause of part 1 is applicable.

## 285 3 Terms and definitions

### 286 3.2 Definitions of types of control according to purpose

287 *Add the following definitions*

#### 288 3.2.101

##### 289 **boiler water level cut-out**

290 water level **sensing control** of the float or electrode-sensor type for boiler applications intended  
291 to respond to a low water level during abnormal operating conditions and which has no provision  
292 for **setting by the user**

293 Note 1 to entry: A water level cut-out may be of the automatic or of the manual reset type. A boiler water level  
294 cutout has a type 2 action, it is a type of water level protective control (see 3.2.105).

#### 295 3.2.102

##### 296 **boiler water level limiter**

297 water level **sensing control** of the float or electrode-sensor type for boiler applications which  
298 is intended to keep a water level below or above one particular value during normal operating  
299 conditions and which may have provision for **setting by the user**

300 Note 1 to entry: A **boiler water level limiter** has a type 2 action and is normally of the automatic reset type.

301 **3.2.103**  
302 **boiler water feed control**  
303 water level **sensing control** of the float or electrode-sensor type for boiler applications which  
304 is intended to keep the water level in a boiler above one particular value during normal operating  
305 conditions and which may have provision for **setting by the user**

306 Note 1 to entry: A **boiler water feed control** is of the automatic reset type and has a type 1 action. A **boiler water**  
307 **feed control** is used on a boiler to cycle a feeder pump or feeder water valve. For the purposes of this document, a  
308 type 2 **boiler water feed control** is considered to be a **boiler water level limiter**.

309 **3.2.104**  
310 **water level operating control**  
311 **control** which is intended to keep the water level below or above one particular value during  
312 normal operating conditions and which may have provision for **setting by the user**

313 Note 1 to entry: A **water level operating control** is of the automatic reset type.

314 **3.2.105**  
315 **water level protective control**  
316 **control** which is intended to prevent a hazardous situation during abnormal **operation** of the  
317 equipment either by

- 318 a) keeping the water level below or above one or more particular values, or by  
319 b) energizing or de-energizing the associated equipment at one or more particular values of  
320 water level

321 **3.2.106**  
322 **water flow operating control**  
323 flow **sensing control** intended to sense or maintain the water flow between two particular  
324 values during normal operating conditions and which may have provision for **setting by the**  
325 **user**

326 Note 1 to entry: A **water flow operating control** is of the automatic reset type.

327 **3.2.107**  
328 **air flow operating control**  
329 flow **sensing control** intended to sense or maintain the air flow between two particular values  
330 during normal operating conditions and which may have provision for **setting by the user**

331 Note 1 to entry: An **air flow operating control** is of the automatic reset type.

332 **3.2.108**  
333 **water flow cut-out**  
334 flow **sensing control** intended to respond to a lack of water flow during abnormal operating  
335 conditions and which has no provision for **setting by the user**

336 Note 1 to entry: A **water flow cut-out** is of the automatic or manual reset type.

337 **3.2.109**  
338 **air flow cut-out**  
339 flow **sensing control** intended to respond to a lack of air flow during abnormal operating  
340 conditions and which has no provision for **setting by the user**

341 Note 1 to entry: An **air flow cut-out** is of the automatic or manual reset type.