



UL 60730-2-15

STANDARD FOR SAFETY

Automatic Electrical Controls – Part 2-15: Particular Requirements for Automatic Electrical Air Flow, Water Flow and Water Level Sensing Controls

ULNORM.COM : Click to view the full PDF of UL 60730-2-15 2019

ULNORM.COM : Click to view the full PDF of UL 60730-2-15 2019

UL Standard for Safety for Automatic Electrical Controls – Part 2-15: Particular Requirements for Automatic Electrical Air Flow, Water Flow and Water Level Sensing Controls, UL 60730-2-15

Third Edition, Dated November 6, 2019

Summary of Topics

This new edition of ANSI/UL 60730-2-15 is an adoption of the third edition of IEC 60730-2-15. This new edition dated November 6, 2019, was issued to reflect the latest approval date as an American National Standard that was proposed June 28, 2019.

The requirements are substantially in accordance with Proposal(s) on this subject dated June 28, 2019.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form by any means, electronic, mechanical photocopying, recording, or otherwise without prior permission of UL.

UL provides this Standard "as is" without warranty of any kind, either expressed or implied, including but not limited to, the implied warranties of merchantability or fitness for any purpose.

In no event will UL be liable for any special, incidental, consequential, indirect or similar damages, including loss of profits, lost savings, loss of data, or any other damages arising out of the use of or the inability to use this Standard, even if UL or an authorized UL representative has been advised of the possibility of such damage. In no event shall UL's liability for any damage ever exceed the price paid for this Standard, regardless of the form of the claim.

Users of the electronic versions of UL's Standards for Safety agree to defend, indemnify, and hold UL harmless from and against any loss, expense, liability, damage, claim, or judgment (including reasonable attorney's fees) resulting from any error or deviation introduced while purchaser is storing an electronic Standard on the purchaser's computer system.

ULNORM.COM : Click to view the full PDF of UL 60730-2-15 2019

No Text on This Page

ULNORM.COM : Click to view the full PDF of UL 60730-2-15 2019

NOVEMBER 6, 2019



ANSI/UL 60730-2-15-2019

1

UL 60730-2-15

**Standard for Automatic Electrical Controls – Part 2-15: Particular
Requirements for Automatic Electrical Air Flow, Water Flow and Water Level
Sensing Controls**

Prior to the second edition of UL 60730-2-15, the requirements for the products covered by this Standard were included in UL 60730-2-16A and in UL 60730-2-18.

Second Edition – July, 2014

Third Edition

November 6, 2019

This ANSI/UL Standard for Safety consists of the Third Edition.

The most recent designation of ANSI/UL 60730-2-15 as an American National Standard (ANSI) occurred on November 6, 2019. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page, or Preface. The National Difference Page and IEC Foreword are also excluded from the ANSI approval of IEC-based standards.

Comments or proposals for revisions on any part of the Standard may be submitted to UL at any time. Proposals should be submitted via a Proposal Request in UL's On-Line Collaborative Standards Development System (CSDS) at <https://csds.ul.com>.

UL's Standards for Safety are copyrighted by UL. Neither a printed nor electronic copy of a Standard should be altered in any way. All of UL's Standards and all copyrights, ownerships, and rights regarding those Standards shall remain the sole and exclusive property of UL.

COPYRIGHT © 2019 UNDERWRITERS LABORATORIES INC.

No Text on This Page

ULNORM.COM : Click to view the full PDF of UL 60730-2-15 2019

CONTENTS

Preface (UL)	5
NATIONAL DIFFERENCES	7
FOREWORD	9
1 Scope and normative references.....	13
1.1 Scope.....	13
1.1.1DV Modification of the sixth paragraph of 1.1.1 by adding the following text:.....	14
2 Terms and definitions.....	14
2.2 Definitions of types of control according to purpose.....	14
2.3 Definitions relating to the function of controls.....	16
3 General requirements.....	16
4 General notes on tests.....	16
4.1 Conditions of test.....	16
4.3 Instructions for test.....	16
5 Rating.....	16
6 Classification.....	17
6.3 According to their purpose.....	17
6.4 According to features of automatic action.....	17
6.5 According to the degree of protection and control pollution degree.....	18
7 Information.....	18
Table 1DV Modification of Table 1 with the following two national differences:.....	19
8 Protection against electric shock.....	19
9 Provision for protective earthing.....	19
10 Terminals and terminations.....	19
10.1 Terminals and terminations for external copper conductors.....	19
10.1.4DV Delete the above note to 10.1.4.....	20
11 Constructional requirements.....	20
11.4 Actions.....	20
11.7 Attachment of cords.....	20
11.11 Requirements during mounting, maintenance and servicing.....	21
11.101 Construction requirements relating to operating mechanism.....	21
11.101.3DV Addition of 11.101.3DV.1 and 11.101.3DV.2 to the part 2:.....	21
12 Moisture and dust resistance.....	21
12.1 Protection against ingress of water and dust.....	21
13 Electric strength and insulation resistance.....	22
13.101 Electric strength of probes.....	22
14 Heating.....	23
15 Manufacturing deviation and drift.....	23
15.6.101DV Add the following text to 15.6.101:.....	23
16 Environmental stress.....	23
17 Endurance.....	23
17.16 Test for particular purpose controls.....	24
18 Mechanical strength.....	25
19 Threaded parts and connections.....	27
19.101DV Addition of 19.101DV.1 to the part 2:.....	27
20 Creepage distances, clearances and distances through solid insulation.....	27
21 Resistance to heat, fire and tracking.....	27
22 Resistance to corrosion.....	28
23 Electromagnetic compatibility (EMC) requirements – Emission.....	28
24 Components.....	28
25 Normal operation.....	28

26	Electromagnetic compatibility (EMC) requirements – Immunity	28
27	Abnormal operation	28
	27DV Modification of 27 of the Part 2:	28
28	Guidance on the use of electronic disconnection	28
	Figures	28
	Annexes	28

Annex H (normative) Requirements for electronic controls

H.2	Terms and definitions	29
	H.2.23 Definitions relating to functional safety	29
H.6	Classification	29
	H.6.18 According to classes of control functions	29
H.7	Information	30
H.11	Constructional requirements	30
	H.11.12 Controls using software	30
H.23	Electromagnetic compatibility (EMC) requirements – Emission	30
	H.23.1.2 Radio frequency emission	30
H.26	Electromagnetic compatibility (EMC) requirements – Immunity	30
	H.26.5 Voltage dips, voltage interruptions and voltage variations in the power supply network	32
	H.26.6 Test of influence of voltage unbalance	32
	H.26.8 Surge immunity test	32
	H.26.9 Electrical fast transient/burst immunity test	32
	H.26.10 Ring wave immunity test	33
	H.26.12 Radio-frequency electromagnetic field immunity	33
	H.26.13 Test of influence of supply frequency variations	33
	H.26.14 Power frequency magnetic field immunity test	33
	H.26.15 Evaluation of compliance	33
H.27	Abnormal operation	34

Annex AA (normative) Independently mounted controls for boiler applications^a

Annex AADV	Replace the heading with the following, "Number of cycles for controls used in boiler applications ^{am} "	37
------------	--	----

Annex BB (normative) Requirements for response delay

Annex CC (normative) Independently mounted air flow and water flow sensing controls^a

Annex CCDV	Replace the heading with the following, "Number of cycles for air flow and water flow sensing controls ^{am} "	39
------------	--	----

Bibliography

Preface (UL)

This UL Standard is based on IEC Publication 60730-2-15: third edition Automatic electrical controls – Part 2-15: Particular requirements for automatic electrical air flow, water flow and water level sensing controls. IEC publication 60730-2-15 is copyrighted by the IEC.

This UL Standard 60730-2-15 Standard for Safety for Automatic Electrical Controls – Part 2-15: Particular requirements for automatic electrical air flow, water flow and water level sensing controls, is to be used in conjunction with the fifth edition of UL 60730-1. The requirements for automatic electrical air flow, water flow and water level sensing controls are contained in this Part 2 Standard and UL 60730-1.

Where a particular subclause of UL 60730-1 is not mentioned in UL 60730-2-15, the UL 60730-1 subclause applies.

These materials are subject to copyright claims of IEC and UL. No part of this publication may be reproduced in any form, including an electronic retrieval system, without the prior written permission of UL. All requests pertaining to the Automatic electrical controls – part 2-15: particular requirements for automatic electrical air flow, water flow and water level sensing controls 60730-2-15 Standard should be submitted to UL.

Note – Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.

ULNORM.COM : Click to view the full PDF of UL 60730-2-15 2019