

# INTERNATIONAL STANDARD

Automatic electrical controls –  
Part 2-13: Particular requirements for humidity sensing controls

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INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## AUTOMATIC ELECTRICAL CONTROLS –

## Part 2-13: Particular requirements for humidity sensing controls

## FOREWORD

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International Standard IEC 60730-2-13 has been prepared by IEC technical committee 72: Automatic electrical controls.

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

FDIS	Report on voting
72/1078/FDIS	72/1108/RVD

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

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

This third edition cancels and replaces the second edition published in 2006. This edition constitutes a technical revision. This edition includes alignment with the text of 60730-1 fifth edition and the following significant technical changes with respect to the previous edition:

- a) alignment of the EMC requirements in Clause H.26 to those in other part 2 standards;
- b) addition of requirements in Clause H.27 to cover class B and C control functions of humidity sensing controls.

This Part 2-13 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). Consideration may be given to future editions of, or amendments to, IEC 60730-1.

This Part 2-13 supplements or modifies the corresponding clauses in IEC 60730-1, so as to convert that publication into the IEC standard: Particular requirements for humidity sensing controls.

Where this Part 2-13 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, this Part 2-13 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.

In this publication, the following print types are used:

- Requirements proper: in roman type.
- *Test specifications: in italic type.*
- Explanatory matter: in smaller roman type.

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

A list of all parts of the IEC 60730 series, under the general title *Automatic electrical controls* can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

The contents of the corrigendum of February 2018 have been included in this copy.

## AUTOMATIC ELECTRICAL CONTROLS –

### Part 2-13: Particular requirements for humidity sensing controls

#### 1 Scope and normative references

This clause of Part 1 is applicable except as follows:

##### 1.1 Scope

*Replacement:*

This part of IEC 60730 applies to automatic electrical humidity sensing controls for use in, on or in association with equipment, including controls for heating, air-conditioning and similar applications. The equipment may use electricity, gas, oil, solid fuel, solar thermal energy, etc. or a combination thereof.

NOTE Throughout this standard, the word "equipment" includes "appliance" and "control system".

This International Standard is applicable to automatic electrical humidity sensing controls forming part of a building automation control system within the scope of ISO 16484.

This standard also applies to automatic electrical humidity sensing 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.

This standard does not apply to automatic electrical humidity sensing controls intended exclusively for industrial process applications unless explicitly mentioned in the equipment standard.

##### 1.1.2 Replacement:

This standard applies to automatic electrical controls, mechanically or electrically operated, responsive to or controlling humidity.

##### 1.1.3 Not applicable.

#### 2 Terms and definitions

This clause of Part 1 is applicable except as follows:

##### 2.2 Definitions of types of control according to purpose

###### 2.2.19 Addition:

Note 1 to entry: In general, a **humidity sensing control** is an **operating control**.

*Additional definitions:*

###### 2.2.101

###### **humidity sensing control**

automatic **electrical control** which is either intended to keep the controlled humidity above, below or between a particular value(s)

### **2.2.102**

#### **room humidistat**

independently mounted or incorporated **humidity sensing control** intended to control the humidity of habitable space

### **3 General requirements**

This clause of Part 1 is applicable.

### **4 General notes on tests**

This clause of Part 1 is applicable.

### **5 Rating**

This clause of Part 1 is applicable.

### **6 Classification**

This clause of Part 1 is applicable except as follows:

#### **6.3.9 Additional subclauses:**

**6.3.9.101 – humidity sensing control;**

**6.3.9.102 – room humidistat;**

### **7 Information**

This clause of Part 1 is applicable.

### **8 Protection against electric shock**

This clause of Part 1 is applicable.

### **9 Provision for protective earthing**

This clause of Part 1 is applicable.

### **10 Terminals and terminations**

This clause of Part 1 is applicable.

### **11 Constructional requirements**

This clause of Part 1 is applicable.

### **12 Moisture and dust resistance**

This clause of Part 1 is applicable.



### 13 Electric strength and insulation resistance

This clause of Part 1 is applicable except as follows:

#### Table 12 (13.2 of edition 3) – Insulation or disconnection test voltages

*Addition to footnote p:*

In the case of **humidity sensing controls**, it may be necessary to provide specially calibrated samples to enable this test to be performed.

### 14 Heating

This clause of Part 1 is applicable.

### 15 Manufacturing deviation and drift

This clause of Part 1 is applicable except as follows:

#### 15.4 Addition:

*Alternatively, the declared **manufacturing deviation** and **drift** may be expressed separately as a tolerance value to the declared **operating value**.*

#### 15.5.3 Additional subclauses:

**15.5.3.101 Controls** intended for **setting by the user** shall be set at the maximum humidity value permitted by the adjustment unless otherwise declared by the manufacturer.

**15.5.3.102 The operation** of the **control** shall be sensed by a suitable device with a sensing current not exceeding 0,05 A.

*The circuit voltage may be any convenient value that will give reliable indication of the function being monitored.*

**15.5.4** Not applicable.

### 16 Environmental stress

This clause of Part 1 is applicable.

### 17 Endurance

This clause of Part 1 is applicable except as follows:

#### 17.1.3 Test sequence and conditions

*Additional subclause:*

**17.1.3.101 For humidity sensing controls**, the tests of Clause 17 are conducted with the **activating quantity** agreed between the manufacturer and testing authority.

## 17.8 Test of automatic action at accelerated rate

*Additional subclause:*

**17.8.4.101** *The number of automatic and manual cycles for independently mounted and in-line cord controls shall be as indicated in Clause AA.1, unless a higher number is declared by the manufacturer.*

## 17.16 Tests for particular purpose controls

*Additional subclause and note:*

### 17.16.101 Humidity sensing controls

- Subclauses 17.1 to 17.5 inclusive are applicable.
- 17.6 is applicable to actions classified as type 1.M or 2.M, the value of "X" being agreed between manufacturer and testing authority.
- 17.7 is applicable.
- 17.8 is applicable.
- 17.9 is applicable, except:
- 17.9.3.1 is not applicable.
- 17.10 to 17.14 inclusive are applicable.

## 18 Mechanical strength

This clause of Part 1 is applicable.

## 19 Threaded parts and connections

This clause of Part 1 is applicable.

## 20 Creepage distances, clearances and distances through solid insulation

This clause of Part 1 is applicable.

## 21 Resistance to heat, fire and tracking

This clause of Part 1 is applicable.

## 22 Resistance to corrosion

This clause of Part 1 is applicable.

## 23 Electromagnetic compatibility (EMC) requirements – Emission

This clause of Part 1 is applicable.

## 24 Components

This clause of Part 1 is applicable.