

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Safety requirements for electrical equipment for measurement, control
and laboratory use –
Part 2-202: Particular requirements for electrically operated valve actuators**

**Exigences de sécurité pour appareils électriques de mesurage, de regulation
et de laboratoire –
Partie 2-202: Exigences particulières pour les actionneurs à vanne à commande
électrique**



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CONTENTS

FOREWORD	3
INTRODUCTION	5
1 Scope and object	6
2 Normative references	7
3 Terms and definitions	7
4 Tests	7
5 Marking and documentation	8
6 Protection against electric shock	9
7 Protection against mechanical HAZARDS	9
8 Resistance to mechanical stresses	10
9 Protection against the spread of fire	10
10 Equipment temperature limits and resistance to heat	10
11 Protection against HAZARDS from fluids and solid foreign objects	10
12 Protection against radiation, including laser sources, and against sonic and ultrasonic pressure	10
13 Protection against liberated gases and substances, explosion and implosion	10
14 Components and subassemblies	11
15 Protection by interlocks	11
16 HAZARDS resulting from application	11
17 RISK assessment	11
Annexes	12
Bibliography	13

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT
FOR MEASUREMENT, CONTROL AND LABORATORY USE –****Part 2-202: Particular requirements
for electrically operated valve actuators**

FOREWORD

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International Standard IEC 61020-2-202 has been prepared by committee TC 65: Industrial-process measurement, control and automation.

This second edition cancels and replaces the first edition published in 2016. This edition constitutes a technical revision.

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

- a) the scope has been clarified in relationship with other IEC standards,
- b) additional requirement for identification has been included,
- c) additional requirement for user documentations has been included,
- d) accuracy of high voltage di-electric tester has been specified,

e) conformity statement for mechanical tests has been clarified.

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

FDIS	Report on voting
65/835/FDIS	65/844/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 Part 2-202 is to be used in conjunction with third edition of IEC 61010-1:2010, including its Amendment 1:2016.

This Part 2-202 supplements or modifies the corresponding clauses in IEC 61010-1 so as to convert that publication into the IEC standard: *Particular requirements for electrically operated valve actuators*.

Where a particular subclause of Part 1 is not mentioned in this part 2, that subclause applies as far as is reasonable. Where this part states "addition", "modification", "replacement", or "deletion", the relevant requirement, test specification or note in Part 1 should be adapted accordingly.

A list of all parts in the IEC 61010 series, published under the general title *Safety requirements for electrical equipment for measurement, control and laboratory use*, can be found on the IEC website.

In this standard:

- 1) the following print types are used:
 - requirements: in roman type;
 - NOTES: in smaller roman type;
 - conformity and test: *in italic type*;
 - terms used throughout this standard which have been defined in clause 3: SMALL ROMAN CAPITALS;
- 2) subclauses, figures, tables and notes which are additional to those in part 1 are numbered starting from 101. Additional annexes are lettered starting from AA.

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.

INTRODUCTION

This IEC 61010-2-202 document constitutes Part 2-202 of a planned series of standards on industrial-process measurement, control and automation equipment.

Safety terms of general use are defined in IEC 61010-1. More specific terms are defined in each part.

This part incorporates the safety related requirements of electrically operated valve ACTUATORS and SOLENOIDS.

This document does not cover functional safety aspects of electrically operated ACTUATORS and SOLENOIDS.

SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT FOR MEASUREMENT, CONTROL AND LABORATORY USE –

Part 2-202: Particular requirements for electrically operated valve actuators

1 Scope and object

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

1.1 Scope

1.1.1 Equipment included in scope

Replacement of the text by the following paragraphs:

This part of IEC 61010 specifies the safety requirements for electric ACTUATORS and SOLENOIDS, as applied to valves, intended to be installed in an industrial process or discrete control environment.

This part of IEC 61010 specifies:

- particular safety requirements for general purpose electrically operated valve ACTUATORS and SOLENOIDS,
- related verification tests.

1.1.2 Equipment excluded from scope

Addition at the end of the list:

This standard excludes:

- aa) electric ACTUATORS and SOLENOIDS for use in domestic or commercial applications;

NOTE 1 These are covered by other IEC or ISO standards, such as IEC 60730, etc.

- bb) electric ACTUATORS and SOLENOIDS performing a safety function;

NOTE 2 These are covered by other IEC or ISO standards, such as IEC 61508, etc.

- cc) positioners.

NOTE 3 A positioner is defined as a "physical unit delivering an additional, often mechanical, feedback to a mechanical final controlling element that improves its velocity and precision" in IEC 60050-351:2013, 351-56-17.

1.2 Object

1.2.2 Aspects excluded from scope

Addition at the end of the list:

- aa) mechanical parts/aspects of valves.

1.2.101 Aspects included in other applicable standards

Where electric ACTUATORS and SOLENOIDS are required to comply with requirements of other IEC or ISO standards, aspects fully covered in these standards can replace requirements as given in IEC 61010-1.