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Standards

Irish Standard  
I.S. EN ISO 22153:2021

# Electric actuators for industrial valves - General requirements (ISO 22153:2020)

**I.S. EN ISO 22153:2021**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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## National Foreword

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**EUROPEAN STANDARD**  
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**Electric actuators for industrial valves - General  
requirements (ISO 22153:2020)**

Actionneurs électriques pour robinetterie industrielle -  
Exigences générales (ISO 22153:2020)

Elektrische Antriebe für Industriearmaturen -  
Allgemeine Anforderungen (ISO 22153:2020)

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**EN ISO 22153:2021 (E)**

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## **European foreword**

The text of ISO 22153:2020 has been prepared by Technical Committee ISO/TC 153 "Valves" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 22153:2021 by Technical Committee CEN/TC 69 "Industrial valves" the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2021, and conflicting national standards shall be withdrawn at the latest by October 2021.

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## **Endorsement notice**

The text of ISO 22153:2020 has been approved by CEN as EN ISO 22153:2021 without any modification.

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## **Electric actuators for industrial valves — General requirements**

*Actionneurs électriques pour robinetterie industrielle — Exigences  
générales*



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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 153, *Valves*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).



# Electric actuators for industrial valves — General requirements

## 1 Scope

This document provides basic requirements for electric valve actuators, used for on-off and control valves. It includes guidelines for classification, design, enclosure and corrosion protection, and methods for conformity assessment.

Combinations of electric actuators and gearboxes when supplied by the actuator manufacturer are within the scope of this document.

This document does not cover solenoid actuators, electro-hydraulic actuators and electric actuators which are integral to the valves.

Other requirements or conditions of use different from those indicated in this document are agreed between the purchaser and the manufacturer/supplier, prior to order.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 5210, *Industrial valves — Multi-turn valve actuator attachments*

ISO 5211, *Industrial valves — Part-turn actuator attachments*

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

### 3.1

#### **electric actuator**

electrically powered device attached to the valve by bolting for the purpose of applying *torque* (3.5) and/or thrust to open and close and/or control a valve

### 3.2

#### **part-turn actuator**

actuator which transmits *torque* (3.5) to the valve for less than one revolution, and does not need to be capable of withstanding operational thrust

Note 1 to entry: In this document, a combination of a *multi-turn actuator* (3.3) plus a part-turn *gearbox* (3.15) is considered as a part-turn actuator

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