

Industrial-process control valves - Part 1: Control valve terminology and general considerations

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

Industrial-process control valves - Part 1: Control valve
terminology and general considerations
(IEC 60534-1:2023)

Vannes de régulation des processus industriels - Partie 1:
Terminologie des vannes de régulation et considérations
générales
(IEC 60534-1:2023)

Stellventile für die Prozessregelung - Teil 1: Begriffe und
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(IEC 60534-1:2023)

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European foreword

The text of document 65B/1228/FDIS, future edition 4 of IEC 60534-1, prepared by SC 65B "Measurement and control devices" of IEC/TC 65 "Industrial-process measurement, control and automation" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60534-1:2023.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2024-03-27 level by publication of an identical national standard or by endorsement
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In the official version, for Bibliography, the following notes have to be added for the standard indicated:

IEC 61987-21:2015 NOTE Approved as EN 61987-21:2016 (not modified)

ISO 6708:1995 NOTE Approved as EN ISO 6708:1995 (not modified)

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Industrial-process control valves –
Part 1: Control valve terminology and general considerations**

**Vannes de régulation des processus industriels –
Partie 1: Terminologie des vannes de régulation et considérations générales**



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INTERNATIONAL STANDARD

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

INDUSTRIAL-PROCESS CONTROL VALVES –**Part 1: Control valve terminology and general considerations**

FOREWORD

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IEC 60534-1 has been prepared by subcommittee 65B: Measurement and control devices, of IEC technical committee 65: Industrial-process measurement, control and automation. It is an International Standard.

This fourth edition cancels and replaces the third edition published in 2005. This edition constitutes a technical revision.

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

- a) update of the definitions given in IEC 60534-1 in order to harmonize them with current terminology;
- b) addition of terms common to individual standards in the 60534 series; and
- c) further clarification in existing definitions.

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

Draft	Report on voting
65B/1228/FDIS	65B/1235/RVD

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

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

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

IEC 60534 consists of the following parts, under the general title *Industrial-process control valves*:

- Part 1: *Control valve terminology and general considerations*
- Part 2-1: *Flow capacity – Sizing equations for fluid flow under installed conditions*
- Part 2-3: *Flow capacity – Test procedures*
- Part 2-4: *Flow capacity – Section Four: Inherent flow characteristics and rangeability*
- Part 3-1: *Dimensions – Face-to-face dimensions for flanged, two-way, globe-type, straight pattern and centre-to-face dimensions for flanged, two-way, globe-type, angle pattern control valves*
- Part 3-2: *Dimensions – Face-to-face dimensions for rotary control valves except butterfly valves*
- Part 3-3: *Dimensions – End-to-end dimensions for butt weld, two-way, globe-type, straight pattern control valves*
- Part 4: *Inspection and routine testing*
- Part 5: *Marking*
- Part 6-1: *Mounting details for attachment of positioners to control valves – Section 1: Positioner mounting on linear actuators*
- Part 6-2: *Mounting details for attachment of positioners to control valves – Positioner mounting on rotary actuators*
- Part 7: *Control valve data sheet*
- Part 8-1: *Noise considerations – Section One: Laboratory measurement of noise generated by aerodynamic flow through control valves*
- Part 8-2: *Noise considerations – Section 2: Laboratory measurement of noise generated by hydrodynamic flow through control valves*
- Part 8-3: *Noise considerations – Control valve aerodynamic noise prediction method*
- Part 8-4: *Noise considerations – Section 4: Prediction of noise generated by hydrodynamic flow*
- Part 9: *Test procedure for response measurements from step inputs*

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

INDUSTRIAL-PROCESS CONTROL VALVES –

Part 1: Control valve terminology and general considerations

1 Scope

This part of IEC 60534 applies to all types of industrial-process control valves (hereinafter referred to as control valves). This document establishes a partial basic terminology list and provides guidance on the use of all other parts of IEC 60534.

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.

IEC 60534 (all parts), *Industrial-process control valves*

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:

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

3.1 Component terminology

3.1.1

control valve

power-operated device that changes the fluid flow rate in a process control system

Note 1 to entry: The device assembly consists of a valve connected to an actuator that is capable of changing the position of a closure member in the valve in response to a signal from the controlling system.

3.1.1.1

control valve with a linear motion closure member

valve that contains a closure member that moves in a line perpendicular to the seating plane

3.1.1.1.1

diaphragm valve

valve in which a flexible closure member isolates the line fluid from the actuating mechanism and provides a seal to the atmosphere

3.1.1.1.2

gate valve

valve whose closure member is a flat gate that moves in a direction parallel to the plane of the seat