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INTERNATIONAL STANDARD

colour inside

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

INTERNATIONAL
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COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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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 buttweld, 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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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*

IEC 60534-1

Edition 4.0 2023-05

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



IEC 60534-1:2023-05(en-fr)

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

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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

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VANNES DE RÉGULATION DES PROCESSUS INDUSTRIELS –

Partie 1: Terminologie des vannes de régulation et considérations générales

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Cette quatrième édition annule et remplace la troisième édition publiée en 2005. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

a) une mise à jour des définitions données dans l'IEC 60534-1 afin de les harmoniser avec la terminologie actuelle;

b) l'ajout de termes communs aux différentes normes de la série IEC 60534; et

c) des clarifications dans les définitions existantes.

Le texte de cette norme est issu des documents suivants:

Projet	Rapport de vote
65B/1228/FDIS	65B/1235/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à son approbation.

La langue employée pour l'élaboration de cette Norme internationale est l'anglais.

Le présent document a été rédigé selon les Directives ISO/IEC, Partie 2, il a été développé selon les Directives ISO/IEC, Partie 1 et les Directives ISO/IEC, Supplément IEC, disponibles sous www.iec.ch/members_experts/refdocs. Les principaux types de documents développés par l'IEC sont décrits plus en détail sous www.iec.ch/publications.

L'IEC 60534 comprend les parties suivantes, publiées sous le titre général *Vannes de régulation des processus industriels:*

Partie 1: *Terminologie des vannes de régulation et considérations générales*

Partie 2-1: *Capacité d'écoulement – Équations de dimensionnement pour l'écoulement des fluides dans les conditions d'installation*

Partie 2-3: *Capacité d'écoulement – Procédures d'essais*

Partie 2-4: *Capacité d'écoulement – Caractéristiques intrinsèques de débit et coefficient intrinsèque de réglage*

Partie 3-1: *Dimensions – Écartements hors-brides des vannes de régulation deux voies droites à soupapes et à brides et dimensions centre/bride des vannes de régulation deux voies coudées à brides*

Partie 3-2: *Dimensions – Dimensions face à face des vannes de régulation rotatives excepté les vannes papillon*

Partie 3-3: *Dimensions – Dimensions bout-à-bout des vannes de régulation à soupape à deux voies, à corps droit avec embouts à souder*

Partie 4: *Inspection et essais individuels*

Partie 5: *Marquage*

Partie 6-1: *Détails d'assemblage pour le montage des positionneurs sur les actionneurs de vannes de régulation – Section 1: Montage des positionneurs sur les actionneurs linéaires*

Partie 6-2: *Détails d'assemblage pour le montage des positionneurs sur les actionneurs de vannes de régulation – Montage des positionneurs sur les actionneurs rotatifs*

Partie 7: *Grille de définition de vanne de régulation*

Partie 8-1: *Considérations sur le bruit – Mesure en laboratoire du bruit créé par un débit aérodynamique à travers une vanne de régulation*

Partie 8-2: *Considérations sur le bruit – Mesure en laboratoire du bruit créé par un écoulement hydrodynamique dans une vanne de régulation*

Partie 8-3: *Considérations sur le bruit – Méthode de prédiction du bruit aérodynamique des vannes de régulation*

Partie 8-4: *Considérations sur le bruit – Prévisions du bruit généré par un écoulement hydrodynamique*

Partie 9: *Procédures d'essai pour la mesure de la réponse des vannes de régulation à des signaux d'entrée échelonnés*

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VANNES DE RÉGULATION DES PROCESSUS INDUSTRIELS –

Partie 1: Terminologie des vannes de régulation et considérations générales

1 Domaine d'application

La présente partie de l'IEC 60534 s’applique à tous les types de vannes de régulation des processus industriels (désignés ci-après sous le terme vannes de régulation). Le présent document établit une liste terminologique de base partielle et fournit des recommandations d'utilisation de toutes les autres parties de l'IEC 60534.

2 Références normatives

Les documents suivants cités dans le texte constituent, pour tout ou partie de leur contenu, des exigences du présent document. Pour les références datées, seule l’édition citée s’applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

IEC 60534 (toutes les parties), *Vannes de régulation des processus industriels*