

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Industrial-process control valves –
Part 7: Control valve data sheet**

**Vannes de régulation des processus industriels –
Partie 7: Grille de définition de vanne de régulation**



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IEC 60534-7

Edition 2.0 2010-11

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INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

PRICE CODE
CODE PRIX

ICS 23.060.40; 25.040.40

ISBN 978-2-88912-207-3

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

INDUSTRIAL-PROCESS CONTROL VALVES –**Part 7: Control valve data sheet**

FOREWORD

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International Standard IEC 60534-7 has been prepared by subcommittee 65B: Devices and process analysis, of IEC technical committee 65: Industrial-process measurement, control and automation.

This second edition cancels and replaces the first edition published in 1989. This edition constitutes a technical revision.

The main changes with respect to the previous edition are listed below:

- the standard has been updated to reflect digital electronic accessories and fieldbus protocols;
- to aid clarification, the explanation of terms and definitions contains the same subheading as the information required in the control valve data sheet;
- the column numbering system has been replaced with descriptive title headings.

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

FDIS	Report on voting
65B/756/FDIS	65B/771/RVD

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

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

A list of all parts of the IEC 60534 series, published under the general title *Industrial-process control valves*, can be found on the IEC website.

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

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- withdrawn,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

INTRODUCTION

The writing of control valve specifications is an extremely important segment of the complete design, purchase and manufacturing of any process control system.

If the wrong control valve is specified, due to either incomplete or erroneous specification, the replacement of that valve becomes costly to both the user and the control valve manufacturer and often results in undue project delay. Therefore, many of the important control valve users and contractors have developed their own standard data sheets to eliminate as much misunderstanding as possible regarding the valve specifications.

To avoid confusion between valve manufacturers, users and contractors, standardisation of the datasheet is required.

The purpose of a standard control valve data sheet is to promote uniformity, both in content and form. General use of this form by contractors, users and manufacturers offers many advantages. For example:

- assisting in preparation of a complete specification by listing and providing space for all principal descriptive options;
- promoting uniform terminology;
- facilitates quoting, purchasing, receiving, accounting and ordering procedures by uniform display of information;
- providing a useful permanent record and information for checking;
- improving efficiency from initial concept to the final installation.

INDUSTRIAL-PROCESS CONTROL VALVES –

Part 7: Control valve data sheet

1 Scope

This part of the IEC 60534 series provides a list of requirements that are normally necessary for the procurement of the majority of control valves for process systems. No attempt is made to include all possible requirements for any conceivable process.

The list is arranged in a format designed to assist the specification writer with a standardized presentation of data and also to be a basis for use with data processing facilities.

A detailed set of instructions is included in order to ensure that the abbreviated terms are fully understood and that consistent data entries are always made.

2 Normative references

The following referenced documents are indispensable for the application 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 60529:2001 Degrees of protection provided by enclosures (IP Code)

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

IEC 60534-1:2005, *Industrial-process control valves – Part 1: Control valve terminology and general considerations*

IEC 60534-2-1:1998, *Industrial-process control valves – Part 2-1: Flow-capacity – Sizing equations for fluid flow under installed conditions*

IEC 60534-2-4:2009, *Industrial-process control valves – Part 2-4: Flow capacity – Inherent flow characteristics and rangeability*

IEC 60534-2-5:2003, *Industrial-process control valves – Part 2-5: Flow-capacity – Sizing equations for fluid flow through multistage control valves with interstage recovery*

IEC 60534-3-1:2000, *Industrial-process control valves – 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*

IEC 60534-3-2:2001, *Industrial-process control valves – Part 3-2: Dimensions – Face-to-face dimensions for rotary control valves except butterfly valves*

IEC 60534-3-3:1998, *Industrial-process control valves – Part 3-3: Dimensions – Dimensions End-to-end dimensions for butt-weld, two-way, globe-type, straight pattern control valves*

IEC 60534-4:2006, *Industrial-process control valves – Part 4: Inspection and routine testing*

IEC 60534-5:2004, *Industrial-process control valves – Part 5: Marking*

IEC 60534-8-1:2005, *Industrial-process control valves – Part 8-1: Noise considerations – Laboratory measurement of noise generated by aerodynamic flow through control valves*

IEC 60534-8-3:2000, *Industrial-process control valves – Part 8-3: Noise considerations – Control valve aerodynamic noise prediction method*

IEC 60534-8-4:2005, *Industrial-process control valves – Part 8-4: Noise considerations – Prediction of noise generated by hydrodynamic flow*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in the IEC 60534 series apply.

4 Application

4.1 General

The control valve data sheet (Figure 1) below may be used for three different levels of control valve selection.

4.2 Preliminary valve specification

For a preliminary inquiry and/or quotation, buyer and vendor may agree on a minimum level of information. In this case, the buyer and manufacturer mark a few lines only in column 1 by a dot, triangle or other symbol. This method minimizes efforts for both buyer and vendor.

4.3 Inquiry valve specification

In inquiry stage, some of the process data and also some of the general requirements will not be fully known and specified. This may not allow the application of the IEC calculation methods given in IEC 60534-2-1 and IEC 60534-2-5. Preliminary valve sizing methods may be used at this stage. Since the main focus of the inquiry specification is to provide all data required to work out a comparable technical and commercial quote, in most cases there is a need to mark additional lines beyond those in 6.1. Also on the inquiry specification, the lines in column 1 shall be marked by a dot, triangle or other symbol by the buyer and manufacturer.

4.4 Order valve specification

A complete ordering specification should ideally include all relevant information about the valve, actuator and accessories concerned. In this case, the fully completed control valve data sheet becomes a kind of passport, which allows an exact identification and can be used for many purposes.

5 General requirements sheet

5.1 Purpose of the general requirements sheet

The purpose of the general requirements sheet (Figure 2), which is optional, is to provide a means for the user to specify general or special requirements that are applicable to a valve or group of valves. Examples are national and international standards, user company standards and special project requirements. These general or special requirements shall be listed in the table of contents section of page 1 of the general requirements sheet. Supplementary general requirements sheets (Figure 3) may be used as necessary. It may also be necessary to cross-reference the general requirements sheet(s) with the data sheets. If there is a conflict between the general requirements sheet and the data sheet, then the latter shall overrule.