
Industrial-process control valves - Part 6: Mounting details for attachment of positioners to control valves - Section 1: Positioner mounting on linear actuators (IEC 60534-6-1:1997)

Industrial-process control valves -- Part 6: Mounting details for attachment of positioners to control valves -- Section 1: Positioner mounting on linear actuators

Stellventile für die Prozeßregelung -- Montage-Einheiten zur Befestigung von Stellungsreglern an Stellventil-Antriebe -- Hauptabschnitt 1: Montage von Stellungsreglern an Hubantriebe (standards.iteh.ai)

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

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Industrial-process control valves
Part 6: Mounting details for attachment of positioners to control valves
Section 1: Positioner mounting on linear actuators
(IEC 60534-6-1:1997)

Vannes de régulation des processus
industriels
Partie 6: Détails d'assemblage pour le
montage des positionneurs sur les
actionneurs de vannes de régulation
Section 1: Montage des positionneurs
sur les actionneurs linéaires
(CEI 60534-6-1:1997)

Stellventile für die Prozeßregelung
Montage-Einheiten zur Befestigung
von Stellungsreglern an
Stellventil-Antriebe
Hauptabschnitt 1: Montage von
Stellungsreglern an Hubantriebe
(IEC 60534-6-1:1997)

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 65B/311/FDIS, future edition 1 of IEC 60534-6-1, prepared by SC 65B, Devices, of IEC TC 65, Industrial-process measurement and control, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60534-6-1 on 1997-10-01.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 1998-07-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 1998-07-01

Endorsement notice

The text of the International Standard IEC 60534-6-1:1997 was approved by CENELEC as a European Standard without any modification.

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Vannes de régulation des processus industriels –

Partie 6:

**Détails d'assemblage pour le montage
des positionneurs sur les actionneurs
de vannes de régulation –**

**Section 1: Montage des positionneurs
sur les actionneurs linéaires**

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Industrial-process control valves –

Part 6:

**Mounting details for attachment of
positioners to control valves –**

**Section 1: Positioner mounting on
linear actuators**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

INDUSTRIAL-PROCESS CONTROL VALVES –

**Part 6: Mounting details for attachment of positioners to control valves –
Section 1: Positioner mounting on linear actuators**

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 60534-6-1 has been prepared by subcommittee 65B: Devices, of IEC technical committee 65: Industrial-process measurement and control.

This standard, together with IEC 60534-6-2 when published, will cancel and replace the first edition of IEC 60534-6 published in 1985.

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

FDIS	Report on voting
65B/311/FDIS	65B/317/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.

INDUSTRIAL-PROCESS CONTROL VALVES –

Part 6: Mounting details for attachment of positioners to control valves – Section 1: Positioner mounting on linear actuators

1 Scope and object

This section of IEC 60534-6 is intended to permit a variety of positioning devices, which respond to a linear motion, to be mounted on the actuator of a control valve, either directly or by employing an intermediate mounting bracket. This section is applicable where interchangeability between actuators and positioners is desired.

The following parameters define the intended applicability of this section for the guidance of manufacturers and users.

- The standardized mounting applies only to positioners which are mounted on the side of the actuator.
- The standardized mounting applies in general only to actuators which have a travel from 10 mm through 100 mm.
- The standardized mounting is designed to cover three basic types of actuator designs (see figure 1):
 - a) those with some form of cast or fabricated yoke to connect the actuator power unit to the valve;
 - b) those which use some form of central tube yoke to connect the actuator power unit to the valve;
 - c) those in which the yoke incorporates two or more columns or pillars to connect the actuator power unit to the valve.

2 Definitions

For the purpose of this section of IEC 60534-6, the definitions given in the other parts of IEC 60534 apply.

3 Basic design principles

The objective is to standardize the attachment of the positioner to the side of the actuator to assure compatibility of products from different manufacturers.

3.1 For this purpose, the manufacturer of the actuator shall observe the design criteria described in figures 1 through 4. Such criteria consist of one or more of the following attachment means provided on the actuator yoke:

- a) one or more suitable rib(s) with fixing hole(s) (see figure 1e);
- b) a plane surface allowing the mounting of the positioner by means of two or more of the four outer threaded holes (see figure 2c);
- c) a suitable shape allowing the fastening of the mounting plate by means of U-bolts as indicated in figure 3c.

It is recommended that two means of the attachment of the same design be provided on both sides of the yoke in order to allow the reversal of positioner mounting from one side to the other side. However, if the actuator yoke can be turned by 180° without any change, then one side only attachment means may be provided.

3.2 The design of the positioner mounting shall assure:

- a) correct positioning of the positioner in relation to the actuator stem;
- b) rigid mounting of the positioner.

3.3 The manufacturer of the positioner may design a positioner incorporating a means of attachment compatible with this standard. Alternatively, a separate mounting plate may be supplied which is compatible with the standardized mounting.

4 Feedback connection

In order to standardize the feedback attachment to the actuator, a connection piece shall be provided which shall have four threaded holes tapped M6 surrounded with a bearing area of at least 10 mm diameter for each hole (see figure 2). The remaining design of the feedback attachment is not specified and may be designed to meet the requirements of each manufacturer. If the design permits the connection piece to be rotated through 180°, only two threaded holes, on one side only, need be provided.

The manufacturer of the positioner shall provide adequate means of transmitting the motion of the actuator stem to the positioner by use of the above connection piece.

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5 Mounting plate design

The positioner shall either incorporate the attachment means for the direct mounting or be provided with a mounting plate in accordance with the details given in figure 4. It should be noted that only the standardized details are given. Details such as material thickness to provide rigidity and design of mounting means of the positioner have not been standardized. The design of the mounting plate shall ensure sufficient contact with the rib or plane surface to ensure that the objective of 3.2b) is attained.

6 Actuator yoke mounting

The actuator yoke shall be provided with one of the following means for mounting the positioner:

- a) ribs of the cross-section shown in figure 1e and relative position shown in figures 1a, 1b and 1c;
- b) two U-bolts as shown in figures 3c and 5 provided that the diameter of the supporting pillars is between 20 mm and 35 mm;
- c) any two of the outer fixing holes in the bracket on a suitable surface.