

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**Industrial-process control systems – Instruments with analogue inputs and two or multi-position outputs –  
Part 2: Guidance for inspection and routine testing**

**Systèmes de commande de processus industriels – Instruments avec entrées analogiques et sorties à deux ou plusieurs positions –  
Partie 2: Conseils pour les inspections et les essais individuels de série**



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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**INDUSTRIAL-PROCESS CONTROL SYSTEMS –  
INSTRUMENTS WITH ANALOGUE INPUTS AND  
TWO OR MULTI-POSITION OUTPUTS –****Part 2: Guidance for inspection and routine testing**

## FOREWORD

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International standard IEC 61003-2 has been prepared by subcommittee 65B: Measurement and control devices, of IEC technical committee TC 65: Industrial-process measurement, control and automation.

This second edition cancels and replaces the first edition published in 2009. This edition constitutes a technical revision.

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

- a) use of the term "two- or multi-position output" instead of "two- or multi-state instrument" (see Scope);
- b) use of the term "differential gap" instead of "switching differential" (see Table 1 No 2);
- c) use of the term "dielectric strength" instead of "isolation test" (see Table 1 No 5).

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

FDIS	Report on voting
65B/1039/FDIS	65B/1049/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.

This International Standard is to be used in conjunction with IEC 61003-1:2016, IEC 61298-2:2008 and IEC 61298-3:2008.

A list of all parts of the IEC 61003 series, published under the general title *Industrial-process control systems – Instruments with analogue inputs and two or multi-position outputs*, 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 website 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- withdrawn,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.

# INDUSTRIAL-PROCESS CONTROL SYSTEMS – INSTRUMENTS WITH ANALOGUE INPUTS AND TWO OR MULTI-POSITION OUTPUTS –

## Part 2: Guidance for inspection and routine testing

### 1 Scope

This part of IEC 61003 gives guidelines for inspection and routine testing of electrical and pneumatic instruments with two- or multi-position output, for instance, for acceptance tests or after repair, and it is to be used in conjunction with IEC 61003-1:2016 IEC 61298-2:2008 and IEC 61298-3:2008.

This part of IEC 61003 is applicable to electrical and pneumatic industrial-process instruments, using measured values that are continuous signals. The set point value may be either a mechanical (position, force, etc.) or a standard signal. These instruments may be used as controllers or as switches for alarms and other similar purposes.

Quantitative criteria for acceptable performance should be established by agreement between manufacturer and user, and the report on the tests clarifies when tests were carried out. The requirements of this standard are effective when agreed by the manufacturer and the user.

### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61003-1:2016 *Industrial-process control systems – Instruments with analogue inputs and two- or multi-position outputs – Part 1: Methods for evaluating performance*

IEC 61298 (all parts), *Process measurement and control devices – General methods and procedures for evaluating performance*

IEC 61298-2:2008, *Process measurement and control devices – General methods and procedures for evaluating performance – Part 2: Tests under reference conditions*

IEC 61298-3:2008, *Process measurement and control devices – General methods and procedures for evaluating performance – Part 3: Tests for the effects of influence quantities*

IEC 61298-4, *Process measurement and control devices – General methods and procedures for evaluating performance – Part 4: Evaluation report content*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 61003-1, IEC 61298-2 and the following apply.