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Standards

Irish Standard  
I.S. EN 61003-2:2016

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

**I.S. EN 61003-2:2016**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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## National Foreword

I.S. EN 61003-2:2016 is the adopted Irish version of the European Document EN 61003-2:2016, Industrial-process control systems - Instruments with analogue inputs and two- or multi-position outputs - Part 2: Guidance for inspection and routine testing

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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EUROPEAN STANDARD

**EN 61003-2**

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2016

ICS 25.040.40

Supersedes EN 61003-2:2009

English Version

**Industrial-process control systems - Instruments with analogue inputs and two- or multi-position outputs - Part 2: Guidance for inspection and routine testing  
(IEC 61003-2:2016)**

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  
(IEC 61003-2:2016)

Systeme der industriellen Prozessleittechnik - Geräte mit analogen Eingängen und Zwei- oder Mehrpunktverhalten - Teil 2: Leitfaden für Funktionskontrolle und Serienprüfung  
(IEC 61003-2:2016)

This European Standard was approved by CENELEC on 2016-07-19. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

**EN 61003-2:2016**

**European foreword**

The text of document 65B/1039/FDIS, future edition 2 of IEC 61003-2, 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 61003-2:2016.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2017-05-04
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-11-04

This document supersedes EN 61003-2:2009.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

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## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

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.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61003-1	2016	Industrial-process control systems - Instruments with analogue inputs and two- or multi-position outputs - Part 1: Methods for evaluating performance	EN 61003-1	2016
IEC 61298	series	Process measurement and control devices - General methods and procedures for evaluating performance	EN 61298	series
IEC 61298-2	2008	Process measurement and control devices - General methods and procedures for evaluating performance - Part 2: Tests under reference conditions	EN 61298-2	2008
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	EN 61298-3	2008
IEC 61298-4	-	Process measurement and control devices - General methods and procedures for evaluating performance - Part 4: Evaluation report content	EN 61298-4	-

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**IEC 61003-2**

Edition 2.0 2016-06

# **INTERNATIONAL STANDARD**

# **NORME INTERNATIONALE**

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

**Systemes 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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**IEC 61003-2**

Edition 2.0 2016-06

# **INTERNATIONAL STANDARD**

# **NORME INTERNATIONALE**

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**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

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

## FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of 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, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). 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. 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 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 which 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.

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