ICS 25.040.40 SLOVENSKÁ TECHNICKÁ NORMA Marec 2017

| STN | **Meranie, riadenie a automatizácia priemyselných procesov. Hodnotenie vlastností systému s cieľom posúdiť systém. Časť 6: Posudzovanie obsluhovateľnosti systému.** | **STN EN 61069-6**<br><br>18 0451 |
|---|---|---|

Industrial-process measurement, control and automation - Evaluation of system properties for the purpose of system assessment - Part 6: Assessment of system operability

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 02/17

Obsahuje: EN 61069-6:2016, IEC 61069-6:2016

Oznámením tejto normy sa od 20.07.2019 ruší
STN EN 61069-6 (18 0451) z decembra 2001

**124354**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

# EN 61069-6

September 2016

ICS 25.040.40

Supersedes EN 61069-6:1998

English Version

# Industrial-process measurement, control and automation - Evaluation of system properties for the purpose of system assessment - Part 6: Assessment of system operability (IEC 61069-6:2016)

Mesure, commande et automation dans les processus industriels - Appréciation des propriétés d'un sytème en vue de son évaluation - Partie 6: Evaluation de l'opérabilité d'un système
(IEC 61069-6:2016)

Leittechnik für industrielle Prozesse - Ermittlung der Systemeigenschaften zum Zweck der Eignungsbeurteilung eines Systems - Teil 6: Eignungsbeurteilung der Systembedienbarkeit
(IEC 61069-6:2016)

This European Standard was approved by CENELEC on 2016-07-20. 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.

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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**



Ref. No. EN 61069-6:2016 E

## European foreword

The text of document 65A/794/FDIS, future edition 2 of IEC 61069-6, prepared by SC 65A "System aspects", of IEC/TC 65 "Industrial-process measurement, control and automation" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61069-6:2016.

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) 2017-04-20
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-07-20

This document supersedes EN 61069-6:1998.

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.

## Endorsement notice

The text of the International Standard IEC 61069-6:2016 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

| | | |
|---|---|---|
| IEC 61069-3:2016 | NOTE | Harmonized as EN 61069-3:201X [1)] (not modified). |
| IEC 61069-4:2016 | NOTE | Harmonized as EN 61069-4:201X [1)] (not modified). |
| IEC 61069-8 | NOTE | Harmonized as EN 61069-8. |
| IEC/TS 62603-1 | NOTE | Harmonized as CLC/TS 62603-1. |
| ISO 6385 | NOTE | Harmonized as EN ISO 6385. |
| ISO 9241-10 | NOTE | Harmonized as EN ISO 9241-10. |
| ISO 10075-1 | NOTE | Harmonized as EN ISO 10075-1. |
| ISO 10075-2 | NOTE | Harmonized as EN ISO 10075-2. |
| ISO 11064-1 | NOTE | Harmonized as EN ISO 11064-1. |
| ISO 11064-7 | NOTE | Harmonized as EN ISO 11064-7. |

1) To be published.

# 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.

| Publication | Year | Title | EN/HD | Year |
|---|---|---|---|---|
| IEC 61069-1 | 2016 | Industrial-process measurement, control and automation - Evaluation of system properties for the purpose of system assessment - Part 1: Terminology and basic concepts | EN 61069-1 | 201X [2)] |
| IEC 61069-2 | 2016 | Industrial-process measurement, control and automation - Evaluation of system properties for the purpose of system assessment - Part 2: Assessment methodology | EN 61069-2 | 201X [2)] |

2) To be published.

IEC 61069-6

Edition 2.0 2016-06

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

colour inside

## Industrial-process measurement, control and automation – Evaluation of system properties for the purpose of system assessment – Part 6: Assessment of system operability

## Mesure, commande et automation dans les processus industriels – Appréciation des propriétés d'un système en vue de son évaluation – Partie 6: Évaluation de l'opérabilité d'un système

IEC 61069-6:2016-06(en-fr)

IEC 61069-6

Edition 2.0 2016-06

# INTERNATIONAL STANDARD

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colour inside

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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# INDUSTRIAL-PROCESS MEASUREMENT, CONTROL AND AUTOMATION – EVALUATION OF SYSTEM PROPERTIES FOR THE PURPOSEOF SYSTEM ASSESSMENT –

## Part 6: Assessment of system operability

## 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 61069-6 has been prepared by subcommittee 65A: System aspects, of IEC technical committee 65: Industrial-process measurement, control and automation.

This second edition cancels and replaces the first edition published in 1998. This edition constitutes a technical revision.

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

a) reorganization of the material of IEC 61069-6:1998 to make the overall set of standards more organized and consistent;
b) IEC TS 62603-1 has been incorporated into this edition.

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

| FDIS | Report on voting |
|---|---|
| 65A/794/FDIS | 65A/804/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 in the IEC 61069 series, published under the general title *Industrial-process measurement, control and automation – Evaluation of system properties for the purpose of system assessment*, 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.

**IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.**

# INTRODUCTION

IEC 61069 deals with the method which should be used to assess system properties of a basic control system (BCS). IEC 61069 consists of the following parts.

Part 1: Terminology and basic concepts

Part 2: Assessment methodology

Part 3: Assessment of system functionality

Part 4: Assessment of system performance

Part 5: Assessment of system dependability

Part 6: Assessment of system operability

Part 7: Assessment of system safety

Part 8: Assessment of other system properties

Assessment of a system is the judgement, based on evidence, of the suitability of the system for a specific mission or class of missions.

To obtain total evidence would require complete evaluation (for example under all influencing factors) of all system properties relevant to the specific mission or class of missions.

Since this is rarely practical, the rationale on which an assessment of a system should be based is:

– the identification of the importance of each of the relevant system properties;
– the planning for evaluation of the relevant system properties with a cost-effective dedication of effort to the various system properties.

In conducting an assessment of a system, it is crucial to bear in mind the need to gain a maximum increase in confidence in the suitability of a system within practical cost and time constraints.

An assessment can only be carried out if a mission has been stated (or given), or if any mission can be hypothesized. In the absence of a mission, no assessment can be made; however, evaluations can still be specified and carried out for use in assessments performed by others. In such cases, IEC 61069 can be used as a guide for planning an evaluation and it provides methods for performing evaluations, since evaluations are an integral part of assessment.

In preparing the assessment, it can be discovered that the definition of the system is too narrow. For example, a facility with two or more revisions of the control systems sharing resources, for example a network, should consider issues of co-existence and inter-operability. In this case, the system to be investigated should not be limited to the “new” BCS; it should include both. That is, it should change the boundaries of the system to include enough of the other system to address these concerns.

The series structure and the relationship among the parts of IEC 61069 are shown in Figure 1.

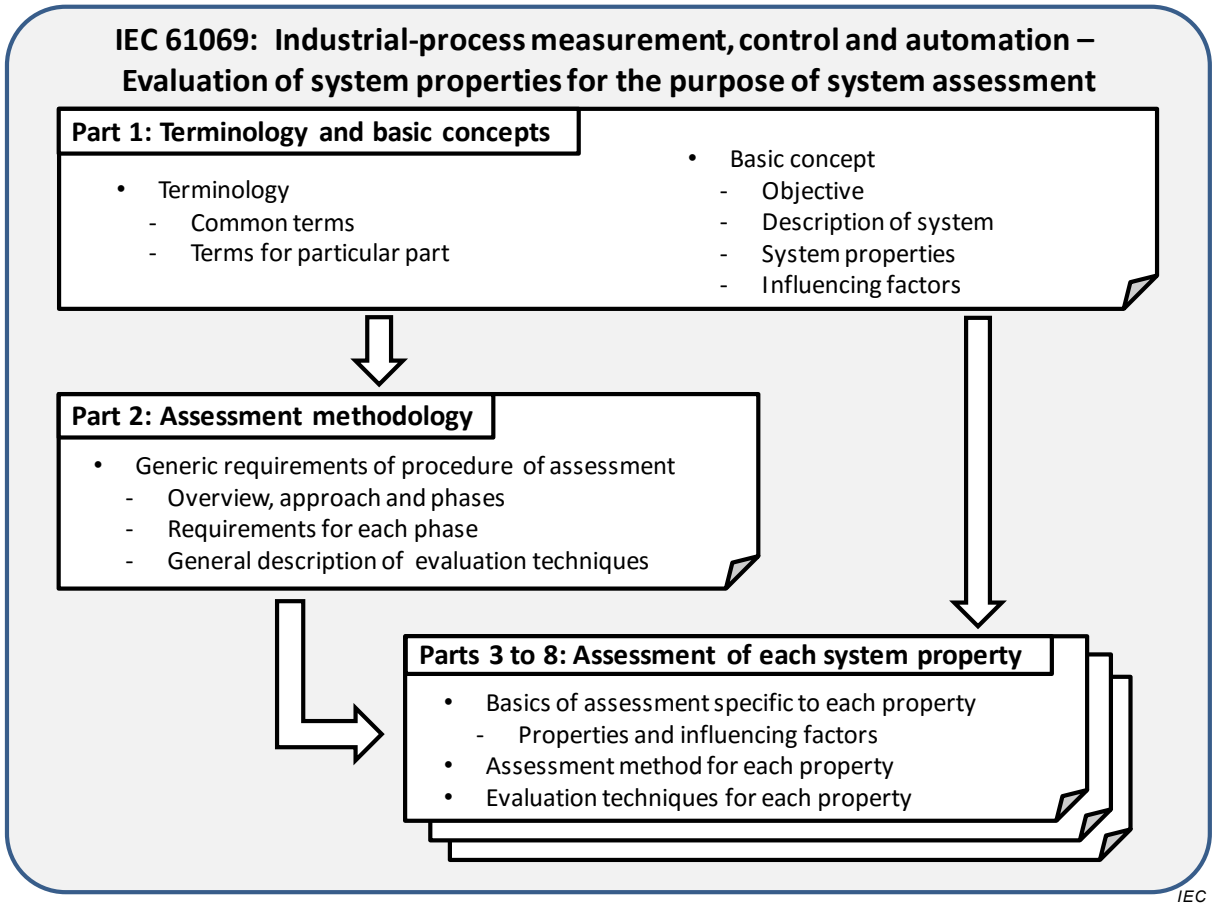


**Figure 1 – General layout of IEC 61069**

Some example assessment items are integrated in Annex C.

# INDUSTRIAL-PROCESS MEASUREMENT, CONTROL AND AUTOMATION – EVALUATION OF SYSTEM PROPERTIES FOR THE PURPOSEOF SYSTEM ASSESSMENT –

## Part 6: Assessment of system operability

## 1 Scope

This part of IEC 61069:

– specifies the detailed method of the assessment of operability of basic control system (BCS), based on the basic concepts of IEC 61069-1 and methodology of IEC 61069-2;

– defines basic categorization of operability properties;

– describes the factors that influence operability and which need to be taken into account when evaluating operability;

– provides guidance in selecting techniques from a set of options (with references) for evaluating the operability.

## 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 61069-1:2016, *Industrial-process measurement, control and automation – Evaluation of system properties for the purpose of system assessment – Part 1: Terminology and basic concepts*

IEC 61069-2:2016, *Industrial-process measurement, control and automation – Evaluation of system properties for the purpose of system assessment – Part 2: Assessment methodology*