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Industriell processtyrning och automation – Ramverk för digitala fabriker – Del 2: Modellelement

*Industrial-process measurement, control and automation –
Digital factory framework –
Part 2: Model elements*

Som svensk standard gäller europastandarden EN IEC 62832-2:2020. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 62832-2:2020.

Nationellt förord

Europastandarden EN IEC 62832-2:2020

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 62832-2, First edition, 2020 - Industrial-process measurement, control and automation - Digital factory framework - Part 2: Model elements**

utarbetad inom International Electrotechnical Commission, IEC.

ICS 25.040.40

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English Version

**Industrial-process measurement, control and automation - Digital
factory framework - Part 2: Model elements
(IEC 62832-2:2020)**

Mesure, commande et automation dans les processus
industriels - Cadre de l'usine numérique (digital factory) -
Partie 2: Éléments de modèles
(IEC 62832-2:2020)

Industrielle Leittechnik - Grundstruktur der digitalen Fabrik -
Teil 2: Modellelemente
(IEC 62832-2:2020)

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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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Comité Européen de Normalisation Electrotechnique
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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 65/830/FDIS, future edition 1 of IEC 62832-2, prepared by IEC/TC 65 "Industrial-process measurement, control and automation" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62832-2:2020.

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) 2021-08-30
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-11-30

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Endorsement notice

The text of the International Standard IEC 62832-2:2020 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 61360 (series)	NOTE	Harmonized as EN 61360 (series)
IEC 61360-2	NOTE	Harmonized as EN 61360-2
IEC 61987 (series)	NOTE	Harmonized as EN IEC 61987 (series)
IEC 61987-10:2009	NOTE	Harmonized as EN 61987-10:2009 (not modified)
IEC 62569-1	NOTE	Harmonized as EN 62569-1
IEC 62656-1:2014	NOTE	Harmonized as EN 62656-1:2015 (not modified)
IEC 62832-3:2020	NOTE	Harmonized as EN IEC 62832-3:2020 (not modified)
IEC 81346 (series)	NOTE	Harmonized as EN IEC 81346 (series)

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

NOTE 1 Where 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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 62832-1	2020	Industrial-process measurement, control and automation - Digital factory framework - Part 1: General principles	EN IEC 62832-1	2020
ISO/IEC 6523	series	Information technology - Structure for the identification of organizations and organization parts	-	-
ISO/TS 29002-5	2009	Industrial automation systems and integration - Exchange of characteristic data – Part 5: Identification scheme	-	-
IETF RFC 3986	-	Uniform Resource Identifier (URI): Generic Syntax	-	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**INDUSTRIAL-PROCESS MEASUREMENT, CONTROL
AND AUTOMATION – DIGITAL FACTORY FRAMEWORK –**
Part 2: Model elements**FOREWORD**

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International Standard IEC 62832-2 has been prepared by IEC technical committee 65: Industrial-process measurement, control and automation.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
65/830/FDIS	65/841/RVD

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

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

A list of all parts of the IEC 62832 series, published under the general title, *Industrial-process measurement, control and automation – Digital Factory framework*, can be found on the IEC website.

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

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

INTRODUCTION

IEC 62832 provides a framework used for establishing and maintaining the digital representations of production systems, including the representation of the elements of the production systems and of the relationships between these elements. The framework is intended also to support the exchange of information about these elements.

The framework aims at reducing the interoperability barriers for exchange of information for the various activities related to production systems. The main advantages of this method are that all information related to a production system is described in a standardized manner, and it can be used and modified through its entire life cycle. The method defined in IEC 62832 is kept as generic as possible in order to enable its use in several industrial sectors.

While IEC 62832-1 describes the general principles of the DF reference model together with its most important model elements, this part of IEC 62832 provides a technology-independent definition of all model elements of the DF reference model.

The intention of this document is to provide a common base for implementation of the DF framework using different technologies (for example different dictionary technologies and different engineering data formats). Proposals for such implementations are provided in Annex C.

The data type specification provided with this document is intended to allow mapping of the DF framework to different dictionaries.

Two types of templates for representation, namely for specific DataElementTypes and for model elements, are described in 3.3. Based on these templates, definitions of specific DataElementTypes are given in Clause 4, and definitions of model elements, using the DataElementTypes are given in Clause 5.

To allow broad use of the framework, the requirements for these two sets of definitions are kept as minimal as possible.

If the concepts of DF framework are applied to provide model elements for different engineering domains, domain-specific data specifications will be used (for example based on IEC 62656-1).

INDUSTRIAL-PROCESS MEASUREMENT, CONTROL AND AUTOMATION – DIGITAL FACTORY FRAMEWORK –

Part 2: Model elements

1 Scope

This part of IEC 62832 specifies detailed requirements for model elements of the Digital Factory framework. It defines the nature of the information provided by the model elements, but not the format of this information.

NOTE General requirements for the main model elements of the DF reference model are specified in IEC 62832-1.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 62832-1:2020, *Industrial-process measurement, control and automation – Digital Factory framework – Part 1: General principles*

ISO/IEC 6523 (all parts), *Information technology – Structure for the identification of organizations and organization parts*

ISO TS 29002-5:2009, *Industrial automation systems and integration – Exchange of characteristic data – Part 5: Identification scheme*

IETF RFC 3986, *Uniform Resource Identifier (URI): Generic Syntax*, available at <<http://www.ietf.org>> [viewed 2020-07-28]