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Integrering av processtyrning och affärssystem – Del 4: Attribut för objektmodeller för integration av produktionsstyrning

Enterprise-control system integration –

Part 4: Object model attributes for manufacturing operations management integration

Som svensk standard gäller europastandarden EN 62264-4:2016. Den svenska standarden innehåller den officiella engelska språkversionen av EN 62264-4:2016.

Nationellt förord

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- **IEC 62264-4, First edition, 2015 - Enterprise-control system integration - Part 4: Object model attributes for manufacturing operations management integration**

utarbetad inom International Electrotechnical Commission, IEC.

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English Version

**Enterprise-control system integration - Part 4: Object model
attributes for manufacturing operations management integration
(IEC 62264-4:2015)**

Intégration des systèmes entreprise-contrôle - Partie 4:
Attributs des modèles d'objets pour l'intégration de la
gestion des opérations de fabrication
(IEC 62264-4:2015)

Integration von Unternehmensführungs- und Leitsystemen -
Teil 4: Attribute des Objektmodells für die Integration des
operativen Produktionsmanagements
(IEC 62264-4:2015)

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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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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

European foreword

The text of document 65E/479/FDIS, future edition 1 of IEC 62264-4, prepared by SC 65E "Devices and integration in enterprise systems", of IEC/TC 65 "Industrial-process measurement, control and automation" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62264-4:2016.

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) 2016-10-20
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-01-20

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Endorsement notice

The text of the International Standard IEC 62264-4:2015 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 61512 (series)	NOTE	Harmonized as EN 61512 (series).
IEC 62541 (series)	NOTE	Harmonized as EN 62541 (series).

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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61511-1	-	Functional safety - Safety instrumented-systems for the process industry sector - Normative (uon) -- Part 1: Framework, definitions, system, hardware and software requirements		-
IEC 61512-4	2009	Batch control -- Part 4: Batch production records	EN 61512-4	2010
IEC 62264-1	2013	Enterprise-control system integration -- Part 1: Models and terminology	EN 62264-1	2013
IEC 62264-2	2013	Enterprise-control system integration -- Part 2: Object and attributes for enterprise-control system integration	EN 62264-2	2013
IEC 62264-3	-	Enterprise-control system integration -- Part 3 Activity models of manufacturing operations management	EN 62264-3	-
IEC 62682	-	Management of Alarm Systems for the Process Industries	EN 62682	-
ISO 8601	-	Data elements and interchange formats -- Information interchange - Representation of dates and times		-
ISO/IEC 19501	-	Information technology - Open Distributed-Processing - Unified Modeling Language (UML) Version 1.4.2		-
ISO/IEC 19505-1	-	Information technology - Object-Management Group Unified Modeling Language (OMG UML) - Part 1: Infrastructure		-
ISO/IEC 19505-2	-	Information technology - Object-Management Group Unified Modeling Language (OMG UML) - Part 2: Superstructure		-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ENTERPRISE-CONTROL SYSTEM INTEGRATION –**Part 4: Object model attributes for manufacturing
operations management integration****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 62264-4 has been prepared by subcommittee 65E: Devices and integration in enterprise systems, of IEC technical committee 65: Industrial-process measurement, control and automation.

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

FDIS	Report on voting
65E/479/FDIS	65E/488/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 62264 series, published under the general title *Enterprise-control system integration*, 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.

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

This part of IEC 62264 defines the interfaces between enterprise activities and control activities and is to be used in conjunction with IEC 62264-3.

The scope of this part of IEC 62264 is limited to defining the details of the information content of interfaces within manufacturing operations management. The scope is limited to the definition of object models and attributes for the information defined in IEC 62264-3. The goal is to reduce the effort, cost, and errors associated with implementing these interfaces.

The standard may be used to reduce the effort associated with implementing new product offerings. The goal is to have enterprise systems and control systems that interoperate and easily integrate.

This part of IEC 62264 further defines the object models and attributes involved in data exchange between activities of manufacturing operations management defined in 62264-3. The models and terminology defined in IEC 62264-3 and this part of IEC 6226

- a) emphasize good manufacturing operations management integration practices during the entire life cycle of the systems;
- b) can be used to improve existing integration capability of manufacturing operations management systems; and
- c) can be applied regardless of the degree of automation.

Specifically, IEC 62264-3 and this part of IEC 62264 provide a standard terminology and a consistent set of concepts and models for integrating manufacturing operations management systems that will improve communications between all parties involved. Benefits produced will

- d) reduce the user's time to reach full production levels for new products;
- e) enable vendors to supply appropriate tools for implementing integration of manufacturing operations management systems;
- f) enable users to better identify their needs;
- g) reduce the cost of automating manufacturing processes;
- h) optimize supply chains; and
- i) reduce life-cycle engineering efforts.

IEC 62264-3 and this part of IEC 62264 may be used to reduce the effort associated with implementing new product offerings. The goal is to have manufacturing operations management systems that interoperate and easily integrate.

It is not the intent of the standards to

- 1) suggest that there is only one way of implementing integration of manufacturing operations management systems;
- 2) force users to abandon their current way of handling integration; or
- 3) restrict development in the area of integration of manufacturing operations management systems.

ENTERPRISE-CONTROL SYSTEM INTEGRATION –

Part 4: Object model attributes for manufacturing operations management integration

1 Scope

This part defines object models and attributes exchanged between Level 3 manufacturing operations management activities defined in IEC 62264-3.

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 62264-1:2013, *Enterprise-control system integration – Part 1: Models and terminology*

IEC 62264-2:2013, *Enterprise-control system integration – Part 2: Object and attributes for enterprise-control system integration*

IEC 62264-3, *Enterprise-control system integration – Part 3: Activity models of manufacturing operations management*

IEC 61512-1, *Batch control – Part 1: Models and terminology*

IEC 61512-4:2009, *Batch control – Part 4: Batch production records*

IEC 62682, *Management of alarm systems for the process industries*

ISO/IEC 19501, *Information technology – Open Distributed Processing – Unified Modeling Language (UML) Version 1.4.2*

ISO/IEC 19505-1, *Information technology – Object Management Group Unified Modeling Language (OMG UML) – Part 1: Infrastructure*

ISO/IEC 19505-2, *Information technology – Object Management Group Unified Modeling Language (OMG UML) – Part 2: Superstructure*

ISO 8601, *Data elements and interchange formats – Information interchange – Representation of dates and times*