BS EN 62264-2:2013

BSI Standards Publication

Enterprise-control system integration

Part 2: Objects and attributes for enterprise-control system integration

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National foreword

This British Standard is the UK implementation of EN 62264-2:2013. It is identical to IEC 62264-2:2013. It supersedes BS EN 62264-2:2008 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee AMT/7, Industrial communications: process measurement and control, including fieldbus.

A list of organizations represented on this committee can be obtained on request to its secretary.

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

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Compliance with a British Standard cannot confer immunity from legal obligations.

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English version

Enterprise-control system integration - Part 2: Objects and attributes for enterprise-control system integration

(IEC 62264-2:2013)

Intégration des systèmes entreprise-contrôle -
Partie 2: Objets et attributs pour l'intégration des systèmes de commande d'entreprise
(CEI 62264-2:2013)

Integration von Unternehmensführungs- und Leitsystemen -
Teil 2: Objekte und Attribute für die Integration von Unternehmensführungs- und Leitsystemen
(IEC 62264-2:2013)

CENELEC

European Committee for Electrotechnical Standardization
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Europäisches Komitee für Elektrotechnische Normung

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Foreword

The text of document 65E/290/FDIS, future edition 2 of IEC 62264-2, prepared by SC 65E "Devices and integration in enterprise systems" of IEC/TC 65 "Industrial-process measurement, control and automation" and by ISO/TC 184/SC5 "Interoperability, integration and architectures for enterprise systems and automation applications" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62264-2:2013.

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)	2014-05-01
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2016-08-01

This document supersedes EN 62264-2:2008.

EN 62264-2:2013 includes the following significant technical changes with respect to EN 62264-2:2008:

a) update of the first edition;

b) addition of object models for exchange information used in manufacturing operations management activities, instead of just production operations management actives. The added object models were physical asset, operations definition, operations schedule, operations performance, and operations capability;

c) displacement of the production specific object models in Annex A;

d) displacement of the UML object models that were in EN 62264-1:2008 into this standard so that the object models and the associated attribute tables were available in the same document;

e) addition of the Hierarchy scope object definition to replace the Location attribute used in the previous edition;

f) addition of a value type section to define the exchange of non-simple value types;

g) definition of simple value types were defined using the ISO 15000-5.

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 62264-2:2013 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 61512-1	NOTE	Harmonised as EN 61512-1.
ISO 19439	NOTE	Harmonised as EN ISO 19439.
ISO 19440	NOTE	Harmonised as EN ISO 19440.

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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 62264-1	-	Enterprise-control system integration - Part 1: Models and terminology	EN 62264-1	-
ISO/IEC 19501	-	Information technology - Open Distributed Processing - Unified Modeling Language (UML)	-	-

CONTENTS

INTRODUCTION

This part of IEC 62264 further defines formal object models for exchange information described in IEC 62264-1 using UML object models, tables of attributes, and examples. The models and terminology defined in this part of IEC 62264:

a) emphasize good integration practices of control systems with enterprise systems during the entire life cycle of the systems;

b) can be used to improve existing integration capability of manufacturing control systems with enterprise systems; and

c) can be applied regardless of the degree of automation.

Specifically, this part of IEC 62264 provides a standard terminology and a consistent set of concepts and models for integrating control systems with enterprise systems that will improve communications between all parties involved. Benefits produced will:

a) reduce the user's time to reach full production levels for new products;

b) enable vendors to supply appropriate tools for implementing integration of control systems to enterprise systems;

c) enable users to better identify their needs;

d) reduce the cost of automating manufacturing processes;

e) optimize supply chains; and

f) reduce life-cycle engineering efforts.

This 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.

It is not the intent of the standards to:

a) suggest that there is only one way of implementing integration of control systems to enterprise systems;

b) force users to abandon their current way of handling integration; or

c) restrict development in the area of integration of control systems to enterprise systems.

ENTERPRISE-CONTROL SYSTEM INTEGRATION –

Part 2: Objects and attributes for enterprise-control system integration

1 Scope

This part of IEC 62264 specifies generic interface content exchanged between manufacturing control functions and other enterprise functions. The interface considered is between Level 3 manufacturing systems and Level 4 business systems in the hierarchical model defined in IEC 62264-1. The goal is to reduce the risk, cost, and errors associated with implementing the interface.

Since this standard covers many domains, and there are many different standards in those domains, the semantics of this standard are described at a level intended to enable the other standards to be mapped to these semantics. To this end this standard defines a set of elements contained in the generic interface, together with a mechanism for extending those elements for implementations.

The scope of IEC 62264-2 is limited to the definition of object models and attributes of the exchanged information defined in IEC 62264-1.

This part of IEC 62264 standard does not define attributes to represent the object relationships.

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

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

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 62264-1, as well as the following apply.

3.1.1
equipment class
grouping of role based equipment with similar characteristics

3.1.2
event
representation of a solicited or unsolicited fact indicating a state change in the enterprise