BS EN 62264-5:2016

BSI Standards Publication

Enterprise-control system integration

Part 5: Business to manufacturing transactions

bsi.

National foreword

This British Standard is the UK implementation of EN 62264-5:2016. It is identical to IEC 62264-5:2016. It supersedes BS EN 62264-5:2012 which is withdrawn.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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English Version

Enterprise-control system integration - Part 5: Business to manufacturing transactions (IEC 62264-5:2016)

Intégration du système de commande d'entreprise - Partie 5 : Transactions entre systèmes de gestion de commande d'entreprise et systèmes de fabrication (IEC 62264-5:2016)

Integration von Unternehmensführungs- und Leitsystemen - Teil 5: Transaktionen zwischen Unternehmungsführungs- und Produktionsleitsystemen (IEC 62264-5:2016)

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

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European foreword

The text of document 65E/459/CDV, future edition 2 of IEC 62264-5, prepared by SC 65E "Devices and integration in enterprise systems", of IEC/TC 65 "Industrial-process measurement, control and automation" and ISO/SC 5/JWG 5, of ISO/TC 184 "Automation systems and integration" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62264-5:2016.

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) 2017-05-25
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-11-25

This document supersedes EN 62264-5:2012

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Endorsement notice

The text of the International Standard IEC 62264-5:2016 was approved by CENELEC as a European Standard without any modification.

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 62264-2	2013	Enterprise-control system integration - Part 2: Objects 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 62264-4	-	Enterprise-control system integration - Part 4: Object model attributes for manufacturing operations management integration	EN 62264-4	-
ISO/IEC 19501	-	Information technology - Open Distributed Processing - Unified Modeling Language (UML) Version 1.4.2	-	-
ISO 8601	-	Data elements and interchange formats - Information interchange - Representation of dates and times	-	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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ENTERPRISE-CONTROL SYSTEM INTEGRATION –

Part 5: Business to manufacturing transactions

FOREWORD

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International Standard IEC 62264-5 has been prepared by subcommittee 65E: Devices and integration in enterprise systems, of IEC technical committee 65: Industrial-process measurement, control and automation and ISO SC5, JWG 5, of ISO technical committee 184: Automation systems and integration.

It is published as a double logo standard.

This second edition cancels and replaces the first edition published in 2011. This edition constitutes a technical revision.

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

The addition of transaction rules for objects defined in IEC 62264-4: Job, Job List, Job Response, Job Response List, Work Alert Definition, Work Alert, Work Calendar Definition, Work Calendar, Work Capability Work Directive, Work Master, Work Performance, Work Record, Work Schedule, Workflow Specification Node Type, Workflow Specification.

The text is based on the following documents:

CDV	Report on voting
65E/459/CDV	65E/493/RVC

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table. In ISO, the standard has been approved by […] P members out of […] having cast a vote.

This publication has been drafted in accordance with the ISO/IEC Directives, IEC 62264-2.

The list of all the parts of the IEC 62264 series, under the general title *Enterprise-control system integration*, can be found on the IEC website.

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

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 is based on the use of IEC 62264 abstract models previously defined in IEC 62264-2 and IEC 62264-4 combined with verbs to define a transaction model for information exchange. It is recognized that other non-IEC 62264-5 transaction protocols are possible and are not deemed invalid as a result. Transactions occur at all levels within the enterprise and between enterprise partners, and are related to both required and actual activities, but the focus of this part of IEC 62264 is the interface between enterprise/business systems and manufacturing systems.

This standard defines transactions that are exchanged between Level 4 and Level 3, and within Level 3 as defined in the object models of IEC 62264-2 and IEC 62264-4. Models are introduced which provide descriptions of the transactions and explanations of the required transaction processing behaviour.

Technology specific implementations to provide this behaviour are not defined in this standard. This part of IEC 62264 has the intent of providing insight into the level of work required to construct transactional exchanges.

ENTERPRISE-CONTROL SYSTEM INTEGRATION –

Part 5: Business to manufacturing transactions

1 Scope

This part of IEC 62264 defines transactions in terms of information exchanges between applications performing business and manufacturing activities associated with Levels 3 and 4. The exchanges are intended to enable information collection, retrieval, transfer and storage in support of enterprise-control system integration. This part of IEC 62264 is consistent with the IEC 62264-2 and IEC 62264-4 object models attributes. This standard also defines transactions that specify how to exchange the objects defined in IEC 62264-2, IEC 62264-4 and this standard. Other uses of the transaction model are not defined in this part.

The models covered in this standard are:

– Personnel model
– Equipment model
– Physical asset model
– Material model
– Process segment model
– Operations capability model
– Operations definition mode
– Operations schedule model
– Operations performance model
– Resource relationship network model
– Work capability model
– Work definition model
– Work schedule model
– Job list model
– Work performance model
– Workflow specification model
– Work calendar
– Work record
– Work alert model

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 62264-2:2013, *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*