Enterprise-control system integration - Part 3: Activity models of manufacturing operations management

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 62264-3:2017 sisaldab Euroopa standardi EN 62264-3:2017 ingliskeelset teksti.	This Estonian standard EVS-EN 62264-3:2017 consists of the English text of the European standard EN 62264-3:2017.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 24.03.2017.	Date of Availability of the European standard is 24.03.2017.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 25.040.01, 35.240.50

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62264-3

March 2017

ICS 25.040.01; 35.240.50

Supersedes EN 62264-3:2007

English Version

Enterprise-control system integration - Part 3: Activity models of manufacturing operations management (IEC 62264-3:2016)

Intégration des systèmes entreprise-contrôle - Partie 3: Modèles d'activités pour la gestion des opérations de fabrication (IEC 62264-3:2016)

Integration von Unternehmensführungs- und Leitsystemen - Teil 3: Aktivitätsmodelle für das Betriebsmanagement (IEC 62264-3:2016)

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 62264-3:2017 E

European foreword

The text of document 65E/456/CDV, future edition 2 of IEC 62264-3, 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 62264-3:2017.

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)	2017-10-20
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2020-01-20

This document supersedes EN 62264-3:2007.

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 62264-3:2016 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 61512-1	NOTE	Harmonized as EN 61512-1
IEC 61512-2	NOTE	Harmonized as EN 61512-2
IEC 62264-4	NOTE	Harmonized as EN 62264-4

CONTENTS

INTRODUCTION

This part of IEC 62264 shows activity models and data flows for manufacturing information that enables enterprise-control system integration. The modelled activities operate between Level 4 logistics and planning functions and Level 2 manual and automated process control functions. The models are consistent with the object models given in IEC 62264-2 and the Level 3 (manufacturing operations and control) definitions.

The goal of the standard is to reduce the risk, cost and errors associated with implementing enterprise systems and manufacturing operations systems in such a way that they inter-operate and easily integrate. The standard may also be used to reduce the effort associated with implementing new product offerings.

This standard provides models and terminology for defining the activities of manufacturing operations management. The models and terminology defined in this standard are:

– to emphasize the good practices of manufacturing operations;
– to be used to improve existing manufacturing operations systems;
– to be applied regardless of the degree of automation.

Some potential benefits produced when applying the standard may include:

– reducing the time to reach full production levels for new products;
– enabling vendors to supply appropriate tools for manufacturing operations;
– enabling more uniform and consistent identification of manufacturing needs;
– reducing the cost of automating manufacturing processes;
– optimizing supply chains;
– improving efficiency in life-cycle engineering efforts.

It is not the intent of this part of the standard to:

– suggest that there is only one way of implementing manufacturing operations;
– force users to abandon their current way of handling manufacturing operations;
– restrict development in the area of manufacturing operations;
– restrict use only to manufacturing industries.

ENTERPRISE-CONTROL SYSTEM INTEGRATION –

Part 3: Activity models of manufacturing operations management

1 Scope

This part of IEC 62264 defines activity models of manufacturing operations management that enable enterprise system to control system integration. The activities defined in this document are consistent with the object models definitions given in IEC 62264-1. The modelled activities operate between business planning and logistics functions, defined as the Level 4 functions and the process control functions, defined as the Level 2 functions of IEC 62264-1. The scope of this document is limited to:

– a model of the activities associated with manufacturing operations management, Level 3 functions;

– an identification of some of the data exchanged between Level 3 activities.

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

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

ISO 22400-1, *Automation systems and integration – Key performance indicators (KPIs) for manufacturing operations management – Part 1: Overview, concepts and terminology*

ISO 22400-2, *Automation systems and integration – Key performance indicators for manufacturing operations management – Part 2: Definitions and descriptions*

3 Terms, definitions and abbreviations

3.1 Terms and definitions

3.1.1
finite capacity scheduling
scheduling methodology where work is scheduled for production equipment, in such a way that no production equipment capacity requirement exceeds the capacity available to the production equipment

3.1.2
inventory operations management
activities within Level 3 of a manufacturing facility which coordinate, direct, manage and track inventory and material movement within manufacturing operations