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Enterprise-control system integration - Part 4: Object model attributes for manufacturing operations management integration

EESTI STANDARDI EESSÕNA

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ICS 25.040.99, 35.100.05, 35.200

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- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-01-20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

CONTENTS

FOREWORD.....	8
INTRODUCTION.....	10
1 Scope.....	11
2 Normative references	11
3 Terms, definitions, abbreviations and conventions.....	11
3.1 Terms and definitions.....	11
3.2 Symbols and abbreviations	13
3.3 Conventions.....	14
4 Information exchange between manufacturing operations.....	14
4.1 Activity information exchange network	14
4.2 Information exchange models	15
4.2.1 Overview	15
4.2.2 Process segments and work masters.....	15
4.2.3 Common resource definitions	15
4.2.4 Work models.....	15
5 Object model representation.....	16
5.1 Minimum attribute sets.....	16
5.2 Attribute extensibility.....	16
5.3 Object model structure.....	16
5.4 Conventions used in table of attributes	17
5.4.1 Attribute table elements.....	17
5.4.2 Object identification	18
5.4.3 Data types of attributes.....	18
5.4.4 Value types	18
5.4.5 Presentation of examples	18
5.4.6 References to resources.....	19
6 Resource relationship network model	19
6.1 Resource relationship network.....	19
6.2 Resource relationship network attributes.....	20
6.3 Resource network connection	21
6.4 Resource network connection property	22
6.5 From resource reference.....	22
6.6 From resource reference property.....	23
6.7 To resource reference.....	23
6.8 To resource reference property.....	24
6.9 Resource network connection type.....	25
6.10 Resource network connection type property.....	25
7 Work definition model	25
7.1 Work definition.....	25
7.2 Work master	26
7.3 Work directive.....	26
7.4 Work definition attributes	27
7.5 Parameter specification	28
7.6 Personnel specification	28
7.7 Personnel specification property	28

7.8	Equipment specification	29
7.9	Equipment specification property	29
7.10	Physical asset specification	29
7.11	Physical asset specification property.....	29
7.12	Material specification	29
7.13	Material specification property	29
7.14	Workflow specification	29
7.14.1	Workflow specification model.....	29
7.14.2	Workflow specification attributes.....	31
7.14.3	Workflow specification node	32
7.14.4	Workflow specification node property.....	32
7.14.5	Workflow specification connection	32
7.14.6	Workflow specification connection property	33
7.14.7	Workflow specification node type	33
7.14.8	Workflow specification node type property	33
7.14.9	Workflow specification connection type.....	34
7.14.10	Workflow specification connection type property	34
8	Work schedule and job list models.....	35
8.1	Work schedule	35
8.2	Work schedule attributes.....	37
8.3	Work request attributes	38
8.4	Job list definition.....	39
8.5	Job list attributes	40
8.6	Job order attributes.....	40
8.7	Job order parameter	42
8.8	Personnel requirement.....	42
8.9	Personnel requirement property	42
8.10	Equipment requirement.....	42
8.11	Equipment requirement property	42
8.12	Physical asset requirement	42
8.13	Physical asset requirement property	42
8.14	Material requirement.....	42
8.15	Material requirement property	42
8.16	Job order to work master relationship	42
9	Work performance model.....	43
9.1	Work performance	43
9.2	Work performance attributes	44
9.3	Work response.....	45
9.4	Job response list.....	46
9.5	Job response	47
9.6	Job response data	47
9.7	Personnel actual.....	47
9.8	Personnel actual property	48
9.9	Equipment actual.....	48
9.10	Equipment actual property	48
9.11	Physical asset actual	48
9.12	Physical asset actual property	48
9.13	Material actual	48
9.14	Material actual property	48

10	Work capability model.....	48
10.1	Work capability	48
10.2	Work capability attributes	49
10.3	Personnel capability.....	50
10.4	Personnel capability property.....	50
10.5	Equipment capability.....	50
10.6	Equipment capability property	51
10.7	Physical asset capability	51
10.8	Physical asset capability property	51
10.9	Material capability.....	51
10.10	Material capability property	51
11	Work master capability model	51
11.1	Work master capability.....	51
11.2	Work master capability attributes	52
11.3	Personnel capability.....	53
11.4	Personnel capability property.....	53
11.5	Equipment capability.....	53
11.6	Equipment capability property	54
11.7	Physical asset capability	54
11.8	Physical asset capability property	54
11.9	Material capability.....	54
11.10	Material capability property	54
12	Work KPI model.....	54
13	Work alert model	54
13.1	Work alert	54
13.2	Work alert definition	55
13.3	Work alert definition property	55
13.4	Work alert attributes.....	56
13.5	Work alert property	57
14	Work calendar model.....	57
14.1	Work calendar definition and work calendar	57
14.2	Work calendar definition	58
14.3	Work calendar definition entry.....	59
14.4	Work calendar definition entry property.....	60
14.5	Work calendar.....	60
14.6	Work calendar entry.....	60
14.7	Work calendar entry property	61
15	Work documents.....	61
16	Work record model	62
16.1	Work record definition	62
16.2	Work record	63
16.3	Work record extensions	63
16.4	Work record model.....	65
16.5	Work record entry	66
16.6	Work record container objects.....	67
16.7	Event types and subtypes	67
17	Object lists and relationships	68
18	Compliance	71

Annex A (informative) Questions and answers about object use	72
A.1 How are dependencies in the work schedule and work response handled?	72
A.2 What are examples of resource relationships?	72
Annex B (informative) Related standards	75
Annex C (informative) Representing a workflow specification in BPMN	77
Annex D (informative) Representing a workflow specification in flowchart notation.....	81
Annex E (informative) Example of work calendars.....	83
E.1 Four-day 24-hour shift pattern.....	83
E.2 Example of ISO 8601 format strings.....	85
E.3 Bank holiday work calendar	85
Bibliography.....	87
Figure 1 – Information exchange models for manufacturing operations management	14
Figure 2 – Resource relationship network model.....	20
Figure 3 – Work definition model.....	26
Figure 4 – Relationship of work master to work directive.....	27
Figure 5 – Workflow specification model	30
Figure 6 – Example of a workflow specification in BPMN format.....	30
Figure 7 – Example of a workflow specification in flowchart format	31
Figure 8 – Work schedule model.....	35
Figure 9 – Operations schedule for a site.....	36
Figure 10 – Work schedule for an area	36
Figure 11 – Work request, job order, job list.....	37
Figure 12 – Work request example for continuous processing.....	37
Figure 13 – Example of job orders and work master relationships	43
Figure 14 – Work performance model	44
Figure 15 – Work capability model	49
Figure 16 – Work master capability object model	52
Figure 17 – Work alert model.....	55
Figure 18 – Work calendar model	58
Figure 19 – Work record environment	63
Figure 20 – Work record container example.....	64
Figure 21 – Work record element reference example	65
Figure 22 – Work record model.....	66
Figure 23 – Relationship between models.....	69
Figure A.1 – Equipment resources	73
Figure A.2 – Routing relationship network.....	73
Figure A.3 – Gas main relationship network.....	74
Figure A.4 – “Usable in” relationship network.....	74
Figure B.1 – Relationship to IEC 62264-2 and IEC 61512 standards	76
Figure C.1 – Example of a workflow specification in BPMN notation.....	79
Figure C.2 – Example workflow process in the workflow specification model.....	80
Figure D.1 – Example of a workflow specification in flowchart notation	81
Figure D.2 – Example workflow process in the workflow specification model.....	82

Table 1 – UML notation used	17
Table 2 – Example table	18
Table 3 – Resource relationship network attributes	21
Table 4 – Resource network connection attributes	21
Table 5 – Resource network connection property attributes	22
Table 6 – From resource reference attributes.....	23
Table 7 – From resource reference property attributes.....	23
Table 8 – To resource reference attributes.....	24
Table 9 – To resource reference property attributes.....	24
Table 10 – Resource network connection type attributes.....	25
Table 11 – Resource network connection type property attributes.....	25
Table 12 – Additional attributes of material specification.....	27
Table 13 – Work definition attributes.....	28
Table 14 – Workflow specification attributes	31
Table 15 – Workflow specification node attributes.....	32
Table 16 – Workflow specification node property attributes.....	32
Table 17 – Workflow specification connection attributes.....	33
Table 18 – Workflow specification connection property attributes.....	33
Table 19 – Workflow specification node type attributes	33
Table 20 – Workflow specification node type property attributes	34
Table 21 – Workflow specification connection type attributes.....	34
Table 22 – Workflow specification connection property attributes.....	34
Table 23 – Work schedule attributes	38
Table 24 – Work request attributes	39
Table 25 – Job list attributes	40
Table 26 – Job order attributes	41
Table 27 – Work performance attributes	45
Table 28 – Work response attributes.....	46
Table 29 – Job response list attributes.....	46
Table 30 – Job response attributes	47
Table 31 – Work capability attributes	50
Table 32 – Work master capability attributes.....	53
Table 33 – Work alert definition attributes	55
Table 34 – Work alert definition property attributes	56
Table 35 – Examples of work alert properties.....	56
Table 36 – Work alert attributes	57
Table 37 – Work alert property attributes	57
Table 38 – Work calendar definition attributes	59
Table 39 – Work calendar definition entry attributes.....	59
Table 40 – Work calendar definition entry property attributes.....	60
Table 41 – Work calendar attributes.....	60
Table 42 – Work calendar entry attributes.....	61

Table 43 – Work calendar entry property attributes	61
Table 44 – Work record entry attributes	67
Table 45 – Additional event types and subtypes.....	68
Table 46 – Objects and models.....	70
Table E.1 – Four-day 24-hour shift pattern example.....	83
Table E.2 – Work calendar definition for 4-day 24-hour shift entry examples	83
Table E.3 – Work calendar definition entry for 4-day 24-hour shift example.....	84
Table E.4 – Work calendar entries for 2014 shift calendar	85
Table E.5 – Work calendar definition for 2014 England bank holidays.....	85
Table E.6 – Work calendar definition entries for 2014 England bank holidays	86

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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*

3 Terms, definitions, abbreviations and conventions

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.