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## **Industrial automation systems and integration — Parts library —**

Part 501:

### **Reference dictionary for measuring instruments — Registration procedure**

*Systèmes d'automatisation industrielle et intégration — Bibliothèque de  
composants —*

*Partie 501: Dictionnaire de référence pour les instruments de mesure —  
Procédure d'enregistrement*



Reference number  
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Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
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<b>Contents</b>	<b>Page</b>
Foreword .....	vi
Introduction .....	viii
1 Scope .....	1
2 Normative references.....	3
3 Terms, definitions, and abbreviations.....	4
4 Representation of ontology concepts as dictionaries entries .....	11
4.1 Measuring instrument classes .....	11
4.1.1 Modelled classes.....	11
4.1.2 Referenced classes.....	12
4.1.3 Used attributes .....	12
4.2 Property DET definitions .....	13
4.2.1 Modelled properties.....	13
4.2.2 Imported properties .....	13
4.2.3 Used Attributes .....	13
4.3 Data type definitions .....	15
4.3.1 Modelled domains of values.....	15
4.3.2 Used Attributes .....	15
4.4 Identification of dictionary entries .....	15
4.5 Specification of registration status .....	16
5 Classification principles .....	17
5.1 Connection to pre-existing classification .....	17
5.2 Upper level of the hierarchy.....	17
5.2.1 Principal identification hierarchy .....	17
5.2.2 Domain .....	17
5.2.3 Function.....	17
5.2.4 Principle .....	17
5.3 Subdivision of principal identification layers .....	18
5.4 Simplification of principal identification layers .....	18
5.5 Lower level of the hierarchy .....	18
5.6 Auxiliary classification .....	18
6 Computer sensible description.....	19

6.1	External files .....	19
6.2	Information model and conformance class .....	19
6.3	Implementation method .....	19
6.4	Language to be used for text attributes .....	19
6.5	Distribution of computer sensible descriptions.....	19
6.6	Control on the intermediate and formal releases.....	19
6.7	Registration authority identifier .....	20
7	Registration and maintenance procedure .....	21
7.1	Structure of registration authority .....	21
7.2	Role and responsibility .....	23
7.2.1	Role and responsibility of parties .....	23
7.2.2	Technical committee of registration authority .....	23
7.2.3	Secretary of registration authority .....	24
7.2.4	Validation committee of registration authority .....	25
7.2.5	ISO/IEC member body .....	26
7.3	Registration procedure .....	26
7.3.1	Decision rules .....	26
7.3.2	Registration process flow .....	27
7.3.3	Task of registration authority.....	30
8	Principles of dictionary edition, update, and maintenance .....	32
8.1	Initial release of the dictionary.....	32
8.2	Version and revision numbers of dictionary elements .....	32
8.2.1	Version number.....	32
8.2.2	Revision number.....	32
8.3	Identification of a formal release of the reference dictionary .....	33
Annex A	(normative) Information object registration .....	34
Annex B	(normative) Dictionary physical file .....	35
Annex C	(normative) Class definition .....	36
Annex D	(normative) Property definitions.....	37
Annex E	(normative) Application form for dictionary elements.....	38
Annex F	(informative) History of registration authority.....	44

Bibliography.....	45
-------------------	----

Index.....	47
------------	----

**Figures**

Figure 1 — BSU coding style .....	16
-----------------------------------	----

Figure 2 — Registration time frame .....	28
--	----

Figure 3 — Registration flow diagram .....	29
--	----

**Tables**

Table 1 — Structure of registration authority and levels of participation.....	22
--	----

Table F. 1 — Historical record of ISO13584-501 registration authorities.....	44
--	----

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/ IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this part of ISO 13584 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 13584-501 was prepared by Technical Committee ISO/TC 184, *Industrial automation systems and integration*, Subcommittee SC 4 *Industrial data*.

ISO 13584 consists of the following parts under the general title *Industrial automation systems and integration — Parts library*:

- *Part 1: Overview and fundamental principles;*
- *Part 20: Logical resource: Logical model of expressions;*
- *Part 24: Logical resource: Logical model of supplier library;*
- *Part 25: Logical resource: Logical model of supplier library with aggregate values and explicit content;*
- *Part 26: Logical resource: Information supplier identification;*

- *Part 31: Implementation resources: Geometric programming interface;*
- *Part 42: Description methodology: Methodology for structuring part families;*
- *Part 101: View exchange protocol: Geometric view exchange protocol by parametric program;*
- *Part 102: View exchange protocol by ISO 10303 conforming specification;*
- *Part 501: Reference dictionary for measuring instruments — Registration procedure;*
- *Part 511: Mechanical systems and components for general use — Reference dictionary for fasteners.*

The structure of the ISO 13584 series is described in ISO 13584-1. The numbering of the parts of ISO 13584 reflects its structure:

- Parts 10 to 19 specify the conceptual descriptions;
- Parts 20 to 29 specify the logical resources;
- Parts 30 to 39 specify the implementation resources;
- Parts 40 to 49 specify the description methodology;
- Parts 100 to 199 specify the view exchange protocol;
- Parts 500 to 599 specify the reference dictionaries.

A complete list of parts of ISO 13584 is available from the Internet:

[http://www.tc184-sc4.org/titles/PLIB\\_Titles.htm](http://www.tc184-sc4.org/titles/PLIB_Titles.htm)

## Introduction

ISO 13584 is an International Standard for the computer-interpretable representation and exchange of parts library data. The objective is to provide a neutral mechanism capable of transferring parts library data, independent of any application that is using a parts library data system. The nature of this description makes it suitable not only for the exchange of files containing parts, but also as a basis for implementing and sharing databases of parts library data.

ISO 13584 is organized as a series of parts, each published separately. The parts of ISO 13584 fall into one of the following series: logical resources, implementation resources, description methodology, view exchange protocol and reference dictionaries. The series are described in ISO 13584-1. This part of ISO 13584 is a member of the reference dictionaries series.

Parts of the standardized content series of parts specify ontologies for representing the entities of an application domain, together with their descriptive properties and domains of values. Each entity, property or domain of values constitutes an entry of a dictionary and it is associated with a computer sensible and human readable definition, and with a computer sensible identification. The unique identification of a dictionary entry allows it to be referenced unambiguously from any application. Definitions and identifications of dictionary entries are represented as instances of the EXPRESS entity data types defined in the common dictionary schema, or in its extensions defined in the logical series of parts of ISO 13584.

This part of ISO 13584 specifies the requirements for an ISO-registered reference dictionary for representing measuring instruments with their properties and domains of values. This part of ISO 13584 also establishes and specifies the behaviour of a registration authority whose role is to develop, maintain and update this ISO-registered reference dictionary for measuring instruments. These measuring instruments include environment measuring instruments and laboratory measuring instruments.