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Industrial automation systems and integration — Parts library —

Part 511: Mechanical systems and components for general use — Reference dictionary for fasteners

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

Partie 511: Systèmes mécaniques et composants pour utilisation générale — Dictionnaire de référence pour éléments de fixation

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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.

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 document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 13584-511 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 resource: Geometric programming interface*;

— *Part 42: Description methodology: Methodology for structuring part families*;

— *Part 101: 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 protocols;

— Parts 500 to 599 specify the reference dictionaries.

Should further parts of ISO 13584 be published, they will follow the same numbering pattern.

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.

This International Standard is organized as a series of parts, each published separately. The parts of ISO 13854 fall into one of the following series: conceptual descriptions, 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.

The reference dictionaries series of parts of ISO 13584 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 that is the formal and computer sensible representation of the specified ontology. It is associated with a computer sensible and human readable definition, and with a computer sensible identification. Identification of a dictionary entry allows for unambiguous reference from any application. Definitions and identifications of dictionary entries consist of 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 a reference dictionary for representing fasteners with their properties and domains of values, as they are described in the various ISO mechanical fastener standards.

The definitions of classes and properties in this fastener dictionary are referenced from:

— various ISO standards (see Bibliography);

— the Federal Item Identification Guide;

— Machinery’s Handbook (26th Edition).