

# ISO 10303-1:2021 (E)

## Industrial automation systems and integration — Product data representation and exchange — Part 1: Overview and fundamental principles

---

### Contents

	Foreword
	Introduction
1	Scope
2	Normative references
3	Terms, definitions and abbreviated terms
3.1	Terms and definitions
3.2	Abbreviated terms
4	Overview of ISO 10303
4.1	Purpose
4.2	Scope of ISO 10303
4.3	Fundamental principles
4.3.1	General
4.3.2	Integrated resources
4.3.3	Support for applications
4.3.4	Implementation methods
4.3.5	Implementations
4.3.6	Conformance testing
5	Architecture of ISO 10303
5.1	Concepts behind the architecture
5.2	Elaborations of the architecture
5.2.1	General
5.2.2	Sharing interpretations in the initial architecture
5.2.3	Sharing interpretations in the Modular architecture
5.2.3.1	General
5.2.3.2	Application module
5.2.3.3	Modular application protocol
5.2.3.4	Business object model
6	Structure of ISO 10303
6.1	Series of parts
6.2	Description methods
6.2.1	Purpose
6.2.2	The EXPRESS and EXPRESS-G modeling languages (ISO 10303-11)
6.2.3	The EXPRESS-X language
6.3	Implementation methods
6.3.1	Purpose
6.3.2	Use of formal language
6.3.3	Mapping from EXPRESS to implementation method
6.3.4	Exchange structures for product data (implementation)
6.3.5	Standard data access interface specification
6.3.6	EXPRESS to OMG XMI binding
6.3.7	BO Model implementation
6.4	Application interpreted construct
6.4.1	Purpose
6.4.2	Characteristics
6.5	Application modules
6.5.1	Purpose

6.5.2	Characteristics
6.5.3	Business benefits
6.6	Business object models
6.6.1	Purpose
6.6.2	EXPRESS Model of the Business Object.
6.6.3	An API Signature for a Business Object.
6.6.4	A UML Model of the Business Object.
6.7	Application protocols
6.7.1	Purpose
6.7.2	Definition of information requirements
6.7.3	Information representation
6.7.4	Implementation methods
6.7.5	Conformance requirements
6.8	Usage guides
6.8.1	Purpose
6.8.2	Characteristics
6.8.3	Document structure
6.8.4	Content
6.9	Conformance testing methodology and framework
6.9.1	Purpose
6.9.2	Procedures for conformance testing
6.9.3	Abstract test methods
6.10	Abstract test suites
7	Information object registration scheme
Annex A	(normative) Information object registration

Page count: 24