



NSAI
Standards

Irish Standard
I.S. EN 16931-1:2017+A1:2019

Electronic invoicing - Part 1: Semantic data model of the core elements of an electronic invoice

I.S. EN 16931-1:2017+A1:2019

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:

EN 16931-1:2017+A1:2019

Published:

2019-11-13

This document was published under the authority of the NSAI and comes into effect on:

2019-12-01

ICS number:

35.240.20

35.240.63

NOTE: If blank see CEN/CENELEC cover page

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

National Foreword

I.S. EN 16931-1:2017+A1:2019 is the adopted Irish version of the European Document EN 16931-1:2017+A1:2019, Electronic invoicing - Part 1: Semantic data model of the core elements of an electronic invoice

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

For relationships with other publications refer to the NSAI web store.

Compliance with this document does not of itself confer immunity from legal obligations.

In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

This page is intentionally left blank

EUROPEAN STANDARD

EN 16931-1:2017+A1

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2019

ICS 35.240.20; 35.240.63

English Version

Electronic invoicing - Part 1: Semantic data model of the core elements of an electronic invoice

Facturation électronique - Partie 1 : Modèle
sémantique de données des éléments essentiels d'une
facture électronique

Elektronische Rechnungsstellung - Teil 1:
Semantisches Datenmodell der Kernelemente einer
elektronischen Rechnung

This European Standard was approved by CEN on 17 April 2017 and includes Amendment 1 approved by CEN on 25 September 2019.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN 16931-1:2017+A1:2019 (E)

Contents	Page
European foreword	5
Introduction.....	7
1 Scope	9
2 Normative references	9
3 Terms and definitions.....	10
4 The concept of a core invoice	11
4.1 The core invoice model as a response to the challenge of interoperability.....	11
4.2 Contents of the core invoice model	12
4.3 How to use and extend the core invoice model	13
4.4 Compliance.....	14
4.4.1 General	14
4.4.2 Compliance of the core invoice usage specifications.....	14
4.4.3 Compliance of sending or receiving party	15
4.4.4 Compliance of an invoice document instance	15
5 Business processes and functionality supported by the core invoice.....	15
5.1 The business parties involved and their roles and relationships.....	15
5.2 Business process requirements supported	17
5.2.1 Introduction.....	17
5.2.2 Invoicing of deliveries against purchase orders, based on a contract (P1).....	18
5.2.3 Periodic invoicing of deliveries based on a contract, where no purchase order is required (P2)	19
5.2.4 Invoicing the delivery against an incidental purchase order (P3)	20
5.2.5 Pre-payment (P4)	20
5.2.6 Spot payment (P5).....	21
5.2.7 Payment in advance of delivery, based on a purchase order (P6).....	22
5.2.8 Invoices with references to a despatch advice (P7).....	22
5.2.9 Invoices with references to a despatch advice and a receiving advice (P8)	23
5.2.10 Credit Note or negative invoicing (P9).....	23
5.2.11 Corrective invoicing (P10)	24
5.2.12 Partial and final invoicing (P11)	25
5.2.13 Self-billing (P12)	26
5.3 Invoicing functionality supported.....	26
5.3.1 Introduction.....	26
5.3.2 Accounting.....	27
5.3.3 Invoice verification	27
5.3.4 VAT reporting	30
5.3.5 Auditing.....	31
5.3.6 Payment	32
5.3.7 Inventory	34
5.3.8 Delivery process.....	34
5.3.9 Customs clearance.....	34
5.3.10 Marketing	34
5.3.11 Reporting.....	34
5.4 The core invoice model in relation to other documents in the procurement process.....	35

6	The semantic data model of the core elements of an electronic invoice and credit note	35
6.1	Introduction.....	35
6.2	The core invoice model - Legend.....	38
6.3	The semantic model.....	40
6.4	Business rules	74
6.4.1	Integrity constraints.....	74
6.4.2	Conditions	77
6.4.3	VAT rules	79
6.5	Semantic data types.....	93
6.5.1	Introduction.....	93
6.5.2	Amount. Type.....	94
6.5.3	Unit Price Amount. Type.....	94
6.5.4	Quantity. Type.....	94
6.5.5	Percentage. Type.....	95
6.5.6	Identifier. Type.....	95
6.5.7	Document Reference. Type	95
6.5.8	Code. Type	95
6.5.9	Date. Type.....	96
6.5.10	Text. Type.....	96
6.5.11	Binary Object. Type.....	96
6.5.12	Decimals.....	97
6.5.13	Rounding.....	98
7	Core Invoice Usage Specification	98
7.1	Introduction.....	98
7.2	Compliance.....	99
7.3	What may be specified in a CIUS.....	99
7.3.1	Introduction.....	99
7.3.2	Allowed specifications in a CIUS.....	100
7.4	Documentation of core invoice usage specifications.....	101
7.5	Mapping to syntax	102
7.6	Identification of core invoice usage specifications.....	102
Annex A (informative)	Examples	103
A.1	Calculation examples	103
A.1.1	Introduction.....	103
A.1.2	Example 1 (Different Invoiced item VAT rates).....	103
A.1.3	Example 2 (Item price base quantity)	105
A.1.4	Example 3 (Invoiced quantity unit of measure)	107
A.1.5	Example 4 (Discounts, allowances and charges).....	108
A.1.6	Example 5 (Negative Invoice line)	111
A.1.7	Example 6 (Prepayment and negative Amount due for payment)	113
A.1.8	Example 7 (Standard VAT including VAT exempted lines)	114
A.1.9	Example 8 (Reverse Charge, Intra EU supply and Export Invoices).....	116
A.2	Number of decimals and rounding	117

EN 16931-1:2017+A1:2019 (E)

A.3	Use cases	118
A.3.1	Taxes other than VAT	118
A.3.2	Allowances and charges	121
A.3.3	Factoring.....	125
A.3.4	Payment instructions	127
A.3.5	Corrections.....	129
Annex B (informative)	Assessment of the compliance of the European Standard with the requirements of the Standardization Request of the European Commission.....	131
B.1	Introduction.....	131
B.2	Sections of the invoice.....	131
B.3	How requirements in the Standardization Request are met in EN 16931-1.....	132
B.3.1	EU Projects	132
B.3.2	Specific business requirements.....	134
B.3.3	ESO (European Standardization Organization- CEN) requirements.....	142
B.4	Guide to indicators for relevance and risk as used in the above tables.....	144
B.4.1	Relevance rating	144
B.4.2	Risk rating	144
Annex C (informative)	How the semantic model meets legal requirements from relevant directives	145
Annex D (informative)	BPMN symbols.....	150
Bibliography	153

European foreword

This document (EN 16931-1:2017+A1:2019) has been prepared by Technical Committee CEN/TC "Electronic Invoicing", the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2019, and conflicting national standards shall be withdrawn at the latest by May 2019.

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

This document includes Corrigendum 1 issued by CEN on 2019-11-13 and Amendment 1, approved by CEN on 2019-9-25.

This document supersedes A1 EN 16931-1:2017 A1.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

The start and finish of text introduced or altered by corrigendum is indicated in the text by tags AC AC.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive 2014/55/EU [1].

For relationship with EU Directive 2014/55/EU [1], see informative Annex B, which is an integral part of this document.

A1 Attention is drawn to the existence of deviations from the content of the EN due to national regulation. See annex E for all relevant information concerning them. A1

This document is part of a set of documents, consisting of:

- EN 16931-1:2017 Electronic invoicing - Part 1: Semantic data model of the core elements of an electronic invoice
- CEN/TS 16931-2:2017 Electronic invoicing - Part 2: List of syntaxes that comply with EN 16931-1
- CEN/TS 16931-3-1:2017 Electronic invoicing - Part 3-1: Methodology for syntax bindings of the core elements of an electronic invoice
- CEN/TS 16931-3-2:2017 Electronic invoicing - Part 3-2: Syntax binding for ISO/IEC 19845 (UBL 2.1) invoice and credit note

EN 16931-1:2017+A1:2019 (E)

- CEN/TS 16931-3-3:2017 Electronic invoicing - Part 3-3: Syntax binding for UN/CEFACT XML Cross Industry Invoice D16B
- CEN/TS 16931-3-4:2017 Electronic invoicing - Part 3-4: Syntax binding for UN/EDIFACT INVOIC D16B
- CEN/TR 16931-4:2017 Electronic invoicing - Part 4: Guidelines on interoperability of electronic invoices at the transmission level
- CEN/TR 16931-5:2017 Electronic invoicing - Part 5: Guidelines on the use of sector or country extensions in conjunction with EN 16931-1, methodology to be applied in the real environment
- CEN/TR 16931-6¹ Electronic invoicing - Part 6: Result of the test of EN 16931-1 with respect to its practical application for an end user - Testing methodology

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

¹ In preparation.

Introduction

The European Commission estimates that “The mass adoption of e-invoicing within the EU would lead to significant economic benefits and it is estimated that moving from paper to e-invoices will generate savings of around EUR 240 billion over a six-year period”². Based on this recognition “The Commission wants to see e-invoicing become the predominant method of invoicing by 2020 in Europe.”

To achieve this goal, Directive 2014/55/EU [1] on electronic invoicing in public procurement aims at facilitating the use of electronic invoices by economic operators when supplying goods, works and services to the public administration. The Directive sets out the legal framework for the establishment and use of a European Standard (EN) for the semantic data model of the core elements of an electronic invoice.

The semantic data model of the core elements of an electronic invoice – the core invoice model – as described in this document is based on the proposition that a quite limited, but sufficient set of information elements can be defined that supports generally applicable invoice-related functionalities. These functionalities are described in Clause 5. The core invoice model, as described in Clause 6, contains information elements that are commonly used and accepted including those that are legally required.

It is expected that in most situations, business partners would use the core invoice model exclusively and the invoices they send or receive would not contain any additional structured information elements. However, in some sectors or situations where there are specific information requirements, the required information may be conveyed in the form of unstructured text. Unstructured text has the drawback in that it cannot be processed automatically and therefore requires human intervention. Alternatively, the specific information requirements can be implemented using information elements that extend the core invoice model. Any such extension needs to respect the semantic definitions in the core invoice model. Only business partners that are part of such a sector or supply chain would be expected to be able to process the extensions. In these circumstances, it should be possible to define a number of required additional information elements whilst still utilizing the core invoice model concept.

In line with Directive 2014/55/EU [1] and after the publication of the reference to this document in the Official Journal of the European Union, all contracting authorities and contracting entities in the EU will be obliged to be able to receive and process an e-invoice as long as it contains all of the (applicable) core elements of an invoice defined in this European Standard (and provided that it is represented in any of the syntaxes identified in the related Technical Specification CEN/TS 16931-2 “List of syntaxes that comply with EN 16931-1” in accordance with the request referred to in paragraph 1 of article 3 of the Directive 2014/55/EU. The inclusion of any additional information which is not contained in the core model will be at the sender’s discretion and contained in unstructured text or in an extension, by agreement with the contracting entity. The inclusion of any extension in an e-invoice will be optional, and it will not form an integral part of the European Standard. See Clause 4 below for further detail on extensions.

By ensuring semantic interoperability of electronic invoices, the European Standard and its ancillary European standardization deliverables will serve to remove market barriers and

² <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0712:FIN:en:PDF>.

EN 16931-1:2017+A1:2019 (E)

obstacles to trade deriving from the existence of various national rules and standards – and thus contribute to the goals set by the European Commission.

1 Scope

This European Standard establishes a semantic data model of the core elements of an electronic invoice. The semantic model includes only the essential information elements that an electronic invoice needs to ensure legal (including fiscal) compliance and to enable interoperability for cross-border, cross sector and for domestic trade. The semantic model may be used by organizations in the private and the public sector for public procurement invoicing. It may also be used for invoicing between private sector enterprises. It has not been specifically designed for invoicing consumers.

This European Standard complies at least with the following criteria:

- it is technologically neutral;
- it is compatible with relevant international standards on electronic invoicing;
- the application of this standard should comply with the requirements for the protection of personal data of Directive 95/46/EC, having due regard to the principles of privacy and data protection by-design, data minimization, purpose limitation, necessity and proportionality;
- it is consistent with the relevant provisions of Directive 2006/112/EC [2];
- it allows for the establishment of practical, user-friendly, flexible and cost-efficient electronic invoicing systems;
- it takes into account the special needs of small and medium-sized enterprises as well as of sub-central contracting authorities and contracting entities;
- it is suitable for use in commercial transactions between enterprises.

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.

EN ISO 3166-1, *Codes for the representation of names of countries and their subdivisions — Part 1: Country codes (ISO 3166-1)*

ISO 4217, *Codes for the representation of currencies*

ISO 8601, *Data elements and interchange formats — Information interchange — Representation of dates and times*

ISO 15000-5, *Electronic Business Extensible Markup Language (ebXML) — Part 5: Core Components Specification (CCS)*

ISO/IEC 6523 (all parts), *Information technology — Structure for the identification of organizations and organization parts*

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-