DIN EN 16931-1:2017-12 (E)

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

Contents

Page

European foreword 5

Introduction 7

1 Scope 8

2 Normative references 8

3 Terms and definitions 9

4 The concept of a core invoice 10
4.1 The core invoice model as a response to the challenge of interoperability 10
4.2 of the core invoice model 11
4.3 How to use and extend the core invoice model 12
4.4 Compliance 13
4.4.1 General 13
4.4.2 Compliance of the core invoice usage specifications 13
4.4.3 Compliance of sending or receiving party 14
4.4.4 Compliance of an invoice document instance 14

5 Business processes and functionality supported by the core invoice 14
5.1 The business parties involved and their roles and relationships 14
5.2 Business process requirements supported 15
5.2.1 Introduction 15
5.2.2 Invoicing of deliveries against purchase orders, based on a contract (P1) 17
5.2.3 Periodic invoicing of deliveries based on a contract, where no purchase order is required (P2) 18
5.2.4 Invoicing the delivery against an incidental purchase order (P3) 18
5.2.5 Pre-payment (P4) 19
5.2.6 Spot payment (P5) 20
5.2.7 Payment in advance of delivery, based on a purchase order (P6) 21
5.2.8 Invoices with references to a despatch advice (P7) 21
5.2.9 Invoices with references to a despatch advice and a receiving advice (P8) 22
5.2.10 Credit Note or negative invoicing (P9) 22
5.2.11 Corrective invoicing (P10) 23
5.2.12 Partial and final invoicing (P11) 24
5.2.13 Self-billing (P12) 24
5.3 Invoicing functionality supported 25
5.3.1 Introduction 25
5.3.2 Accounting 25
5.3.3 Invoice verification 26
5.3.4 VAT reporting 29
5.3.5 Auditing 30
5.3.6 Payment 31
5.3.7 Inventory 32
5.3.8 Delivery process 32
5.3.9 Customs clearance 32
5.3.10 Marketing 32
5.3.11 Reporting 33
5.4 The core invoice model in relation to other documents in the procurement process 33

6 The semantic data model of the core elements of an electronic invoice and credit note ... 34
6.1 Introduction ... 34
6.2 The core invoice model - Legend ... 36
6.3 The semantic model ... 38
6.4 Business rules ... 70
6.4.1 Integrity constraints ... 70
6.4.2 Conditions ... 73
6.4.3 VAT rules ... 75
6.5 Semantic data types ... 89
6.5.1 Introduction ... 89
6.5.2 Amount. Type ... 90
6.5.3 Unit Price Amount. Type ... 90
6.5.4 Quantity. Type ... 90
6.5.5 Percentage. Type ... 91
6.5.6 Identifier. Type ... 91
6.5.7 Document Reference. Type ... 91
6.5.8 Code. Type ... 91
6.5.9 Date. Type ... 92
6.5.10 Text. Type ... 92
6.5.11 Binary Object. Type ... 92
6.5.12 Decimals ... 93
6.5.13 Rounding ... 94

7 Core Invoice Usage Specification ... 94
7.1 Introduction ... 94
7.2 Compliance ... 95
7.3 What may be specified in a CIUS ... 95
7.3.1 Introduction ... 95
7.3.2 Allowed specifications in a CIUS ... 96
7.4 Documentation of core invoice usage specifications ... 97
7.5 Mapping to syntax ... 98
7.6 Identification of core invoice usage specifications ... 98

Annex A (informative) Examples ... 99

A.1 Calculation examples ... 99
A.1.1 Introduction ... 99
A.1.2 Example 1 (Different Invoiced item VAT rates) ... 99
A.1.3 Example 2 (Item price base quantity) ... 101
A.1.4 Example 3 (Invoiced quantity unit of measure) ... 103
A.1.5 Example 4 (Discounts, allowances and charges) ... 104
A.1.6 Example 5 (Negative Invoice line) ... 107
A.1.7 Example 6 (Prepayment and negative Amount due for payment) ... 109
A.1.8 Example 7 (Standard VAT including VAT exempted lines) ... 110
A.1.9 Example 8 (Reverse Charge, Intra EU supply and Export Invoices) ... 112
A.2 Number of decimals and rounding ... 113
A.3 Use cases ... 114
A.3.1 Taxes other than VAT ... 114
A.3.2 Allowances and charges ... 117
A.3.3 Factoring ... 121
A.3.4 Payment instructions ... 123
A.3.5 Corrections ... 125

Annex B (informative) Assessment of the compliance of the European Standard with the requirements of the Standardization Request of the European Commission ... 127

B.1 Introduction ... 127
B.2 Sections of the invoice ... 127
B.3.1 EU Projects ... 128
B.3.2 Specific business requirements ... 130
B.3.3 ESO (European Standardization Organization- CEN) requirements ... 138
B.4 Guide to indicators for relevance and risk as used in the above tables ... 140

B.4.1 Relevance rating 140
B.4.2 Risk rating 140

Annex C (informative) How the semantic model meets legal requirements from relevant directives 141

Annex D (informative) BPMN symbols 146

Bibliography 149