

Information technology - Automatic identification and data capture techniques - Electronic identification plate

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

Information technology - Automatic identification and data capture techniques - Electronic identification plate

Technologies de l'information - Techniques
automatiques d'identification et de saisie de données -
Plaque signalétique électronique

Informationstechnik - Automatische Identifikation und
Datenerfassungsverfahren - Elektronisches
Typenschild

This European Standard was approved by CEN on 25 June 2018.

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European foreword

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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of an identical text or by endorsement, at the latest by August 2019, and conflicting national standards shall be withdrawn at the latest by August 2019.

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Introduction

Many items are equipped with a type plate, which contains the most relevant data for the identification of the item and to fulfil legal requirements. These type plates are widely manufacturer and user specific. This causes problems as the data construction for machine readable processing is done in different ways.

The data on type plates is among others required for the installation, maintenance and inventory management of items. Machine readable data carriers are used more and more to support reading the data in higher efficiency and with fewer errors.

In order to rationalize the related activities, the data constructs used in type plates needs to be in a consistent way to allow use of both human readable and machine readable information on the type plate.

RFID can give access to the data without that the type plate should be directly visible to the reader and may offer the possibility for rewriting part of the content or add content. Depending on the memory size of the transponder more data can be stored.

1 Scope

This document defines a concept for building data structures (including data elements, syntax and semantics) for type plates with a RFID transponder (including HF, UHF, NFC), 2D symbol (including DataMatrix, QR-Code) and human readable text in a consistent way.

This document also defines a minimum set of consistent data that are needed on the data carriers when multiple data carrier techniques are used on the same item.

This document also gives guidance for creating specific applications standards, to support interoperability and backward compatibility.

The processes related to the usage of type plates are not in scope of this document.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 16571:2014, *Information technology — RFID privacy impact assessment process*

EN 16656, *Information technology — Radio frequency identification for item management — RFID Emblem (ISO/IEC 29160:2012, modified)*

ISO/IEC 15418, *Information technology — Automatic identification and data capture techniques — GS1 Application Identifiers and ASC MH10 Data Identifiers and maintenance*

ISO/IEC 15424, *Information technology — Automatic identification and data capture techniques — Data Carrier Identifiers (including Symbology Identifiers)*

ISO/IEC 15434, *Information technology — Automatic identification and data capture techniques — Syntax for high-capacity ADC media*

ISO/IEC 15459-2, *Information technology — Automatic identification and data capture techniques — Unique identification — Part 2: Registration procedures*

ISO/IEC 15459-4, *Information technology — Automatic identification and data capture techniques — Unique identification — Part 4: Individual products and product packages*

ISO/IEC 15962:2013, *Information technology — Radio frequency identification (RFID) for item management — Data protocol: data encoding rules and logical memory functions*

ISO/IEC 16022, *Information technology — Automatic identification and data capture techniques — Data Matrix bar code symbology specification*

ISO/IEC 18000-3, *Information technology — Radio frequency identification for item management — Part 3: Parameters for air interface communications at 13,56 MHz*

ISO/IEC 18000-63, *Information technology — Radio frequency identification for item management — Part 63: Parameters for air interface communications at 860 MHz to 960 MHz Type C*

ISO/IEC 18004, *Information technology — Automatic identification and data capture techniques — QR Code bar code symbology specification*

ISO/IEC 19762, *Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary*

EPC Tag Data Standard

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 19762 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

4 Concepts

4.1 Principles

Type plates are typically attached physically to the item to provide basic information about the item.

Shape and content of type plates vary depending on sector and type of equipment.

For some sectors / equipment types, regulations mandate specific format and content.

This standard defines general rules for machine readable type plates, and how to implement sectors / equipment specific additional requirements in machine readable form.

4.2 Type plate format

This standard specifies the machine readable representation of data in barcodes and/or RFID, including the barcode symbology standards and the RFID radio protocols standards to be used for type labels.

This standard also specifies some aspects for human readable data to ease consistent processing with machine readable data. Item specific type plate format aspects such as a minimum or maximum size or shapes are not restricted by this standard.

4.3 Interoperability on Data Level

The physical, syntactical and semantical representations in the different media depend on the media / data carrier. Capturing and pre-processing the data from the type labels requires different equipment and tools, depending on used media. However once captured and pre-processed the encoded data map –as far as possible– to a technology independent set of data elements. Figure 1 shows how interoperable data encoded and transmitted with different technologies can be provided for applications and services for technology-independent further processing.