SLOVENSKI STANDARD
SIST EN 16656:2014

01-december-2014

Informacijska tehnologija - Radiofrekvenčna prepoznava za upravljanje pretoka predmetov - Emblem RFID (ISO/IEC 29160:2012, spremenjen)

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

Informationstechnik - Identifizierung von Waren mittels Hochfrequenz(RFID) für das Management des Warenflusses - RFID- Emblem (ISO/IEC 29160:2012, modifiziert)

Technologies de l'information - Identification par radiofréquence (RFID) pour la gestion d'objets - Emblème RFID (ISO/CEI 29160:2012, modifié)

Ta slovenski standard je istoveten z: **EN 16656:2014**

ICS:

35.040.50	Tehnike za samodejno razpoznavanje in zajem podatkov	Automatic identification and data capture techniques
35.240.60	Uporabniške rešitve IT v prometu	IT applications in transport

SIST EN 16656:2014 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 16656

June 2014

ICS 35.240.60

English Version

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

Technologies de l'information - Identification par radiofréquence (RFID) pour la gestion d'objets - Emblème RFID (ISO/CEI 29160:2012, modifié)

Informationstechnik - Identifizierung von Waren mittels Hochfrequenz (RFID) für das Management des Warenflusses - RFID-Emblem (ISO/IEC 29160:2012, modifiziert)

This European Standard was approved by CEN on 8 May 2014.

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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.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword

This document (EN 16656:2014) has been prepared by Technical Committee CEN/TC 225 “AIDC technologies”, 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of an identical text or by endorsement, at the latest by December 2014, and conflicting national standards shall be withdrawn at the latest by December 2014.

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

The modifications to ISO/IEC 29160:2012 are indicated by a vertical line in the margin.

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

Introduction

Radio frequency identification (RFID) is a technology that touches all aspects of the supply chain, from manufacturing all the way to the end-use consumer.

It is important for industrial users, retailers and consumers to know when an RFID tag is present. To this end, the RFID Emblem specified in this International Standard provides the public with a readily identifiable method to inform users of the presence of RFID.

The RFID Emblem provides a visible identification of RFID transponders, interrogators, and tagged items. Visible signs inform consumers whether an item or product contains an RFID tag. Therefore, this meets one of the main requirements for consumer privacy protection.

The RFID Emblem is a public-domain object intended to augment rather than replace other emblems and logos such as recycling and CE. The RFID Emblem requires no fee for use nor does it have any membership or other use restriction or requirement, other than compliance with this International Standard.

1 Scope

This European Standard specifies the design and use of the RFID Emblem: an easily identified visual guide that indicates the presence of radio frequency identification (RFID). It does not address location of the RFID Emblem on a label. Specific placement requirements are left to application standards developers.

It also specifies an RFID Index, which can be included in the RFID Emblem and which addresses the complication added by the wide range of RFID tags (frequency, protocol and data structure). The RFID Index is a two-character code that provides specific information about compliant tags and interrogators. Successful reading of RFID tags requires knowledge of the frequency, protocol and data structure information provided by the RFID Index.

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

3 Terms, definitions, symbols and abbreviations

For the purposes of this document, the terms, definitions, symbols and abbreviations given in EN ISO/IEC 19762 (all parts) apply.

4 The RFID Emblem

4.1 General

The RFID Emblem's genesis was the AIM RFID Emblem, developed by the AIM Global RFID Experts Group (REG). The RFID Emblem consists of a unique, public-domain emblem with a two-character code (RFID Index) to indicate the frequency range and, in certain cases, the data structure contained within the encoded RFID transponder. A generic emblem without the RFID Index is permitted. Due to the incompatibility of different types of RFID, the use of the generic emblem is discouraged.

The RFID Emblem may be used in conjunction with other logos or indicia that indicate specific applications of RFID.

4.2 RFID Index

Two-character codes are used to identify the frequency, the air interface protocol, the defining agency for the data, and the data on the tag. This is referred to as the RFID Index. The first character defines the frequency, air interface protocol and defining authority, the second character defines the data structure.

To help installation planners identify encoding or reading equipment suitable for a particular frequency and data structure, a "generic" code with an asterisk (*) as the second character is assigned for each grouping. This code shall only be used on interrogators and shall not be used on labels or tags. Currently assigned two-character codes are given in Annex A. Codes not currently assigned are reserved for future use.

4.3 Representation

The two representations of the RFID Emblem are dark-on-light and light-on-dark, as illustrated below. Examples of the RFID Emblem for use on RFID-enabled printers/encoders and interrogators, and for use on labels are also illustrated.

Figure 1 illustrates the RFID Emblem. Earlier forms and representations of the emblem are not compliant with this International Standard.

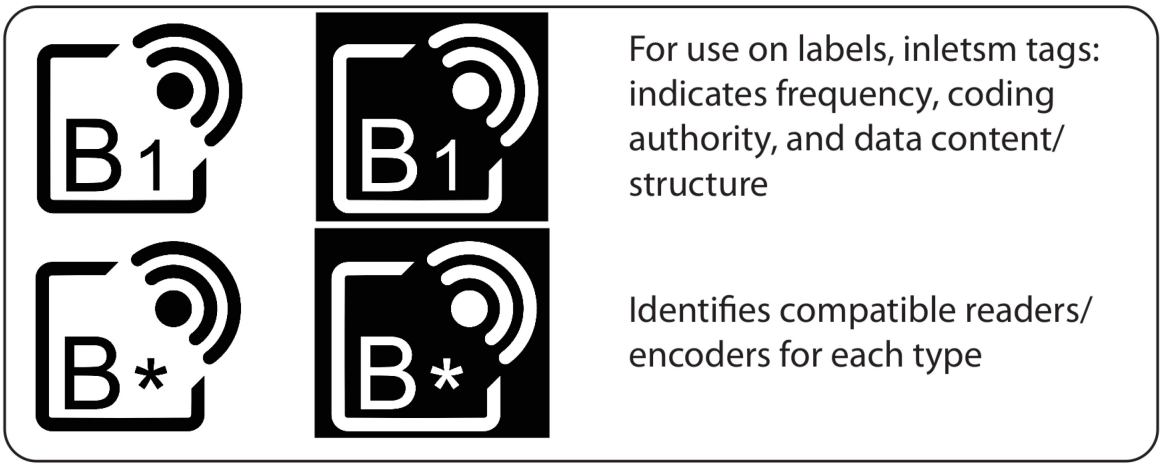

Figure 1 — Examples of the RFID Emblem

Either form of the RFID Emblem may be used; the form which most visually striking on the printed RFID-enabled label material or tag should be used.

The RFID Emblem may also be engraved or embossed in the covering of an RFID tag or item containing an RFID transponder.

As described in 4.6 and Figure 2, a generic emblem with the characters “RFID” is also defined for transponders and interrogators with non-standardized communication protocols and/or non-standardized data structures.

4.4 Size

The RFID Emblem should be printed no smaller than 14 mm by 13 mm, in any colour. There shall be a minimum 3 mm clear, unprinted area around the RFID Emblem. If direct marking on small components/products, a smaller emblem may be used but in no case shall the emblem be smaller than 5 mm square. When represented in a low contrast form, it should be large enough to be easily recognizable under typical use conditions.

The general purpose version of the RFID Emblem illustrated in Figure B.2 has been adopted by the European Commission for use as the Notification Emblem in the Common European RFID sign as specified in this European Standard, EN 16656:2014.

Where the RFID Emblem is to be used as the Common European RFID Notification Emblem, Clause 4.4 of this EN shall be understood to permit the emblem to be printed not less than 5 mm square.

Design graphics for the RFID Emblem are shown in Annex B.

4.5 Placement

Placement of the RFID Emblem shall be determined by an appropriate application standard. In the absence of an appropriate application standard, the RFID Emblem shall be placed such that it is easily visible to those trying to read the RFID tag or label. To improve readability, the RFID Emblem should be located near the actual transponder.

4.6 Using the RFID Emblem

The RFID Emblem is free to use by any RFID label, tag, encoder or interrogator manufacturer and companies printing or using RFID labels and tags who self-certify their compliance to the assignments of Table A.1.

Manufacturers of RFID equipment who do not comply with the Table A.1 assignments are free to use the following graphic to denote “RFID inside”.

Figure 2 — Graphic for generic RFID equipment

Large, high-quality (300 dpi) graphics of the RFID Emblem for all current assignments are available at: https://www.aimglobal.org/estore/ProductDetails.aspx?productID=286. These graphics may be resized to meet user needs.

Graphic files are available in bmp, jpg, eps and pcx formats. Additional formats will be made available upon request.

4.7 Restrictions on use

The RFID Emblem shall not be modified in any way.

Ad hoc and “internal use only” assignments of two-character codes in conjunction with the RFID Emblem are prohibited.

5 Maintenance

5.1 General

As more standards and user applications evolve, additional index assignments will be made. Corresponding graphics will be made available for download from the AIM Global website.

5.2 Requesting an index assignment

Anyone may request additional index assignments by submitting the application form shown in Annex C. Requests should be addressed to ISO_IEC_29160_RegistrationAuthority@aimglobal.org.

The completed information from Annex C shall be provided for all requests.

5.3 Criteria for additional index assignments

— The technology standard(s) shall be stable.

— The issuer of the technology standard(s) shall be an internationally recognized standards-setting organization.

— The data authority shall be a widely recognized coding authority.

— There is a demonstrated need for the assignment.

Annex A
(normative)

RFID Index

Table A.1 — Two-character code assignments for the RFID Emblem

2-Character Printed Code	Transponder Frequency	Air Interface Protocol	Data Structure Defining Agency	Data Structure
RFID	Mutually agreed	Mutually agreed	Mutually agreed	Indicates transponders and interrogators
A*	433 MHz	ISO/IEC 18000-7	ISO JWG	Indicates compatible interrogators
A0	433 MHz	ISO/IEC 18000-7	(RFU)	Reserved for future use
A1	433 MHz	ISO/IEC 18000-7	ISO 17363	License plate ID plus optional application data
A2	433 MHz	ISO/IEC 18000-7	(RFU)	Reserved for future use
A3	433 MHz	ISO/IEC 18000-7	(RFU)	Reserved for future use
Not Listed	433 MHz	OTHER APPLICATION AND AIR INTERFACE NOT LISTED		
B*	860-960 MHz	ISO/IEC 18000-6 C	ISO JWG	Indicates compatible interrogators
B0	860-960 MHz	ISO/IEC 18000-6 C	(RFU)	Reserved for future use
B1	860-960 MHz	ISO/IEC 18000-6 C	ISO 17364	License plate ID plus optional application data
B2	860-960 MHz	ISO/IEC 18000-6 C	(RFU)	Reserved for future use
B3	860-960 MHz	ISO/IEC 18000-6 C	ISO 17365	License plate ID plus optional application data
B4	860-960 MHz	ISO/IEC 18000-6 C	(RFU)	Reserved for future use
B5	860-960 MHz	ISO/IEC 18000-6 C	ISO 17366	License plate ID plus optional application data
B6	860-960 MHz	ISO/IEC 18000-6 C	(RFU)	Reserved for future use
B7	860-960 MHz	ISO/IEC 18000-6 C	ISO 17367	License plate ID plus optional application data
B8	860-960 MHz	ISO/IEC 18000-6 C	ISO 17363	License plate ID plus optional application data
Not Listed	860-960 MHz	OTHER APPLICATION AND AIR INTERFACE NOT LISTED		