

Irish Standard I.S. EN 62090:2017

Product package labels for electronic components using bar code and two-dimensional symbologies

© CENELEC 2017 No copying without NSAI permission except as permitted by copyright law.

I.S. EN 62090:2017

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: Published:

EN 62090:2017 2017-07-07

This document was published ICS number:

under the authority of the NSAI

and comes into effect on:

31.190
31.200

2017-07-25 35.040

NOTE: If blank see CEN/CENELEC cover page

NSAI T +353 1 807 3800 Sales:

 1 Swift Square,
 F +353 1 807 3838
 T +353 1 857 6730

 Northwood, Santry
 E standards@nsai.ie
 F +353 1 857 6729

 Dublin 9
 W NSAI.ie
 W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

This is a free page sample. Access the full version online.

National Foreword

I.S. EN 62090:2017 is the adopted Irish version of the European Document EN 62090:2017, Product package labels for electronic components using bar code and two-dimensional symbologies

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 is a free page sample. Access the full version online.

This page is intentionally left blank

This is a free page sample. Access the full version online. I.S. EN 62090:2017

EUROPEAN STANDARD

EN 62090

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2017

ICS 31.190; 31.200; 35.040

Supersedes EN 62090:2003

English Version

Product package labels for electronic components using bar code and two- dimensional symbologies (IEC 62090:2017)

Etiquettes d'emballage de produits pour composants électroniques, utilisant un code à barres et une symbologie bidimensionelle (IEC 62090:2017) Etiketten für Verpackungen elektronischer Bauelemente unter Anwendung von Strichcodierung und zweidimensionaler Symbologien (IEC 62090:2017)

This European Standard was approved by CENELEC on 2017-05-16. CENELEC 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 CENELEC 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 CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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



European Committee for Electrotechnical Standardization Comité Européen de Normalisation Electrotechnique Europäisches Komitee für Elektrotechnische Normung

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

European foreword

The text of document 91/1394/CDV, future edition 2 of IEC 62090, prepared by IEC/TC 91 "Electronics assembly technology" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62090:2017.

The following dates are fixed:

•	latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2018-02-16
•	latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2020-05-16

This document supersedes EN 62090:2003.

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

Endorsement notice

The text of the International Standard IEC 62090:2017 was approved by CENELEC as a European Standard without any modification.

IEC 60194	NOTE	Harmonized as EN 60194.
IEC 60286-1	NOTE	Harmonized as EN 60286-1.
IEC 60286-2	NOTE	Harmonized as EN 60286-2.
IEC 60286-3	NOTE	Harmonized as EN 60286-3.
IEC 60286-4	NOTE	Harmonized as EN 60286-4.
IEC 60286-5	NOTE	Harmonized as EN 60286-5.
IEC 60286-6	NOTE	Harmonized as EN 60286-6.
IEC 61760-4	NOTE	Harmonized as EN 61760-4.
ISO/IEC 15416	NOTE	Harmonized as EN ISO/IEC 15416.
ISO/IEC 15438	NOTE	Harmonized as EN ISO/IEC 15438.
ISO 3166-1	NOTE	Harmonized as EN ISO 3166-1.

EN 62090:2017

Annex ZA

(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here:

www.cenelec.eu.				
<u>Publication</u>	<u>Year</u>	<u>Title</u>	EN/HD	<u>Year</u>
ISO 8601	-	Data elements and interchange formats -	-	-
		Information interchange - Representation		
		of dates and times		
ISO/IEC 15417	_	Information technology - Automatic	_	_
		identification and data capture techniques	-	
		Code 128 bar code symbology		
		specification		
ISO/IEC 15418	_	Information technology - Automatic	_	_
100/120 10+10		identification and data capture techniques	_	
		GS1 Application Identifiers and ASC MH1		
		Data Identifiers and maintenance	O	
ISO/IEC 15434		Information technology - Automatic		
100/100 10404	_	identification and data capture techniques	_	_
		Syntax for high-capacity ADC media	-	
ISO/IEC 15459	series			series
130/IEC 13439	Selles	Information technology - Automatic	-	series
		identification and data capture techniques	-	
100/150 40000		Unique identification		
ISO/IEC 16022	-	Information technology - Automatic	-	-
		identification and data capture techniques	-	
		Data Matrix bar code symbology		
		specification		
ISO/IEC 16388	-	Information technology - Automatic	-	-
		identification and data capture techniques		
		Code 39 bar code symbology specification	า	
ISO/IEC 18004	-	Information technology - Automatic	-	-
		identification and data capture techniques	-	
		QR Code bar code symbology specification	n	
ISO/IEC 19762	-	Information technology - Automatic	-	-
		identification and data capture (AIDC)		
		techniques - Harmonized vocabulary		
ANSI MH 10.8.2	-	Data Identifier and Application Identifier	-	-
		Standard		

This is a free page sample. Access the full version online.

This page is intentionally left blank



IEC 62090

Edition 2.0 2017-04

INTERNATIONAL STANDARD



Product package labels for electronic components using bar code and twodimensional symbologies





THIS PUBLICATION IS COPYRIGHT PROTECTED Copyright © 2017 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

IEC Central Office Tel.: +41 22 919 02 11 3, rue de Varembé Fax: +41 22 919 03 00

CH-1211 Geneva 20 info@iec.ch Switzerland www.iec.ch

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigenda or an amendment might have been published.

IEC Catalogue - webstore.iec.ch/catalogue

The stand-alone application for consulting the entire bibliographical information on IEC International Standards, Technical Specifications, Technical Reports and other documents. Available for PC, Mac OS, Android Tablets and iPad

IEC publications search - www.iec.ch/searchpub

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee,...). It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and also once a month by email.

Electropedia - www.electropedia.org

The world's leading online dictionary of electronic and electrical terms containing 20 000 terms and definitions in English and French, with equivalent terms in 16 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

IEC Glossary - std.iec.ch/glossary

65 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

IEC Customer Service Centre - webstore.iec.ch/csc

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: csc@iec.ch.



IEC 62090

Edition 2.0 2017-04

INTERNATIONAL STANDARD



Product package labels for electronic components using bar code and twodimensional symbologies

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ICS 31.190; 31.200; 35.040.50

ISBN 978-2-8322-4160-8

Warning! Make sure that you obtained this publication from an authorized distributor.

- 2 - IEC 62090:2017 © IEC 2017

CONTENTS

FC	REWO	RD	4
1	Scop	e	6
2	Norm	ative references	6
3	Term	s and definitions	7
4		I data content and requirements	
-	4.1	Data elements – general	
	4.2	Mandatory data elements	
	4.2.1	Manufacturer item identification – DI "1P" and "25P"	
	4.2.2		
	4.2.3	·	
	4.2.4		
	4.2.5	·	
	4.2.6		
	4.2.7	Production date – DI "16D"	9
	4.2.8	Package identification – DI "J" and "3S"	9
	4.3	Optional data elements	10
	4.3.1	Expiration date – DI "14D"	10
	4.3.2	Revision level – DI "2P"	10
	4.3.3	EIAJ ID – DI "3N"	10
	4.3.4		
	4.3.5	3 11	
	4.3.6	•	
	4.3.7		
	4.4	Data semantics and formats defined by the data identifiers	
	4.5	Data representation	
	4.5.1	ŭ	
	4.5.2	,	
	4.5.3	- J	
	4.6	Data carrier selection	
	4.6.1	Linear bar code symbols	
		Two-dimensional (2D) symbols	
	4.7	Label size, layout, and location	
	4.7.1 4.7.2		
	4.7.2	•	
	4.7.4	•	
Δr		informative) Quality aspects of labels – Adhesive characteristics and	10
, (1		bility of marking	20
	A.1	General	20
	A.2	Recommendations	20
	A.2.1	General	20
	A.2.2	Adhesion characteristics	20
	A.2.3	Use and protection	20
	A.2.4	·	
	A.2.5	Durability	21
	A.2.6	Blank label stock contamination	21
	A.3	Method of test	21

A.3.1 Adhesive strength	21
A.3.2 Blank label stock contamination	21
A.3.3 Recyclability	22
Annex B (informative) ISO/IEC 15434 Data Transfer Syntax	23
Annex C (informative) URL	24
C.1 General	
C.2 Principle of using the URL DI "33L"	
C.3 Principle of using the P2P URL DI "34L"	25
C.4 Implementation of product to internet communication by help of P2P data identifier "34L"	25
Annex D (informative) Examples of data element short titles	
Annex E (informative) Package levels for component package labels	
E.1 Inner and outer product packages	
E.2 "Unit load packages" / "handling units" / "overpacks"	
E.3 "Shipping units" / "transport packages"	29
Bibliography	30
Figure 1 – Label with a linear bar code, Data Matrix symbol and human-readable	47
information	
Figure 2 – Label with minimum content, Data Matrix and human-readable information	
Figure 3 – Label with minimum content, QR Code and human-readable information	
Figure 4 – Typical label locations	
Figure A.1 – Adhesion tester	
Figure B.1 – Example of encoding data elements in a 2D symbol	
Figure C.1 – Smartphone with P2P App for access to P2P information	
Figure E.1 – Examples for intimate/inner packages	
Figure E.2 – Example for outer package with more than one inner package	
Figure E.3 – Example of "unit loads" or "handling units" or "overpacks"	
Figure E 4 – Examples of transport packages	29
Table 1 – Data identifiers	11
Table 2 – Mandatory data elements and their representations	13
Table 3 – Valid combinations of representation of optional data elements	14
Table 4 – Product package label symbol requirements – Code 39	15
Table 5 – Product package label symbol requirements – Code 128	16
Table C.1 – How to use the URL DI "33L".	
Table C.2 – How to use the P2P URL DI "34L"	
Table C.3 –ASC DIs used for the P2P code example:	26
Table D.1 – Examples of data element short titles	27

IEC 62090:2017 © IEC 2017

INTERNATIONAL ELECTROTECHNICAL COMMISSION

PRODUCT PACKAGE LABELS FOR ELECTRONIC COMPONENTS USING BAR CODE AND TWO-DIMENSIONAL SYMBOLOGIES

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 62090 has been prepared by IEC technical committee 91: Electronics assembly technology.

This second edition cancels and replaces the first edition published in 2002. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) Applicable data elements have been added. Data identifiers of those data elements are "10D", "14D", "2P", "25L", "18V", "V", "J", "3S", "13E", "33L" and "34L".
- b) The following new informative annexes have been added:
 - Annex C, URL;
 - Annex D, Examples of data element short titles;
 - Annex E, Package levels for component package labels.

-4 -

IEC 62090:2017 © IEC 2017

- 5 -

The text of this International Standard is based on the following documents:

CDV	Report on voting	
91/1394/CDV	91/1430/RVC	

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

IEC 62090:2017 © IEC 2017

PRODUCT PACKAGE LABELS FOR ELECTRONIC COMPONENTS USING BAR CODE AND TWO-DIMENSIONAL SYMBOLOGIES

1 Scope

This document applies to labels on the packaging of electronic components for automatic handling in B2B processes. These labels use linear bar code and two-dimensional (2D) symbols. Labels for direct product marking and shipping labels are excluded. Labels required on the packaging of electronic components that are intended for the retail channel of distribution in B2C processes are also excluded from this document.

Bar code and 2D symbol markings are used, in general, for automatic identification and automatic handling of components in electronics assembly lines. Intended applications include systems that automate the control of component packages during production, inventory and distribution.

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.

ISO/IEC 15417, Information technology – Automatic identification and data capture techniques – Code 128 bar code symbology specification

ISO/IEC 15418, Information technology – Automatic identification and data capture techniques – GS1 Application Identifiers and ASC MH 10 Data Identifiers and maintenance

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

ISO/IEC 15459 (all parts), Information technology – Automatic identification and data capture techniques – Unique identification

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

ISO/IEC 16388, Information technology – Automatic identification and data capture techniques – Code 39 bar code symbology specification

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

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

ANSI MH10.8.2, Data Identifier and Application Identifier Standard

- 6 -



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

Product Page

- Dooking for additional Standards? Visit Intertek Inform Infostore
- Dearn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation