



**NSAI**  
Standards

Irish Standard  
I.S. EN ISO 19160-4:2017

# Addressing - Part 4: International postal address components and template language (ISO 19160-4:2017)

**I.S. EN ISO 19160-4:2017**

*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:*

EN ISO 19160-4:2017

*Published:*

2017-12-13

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

2017-12-31

ICS number:

35.240.70

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 ISO 19160-4:2017 is the adopted Irish version of the European Document EN ISO 19160-4:2017, Addressing - Part 4: International postal address components and template language (ISO 19160-4:2017)

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**  
**NORME EUROPÉENNE**  
**EUROPÄISCHE NORM**

**EN ISO 19160-4**

December 2017

ICS 35.240.70

Supersedes EN 14142-1:2011

English Version

**Addressing - Part 4: International postal address  
components and template language (ISO 19160-4:2017)**

Adressage - Partie 4: Composants et langages des  
modèles d'adresses postales internationales (ISO  
19160-4:2017)

Adressierung - Teil 4: Bestandteile internationaler  
postalischer Anschriften und Template-Sprachen (ISO  
19160-4:2017)

This European Standard was approved by CEN on 12 December 2017.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, 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 ISO 19160-4:2017 (E)**

<b>Contents</b>	<b>Page</b>
<b>European foreword.....</b>	<b>3</b>

## **European foreword**

This document (EN ISO 19160-4:2017) has been prepared by Technical Committee ISO/TC 211 “Geographic information/Geomatics” in collaboration with Technical Committee CEN/TC 331 “Postal services” 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 June 2018, and conflicting national standards shall be withdrawn at the latest by June 2018.

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 supersedes EN 14142-1:2011.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

### **Endorsement notice**

The text of ISO 19160-4:2017 has been approved by CEN as EN ISO 19160-4:2017 without any modification.

This page is intentionally left blank

# INTERNATIONAL STANDARD

**ISO  
19160-4**

First edition  
2017-11

---

---

## **Addressing —**

Part 4:

### **International postal address components and template language**

*Adressage —*

*Partie 4: Composants et langages des modèles d'adresses postales  
internationales*



Reference number  
ISO 19160-4:2017(E)

© ISO 2017

**ISO 19160-4:2017(E)**



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2017, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Ch. de Blandonnet 8 • CP 401  
CH-1214 Vernier, Geneva, Switzerland  
Tel. +41 22 749 01 11  
Fax +41 22 749 09 47  
copyright@iso.org  
www.iso.org

# Contents

Page

<b>Foreword</b> .....	<b>v</b>
<b>Introduction</b> .....	<b>vi</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>2</b>
<b>4 Abbreviated terms</b> .....	<b>6</b>
<b>5 Conformance</b> .....	<b>6</b>
5.1 Composition .....	6
5.2 U-code.....	6
5.3 Rendering of postal address.....	6
5.4 PATDL template.....	6
<b>6 Postal address components</b> .....	<b>7</b>
6.1 General.....	7
6.2 Postal address segments .....	9
6.3 Postal address constructs.....	10
6.4 Postal address elements .....	10
6.5 Postal address sub-elements .....	16
6.6 Requirement for composition.....	19
<b>7 Element and sub-element codes</b> .....	<b>19</b>
7.1 General.....	19
7.2 Requirement for a U-code .....	19
<b>8 Postal address rendering</b> .....	<b>20</b>
8.1 General.....	20
8.2 Rendering parameters.....	22
8.3 Rendition instructions.....	22
8.3.1 General.....	22
8.3.2 Concatenation.....	23
8.3.3 Abbreviation .....	23
8.3.4 Punctuation.....	23
8.4 Requirements for rendering of postal address .....	23
8.5 Requirement for domain of postal address template.....	24
<b>9 Postal address template description language (PATDL)</b> .....	<b>24</b>
9.1 General.....	24
9.2 PATDL as an XML Schema.....	24
9.2.1 General.....	24
9.2.2 Requirement for encoding of rendering rules.....	25
9.2.3 Requirement for data populating PATDL elements .....	25
9.3 PATDL elements .....	25
9.3.1 General.....	25
9.3.2 templateIdentifier .....	26
9.3.3 userPreferences .....	27
9.3.4 triggerConditions .....	27
9.3.5 lineData.....	29
9.3.6 combinedData.....	31
<b>Annex A (normative) Abstract test suites</b> .....	<b>33</b>
<b>Annex B (informative) Postal address profile of ISO 19160-1</b> .....	<b>35</b>
<b>Annex C (informative) Mapping conventions</b> .....	<b>42</b>
<b>Annex D (informative) Template design patterns</b> .....	<b>51</b>

**ISO 19160-4:2017(E)**

<b>Annex E (informative) PATDL features</b> .....	<b>55</b>
<b>Annex F (informative) Example of PATDL template</b> .....	<b>58</b>
<b>Bibliography</b> .....	<b>61</b>

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 211, *Geographic information/Geomatics*.

A list of all parts in the ISO 19160 series can be found on the ISO website.

## ISO 19160-4:2017(E)

### Introduction

Postal service provides letter, package and parcel delivery on a global and universal basis, without the need for mailers and recipients to enter into explicit service contracts. Postal addresses, which combine private recipient information with publicly known delivery point data, provide the mechanism through which mailers specify the intended recipient and the means by which the postal operator can fulfil its delivery commitment.

Traditionally, postal operators have been highly flexible with regard to the manner in which postal items can be addressed; any form and content of address was acceptable as long as it permitted sufficiently unambiguous determination of the delivery point. Even today, many posts pride themselves on their ability, using staff intelligence and local knowledge, to deliver postal items carrying incomplete or unusual address representations.

However, increasing volumes and labour cost rates long ago reached the point at which automation became not only economic, but essential. As a result, it has become more and more vital to ensure that the vast majority of postal items are addressed in a way which can be processed automatically, without risk of misinterpretation.

When mail is sent with addresses that are incorrect or incomplete, there is the possibility of undeliverable as addressed mail (UAA mail) which results in the mail being sent back to a return address, being sent on to a forwarding address or discarded as waste. All this unnecessary work has negative economic consequences.

Today, the vast majority of postal items carry printed addresses which are extracted from computer databases. Such databases need to be maintained in the face of population mobility, creation and retirement of delivery points and changes in their specification, such as renaming of streets, renumbering of properties, etc. Moreover, there is a growing need for validation of addresses in e-commerce and the tendency for organizations to exchange or trade address data and for organizations in one country to hold address data of organizations and individuals in other countries, which might use different approaches to the rendering of postal addresses.

Addresses can be rendered according to rules that differ from country to country or from one mailing event (a batch of mail, e.g. letters or monthly statements, sent by a mailer at one time) to another. This document does not impose any obligation on countries or mailers on how addresses shall be rendered but provides a language to express rendering rules recommended by postal operators for mailing purposes.

Templates specified according to this document may be used to exchange information about address rendering rules on international cross-border mail and domestic mail. These templates are available from the UPU for all countries which have approved them. This facilitates automated processing of mail and international e-commerce deliveries. Rendition engines based on this document are expected to produce the same results for the same addresses. This is conditional upon using approved templates with the same parameters. Even if this were not the case, consistency remains an appropriate goal.

The intended readers of this document include designers and developers of computer systems that process global postal address data including postal address rendering, those who formulate and implement international addressing policies and anyone seeking to reduce UAA mail.

The preparatory work for this project is described in *Review summary of the ISO 19160 stage zero project (20110)*<sup>[2]</sup> and recommended five projects with the following titles:

- *Addressing – Conceptual model*
- *Addressing – Good practices for address assignment schemes*
- *Addressing – Quality management for address data*
- *Addressing – International postal address components and template language*

— *Addressing – Address rendering for purposes other than mail*

This document implements the fourth of these recommendations and focuses solely on addresses for postal purposes. Addresses for other purposes are described in other parts of ISO 19160.

This document is based on UPU S42, Part A, Version 7 and has been developed with UPU. It is intended to be adopted by CEN as a replacement for EN 14142-1.



# Addressing —

## Part 4: International postal address components and template language

### 1 Scope

This document defines key terms for postal addressing, postal address components and constraints on their use.

Specifically, this document defines postal address components organized into three hierarchical levels:

- elements, such as organization name or postcode, which have well-defined conceptual meaning and are not themselves made up of subordinate components, though they may be sub-divided for technical purposes;
- constructs, such as organization identification, which group elements into units form a logical portion of a postal address;
- segments, such as addressee specification, which group-related postal address constructs and/or postal address elements into units with a specific defined function.

This document also specifies a mechanism for creation of sub-elements, which correspond to either sub-divisions of element content, such as door type or door indicator or to multiple occurrences and locations of elements in an address, such as levels of administrative regions.

This document does not specify the length of any component nor the value range of any component.

Moreover, this document defines the codes to identify elements and sub-elements.

Further, this document specifies postal address rendering rules. This includes identification and ordering of output lines in a rendered address, conditions for selection of candidate lines, the order and concatenation of postal address components, required and optional components, parameters to contextualize address for rendering and the formatting of the components, subject to constraints on the space available for that task. Postal address rendering rules are represented in this document as a postal address template.

Finally, this document specifies language suitable for computer processing to formally express postal address templates.

### 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 639-1, *Codes for the representation of names of languages — Part 1: Alpha-2 code*

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

ISO 15924, *Information and documentation — Codes for the representation of names of scripts*

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
-