SLOVENSKI STANDARD
SIST EN ISO 14819-2:2021

01-junij-2021

Nadomešča:
SIST EN ISO 14819-2:2014

Inteligentni transportni sistemi - Sporočila prometnih in potovalnih informacij prek kodiranih prometnih sporočil - 2. del: Kode za dogodke in informacije za radijski podatkovni sistem (RDS) - Prometni informacijski kanal (RDS-TMC), ki uporablja sistem ALERT-C (ISO 14819-2:2021)

Intelligent transport systems - Traffic and travel information messages via traffic message coding - Part 2: Event and information codes for Radio Data System - Traffic Message Channel (RDS-TMC) using ALERT-C (ISO 14819-2:2021)

Intelligente Transportsysteme - Verkehrs- und Reiseinformationen über Verkehrsmeldungskodierung - Teil 2: Ereignis- und Informationscodes für den digitalen Radiokanal für Verkehrsmeldungen (RDS-TMC) unter Nutzung von ALERT-C (ISO 14819-2:2021)

Systèmes intelligents de transport - Informations sur le trafic et le tourisme via le codage de messages sur le trafic - Partie 2: Codes d'événements et d'informations pour le système de radiodiffusion de données (RDS) - Canal de messages d'informations sur le trafic (RDS-TMC) avec ALERT-C (ISO 14819-2:2021)

Ta slovenski standard je istoveten z: EN ISO 14819-2:2021

iTeh STANDARD PREVIEW
(standards.iteh.ai)

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 14819-2

March 2021

ICS 03.220.20; 35.240.60

Supersedes EN ISO 14819-2:2013

English Version

Intelligent transport systems - Traffic and travel information messages via traffic message coding - Part 2: Event and information codes for Radio Data System-Traffic Message Channel (RDS-TMC) using ALERT-C (ISO 14819-2:2021)

Systèmes de transport intelligents - Informations sur le trafic et les déplacements via le codage de messages sur le trafic - Partie 2 : Codes d'évènements et d'informations pour le système de radiodiffusion de données - canal de messages d'informations sur le trafic (RDS-TMC) avec Alert-C (ISO 14819-2:2021)

Intelligente Transportsysteme - Verkehrs- und Reiseinformationen über Verkehrsmeldungskodierung - Teil 2: Ereignis- und Informationscodes für den digitalen Radiokanal für Verkehrsmeldungen (RDS-TMC) unter Nutzung von ALERT-C (ISO 14819-2:2021)

iTeh STANDARD PREVIEW

This European Standard was approved by CEN on 30 July 2020.
(standards.iteh.ai)

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, 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

Ref. No. EN ISO 14819-2:2021 E

EN ISO 14819-2:2021 (E)

Contents

Page

iTeh STANDARD PREVIEW
(standards.iteh.ai)

European foreword

This document (EN ISO 14819-2:2021) has been prepared by Technical Committee ISO/TC 204 "Intelligent transport systems" in collaboration with Technical Committee CEN/TC 278 "Intelligent transport systems" 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 September 2021, and conflicting national standards shall be withdrawn at the latest by September 2021.

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 ISO 14819-2:2013.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

iTeh STANDARD PREVIEW
Endorsement notice
(standards.iteh.ai)

The text of ISO 14819-2:2021 has been approved by CEN as EN ISO 14819-2:2021 without any modification.

3

iTeh STANDARD PREVIEW
(standards.iteh.ai)

INTERNATIONAL STANDARD

ISO
14819-2

Third edition
2021-02

Intelligent transport systems — Traffic and travel information messages via traffic message coding —

Part 2:
Event and information codes for Radio Data System-Traffic Message Channel (RDS-TMC) using ALERT-C

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Systèmes de transport intelligents — Informations sur le trafic et les déplacements via le codage de messages sur le trafic —

Partie 2: Codes d'évènements et d'informations pour le système de radiodiffusion de données - canal de messages d'informations sur le trafic (RDS-TMC) avec Alert-C

Reference number
ISO 14819-2:2021(E)

© ISO 2021

ISO 14819-2:2021(E)

iTeh STANDARD PREVIEW
(standards.iteh.ai)

 COPYRIGHT PROTECTED DOCUMENT

Contents

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 14819-2:2021(E)

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).

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).

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

For an explanation of 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 204, *Intelligent transport systems*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 278, *Intelligent transport systems*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 14819-2:2013) which has been technically revised. The main changes compared to the previous edition are as follows:

— in the Event List, the column "P" for 'phased-out codes' has been added;

— a small number of additional events have been added to the Event List;

— a small number of additional events have been added to the Supplementary List;

— wording has been improved for greater clarity;

— several minor typographical errors have been corrected.

A list of all parts in the ISO 14819 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

ISO 14819-2:2021(E)

Introduction

This document is the second part of the ISO 14819 series of standards, covering the 'ALERT-C' protocol which describes how traffic messages are coded for transmission as an 'Open Data Application' over the Radio Data System (RDS), a sub-carrier on FM radio transmissions. A complete understanding of RDS-TMC is only possible by reading this document (Part 2) together with the other parts of the ISO 14819 series of standards, which are:

— ISO 14819-1, which describes the ALERT-C protocol concept and relationship with the RDS standards, IEC 62106 (all parts);

— ISO 14819-3, which describes ways in which position and places are coded using ALERT-C; and

— ISO 14819-6, which describes how messages may be optionally encrypted for conditional access.

This document contains the special meta-language which technical experts agreed would be the sole source for all coded descriptions used in RDS-TMC. This methodology has allowed agreement over important details for the many hundreds of event phrases so included, even though subtle linguistic differences were perceived and allowed for in terms of end-user presentation.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

INTERNATIONAL STANDARD   **ISO 14819-2:2021(E)**

Intelligent transport systems — Traffic and travel information messages via traffic message coding —

Part 2:
Event and information codes for Radio Data System-Traffic Message Channel (RDS-TMC) using ALERT-C

1   Scope

ISO 14819-1 describes the ALERT-C protocol concept and message structure used to achieve densely coded messages to be carried in the RDS-TMC feature. This document specifies the 'Events List' to be used in coding those messages.

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 14819-1, *Intelligent transport systems — Traffic and Travel information messages via traffic message coding — Part 1: Coding Protocol for Radio Data System-Traffic Message Channel (RDS-TMC) using ALERT-C*

IEC 62106 (all parts), *Specification of the Radio Data System (RDS) for VHF/FM sound broadcasting in the frequency range from 64,0 to 108,0 MHz*

3   Terms and definitions

No terms and definitions are listed in this document.

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

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

4   Event and Information codes for Traffic Message Channel

4.1   Event List

4.1.1   Explanatory notes

a)   The event list is divided into update classes, indicated by the various sections. These update classes are used for terminal message management, as indicated in ISO 14819-1:2021, 6.1. The event list is shown in the format of a database.

NOTE   The first column of the Event list in 4.1.3 (Table 2) shows line numbers to assist reading and use of the database.

b)   The second column gives a 'technical language' (so-called CEN-English) description of the event code, the code of which is shown in the third field. Appropriate authorities of each country have been responsible for the exact descriptions in other languages, in conformity with the definitions

ISO 14819-2:2021(E)

given in the DATEX Data Dictionary. This document uses the English language and metric units by default, but is essentially both language- and unit-independent, as presentation to the end-user's preference is made by the client device: the recommended conversions from metric to non-metric (i.e. imperial) units are given in Annexes A, B, C and D.

This ensures precise definitions and use of the event codes in the transmission layer. Individual terminal implementations may handle these (translated) descriptions with some flexibility in order to allow a more effective presentation, but without altering the meaning.

c) The third column gives the decimal equivalent of the actual binary event code to be transmitted (see ISO 14819-1:2021, 5.3.2). These codes are purely internal to the RDS-TMC system and should not be used for referencing events or composing messages in other operator systems. Undefined codes are reserved for future system additions.

d) The fourth column, "N", is the nature of the event. The general meaning of the codes is as follows:

(blank) - Information

F - Forecast

S - Silent: no message shall be presented to the end-user

e) The fifth column, "Q", is the quantifier field, containing the reference numbers of quantifiers listed in the table at the end of the event list. The position of the quantifier in the event, plus in some cases some accompanying words, is shown by (...Q...) within the text. Use of these quantifiers is usually optional. However, a few event messages have no meaning without the quantifier. The use of quantifiers is described in ISO 14819-1:2021, 5.5.6.

f) The sixth column, "T", is the duration type. "D" indicates "dynamic" events of short duration and "L" indicates longer-lasting events (see ISO 14819-1:2021, 5.4.7). If this code is bracketed ( ), or if the time-of-day quantifier (no.7) is actually used in the message, no duration shall be presented to the user. In these cases, the duration indicates persistence, used for message management only.

g) The seventh column, "D", is the default directionality of the event. "1" indicates that one direction of traffic is normally affected by the event. "2" indicates that both directions of traffic are normally affected by the event. TMC terminals can use this field to help to determine which events to present to the driver and how to present them.

h) The eighth column, "U", is the default terminal urgency, with values "X" for extremely urgent, "U" for urgent, and blank for normal events (see ISO 14819-1:2021, 5.4.5).

i) The ninth column, "C", gives a numerical representation of the update class to which the event belongs. Update classes 1...31 are listed in 4.1.3. Update classes 32...39 are exclusively for events of the forecast nature "F" with duration type L or (L). These are in subclause 4.3.2. Other than events of type S, these classes contain no other events.

j) The tenth column, "P", if it contains a code, indicates an event that experience has shown can be misinterpreted. As such, this event may be deprecated in due course. The code in this cell indicates the code that should be used in preference, as it better represents the event.

k) The final column, "R", gives phrase codes (references) for use by TMC operators. An event may be a single phrase event, or a combination of two or more phrases. Each phrase is allocated a phrase code consisting of at least of a single code letter (A - Z) and a code number (1 - 999). Single phrase events are indicated by a single code letter and a one or two digit number (e.g. A1 - A99); expected events are indicated by the normal phrase code followed by "E" (e.g. A1E), and where a risk of danger exists by a following "D" (e.g. G6D); events with quantifiers can have three digits (e.g. A101). Longer lasting forecasts are indicated by the letter "F".

The Event List also contains several predefined combinations of single phrase events to make better use of the available channel capacity. These combined events are indicated by the combined codes of the constituent phrases (e.g. B11.C1).

Note that although the event lists (Main, Forecast and Supplementary) together contain around 1,700 messages, as explained above, most are composed by combining two or more single phrase messages, so in practice there are only a few hundred unique phrases that need to be stored by the terminal, which when combined form the longer composite messages.

Note also that the phrases used in combined events are not always word for word identical to the corresponding phrases used in the single events. Binding words or small changes to the wording are sometimes necessary.

The code letters are not related to the update classes, but have the following meaning:

A: Level of Service

B: Incidents/Accidents

C: Closures

D: Lane Restrictions

E: Roadworks

F: Obstruction Hazards

G: Road Conditions

H: Weather

J: Winds

L: Environment

M: Temperature

P: Activities

Q: Delays/Cancellations

R: Dangerous Vehicles

S: Exceptional Loads

T: Traffic Equipment Status

U: Traffic Regulations

X: Parking

Y: Information

Z: Indicates phrases from the List of Supplementary Information (see 4.2.1).

The phrase codes are not normative, but are only given as additional information about the contents of a given event and should be helpful when implementing software.

l) The Event List is comprehensive and contains many messages that may be rarely or even never used by particular service providers. In general, each service provider will use a sub-set of the complete list, according to their needs and the needs of the road network for which they are providing information.

Although individual service providers may use only a sub-set of messages, terminal manufacturers are encouraged to support all messages in the event list to ensure messages from any service provider can be presented to the end-user.