

SVENSK STANDARD

SS-EN ISO 24534-3:2016



Fastställt/Approved: 2016-04-25
Publicerad/Published: 2016-05-02
Utgåva/Edition: 2
Språk/Language: engelska/English
ICS: 03.220.20; 35.240.60

Vägtrafikinformatik – Automatisk fordons- och utrustningsidentifiering – Elektronisk registreringsidentifiering (ERI) av fordon – Del 3: Fordonsdata (ISO 24534-3:2016)

Intelligent transport systems – Automatic vehicle and equipment identification – Electronic registration identification (ERI) for vehicles – Part 3: Vehicle data (ISO 24534-3:2016)



Standarder får världen att fungera

SIS (Swedish Standards Institute) är en fristående ideell förening med medlemmar från både privat och offentlig sektor. Vi är en del av det europeiska och globala nätverk som utarbetar internationella standarder. Standarder är dokumenterad kunskap utvecklad av framstående aktörer inom industri, näringsliv och samhälle och befrämjar handel över gränser, bidrar till att processer och produkter blir säkrare samt effektiviserar din verksamhet.

Delta och påverka

Som medlem i SIS har du möjlighet att påverka framtida standarder inom ditt område på nationell, europeisk och global nivå. Du får samtidigt tillgång till tidig information om utvecklingen inom din bransch.

Ta del av det färdiga arbetet

Vi erbjuder våra kunder allt som rör standarder och deras tillämpning. Hos oss kan du köpa alla publikationer du behöver – allt från enskilda standarder, tekniska rapporter och standardpaket till handböcker och onlinetjänster. Genom vår webbtjänst e-nav får du tillgång till ett lättnavigerat bibliotek där alla standarder som är aktuella för ditt företag finns tillgängliga. Standarder och handböcker är källor till kunskap. Vi säljer dem.

Utveckla din kompetens och lyckas bättre i ditt arbete

Hos SIS kan du gå öppna eller företagsinterna utbildningar kring innehåll och tillämpning av standarder. Genom vår närhet till den internationella utvecklingen och ISO får du rätt kunskap i rätt tid, direkt från källan. Med vår kunskap om standarders möjligheter hjälper vi våra kunder att skapa verklig nytta och lönsamhet i sina verksamheter.

Vill du veta mer om SIS eller hur standarder kan effektivisera din verksamhet är du välkommen in på www.sis.se eller ta kontakt med oss på tel 08-555 523 00.



Standards make the world go round

SIS (Swedish Standards Institute) is an independent non-profit organisation with members from both the private and public sectors. We are part of the European and global network that draws up international standards. Standards consist of documented knowledge developed by prominent actors within the industry, business world and society. They promote cross-border trade, they help to make processes and products safer and they streamline your organisation.

Take part and have influence

As a member of SIS you will have the possibility to participate in standardization activities on national, European and global level. The membership in SIS will give you the opportunity to influence future standards and gain access to early stage information about developments within your field.

Get to know the finished work

We offer our customers everything in connection with standards and their application. You can purchase all the publications you need from us - everything from individual standards, technical reports and standard packages through to manuals and online services. Our web service e-nav gives you access to an easy-to-navigate library where all standards that are relevant to your company are available. Standards and manuals are sources of knowledge. We sell them.

Increase understanding and improve perception

With SIS you can undergo either shared or in-house training in the content and application of standards. Thanks to our proximity to international development and ISO you receive the right knowledge at the right time, direct from the source. With our knowledge about the potential of standards, we assist our customers in creating tangible benefit and profitability in their organisations.

If you want to know more about SIS, or how standards can streamline your organisation, please visit www.sis.se or contact us on phone +46 (0)8-555 523 00



Europastandarden EN ISO 24534-3:2016 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN ISO 24534-3:2016.

Denna standard ersätter SS-EN ISO 24534-3:2010, utgåva 1.

The European Standard EN ISO 24534-3:2016 has the status of a Swedish Standard. This document contains the official English version of EN ISO 24534-3:2016.

This standard supersedes the Swedish Standard SS-EN ISO 24534-3:2010, edition 1.

**Förhållandet till övriga delar under samma huvudtitel - Utdrag ur Förord i ISO 24534-3:2016/
Relations to other parts under the same general title - Extract from the Foreword of ISO 24534-3:2016**

ISO 24534 consists of the following parts, under the general title *Automatic vehicle and equipment identification — Electronic registration identification (ERI) for vehicles*:

- Part 1: Architecture
- Part 2: Operational requirements
- Part 3: Vehicle data
- Part 4: Secure communications using asymmetrical techniques
- Part 5: Secure communications using symmetrical techniques.

© Copyright/Upphovsrätten till denna produkt tillhör SIS, Swedish Standards Institute, Stockholm, Sverige. Användningen av denna produkt regleras av slutanvändarlicensen som återfinns i denna produkt, se standardens sista sidor.

© Copyright SIS, Swedish Standards Institute, Stockholm, Sweden. All rights reserved. The use of this product is governed by the end-user licence for this product. You will find the licence in the end of this document.

Upplysningar om sakinnehållet i standarden lämnas av SIS, Swedish Standards Institute, telefon 08-555 520 00. Standarder kan beställas hos SIS Förlag AB som även lämnar allmänna upplysningar om svensk och utländsk standard.

Information about the content of the standard is available from the Swedish Standards Institute (SIS), telephone +46 8 555 520 00. Standards may be ordered from SIS Förlag AB, who can also provide general information about Swedish and foreign standards.

Denna standard är framtagen av kommittén för Vägtrafikinformatik, SIS/TK 255.

Har du synpunkter på innehållet i den här standarden, vill du delta i ett kommande revideringsarbete eller vara med och ta fram andra standarder inom området? Gå in på www.sis.se - där hittar du mer information.

EUROPEAN STANDARD

EN ISO 24534-3

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2016

ICS 03.220.20; 35.240.60

Supersedes EN ISO 24534-3:2010

English Version

**Intelligent transport systems - Automatic vehicle and
equipment identification - Electronic registration
identification (ERI) for vehicles - Part 3: Vehicle data (ISO
24534-3:2016)**

Systèmes de transport intelligents - Identification
automatique des véhicules et des équipements -
Identification d'enregistrement électronique (ERI)
pour les véhicules - Partie 3: Données du véhicule (ISO
24534-3:2016)

Automatische Identifizierung von Fahrzeugen und
Ausrüstungen - Elektronische Identifizierung für die
Registrierung (ERI) von Fahrzeugen - Teil 3:
Fahrzeugdaten (ISO 24534-3:2016)

This European Standard was approved by CEN on 4 March 2016.

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, 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: Avenue Marnix 17, B-1000 Brussels

Contents

Page

European foreword	¥
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Abbreviations	3
5 Requirements	3
5.1 Vehicle identification data.....	3
5.2 Vehicle identifier.....	4
5.3 ERI data type.....	5
5.4 Additional ERI data type.....	5
5.5 Additional ERI registration data.....	5
5.5.1 Additional ERI registration data type.....	5
5.5.2 Administrative types.....	11
5.5.3 EU vehicle category code type.....	12
5.5.4 Other Vehicle type types.....	13
5.5.5 ISO 3833 vehicle type.....	14
5.5.6 Other vehicle shape types.....	15
5.5.7 Number of passenger, axles, and mass types.....	15
5.5.8 Engine and power source types.....	17
5.5.9 Environmental types.....	18
5.5.10 Official test data type.....	19
5.5.11 Types used for EFC.....	19
5.5.12 Other types.....	26
5.6 Attributes.....	28
5.6.1 Introduction.....	28
5.6.2 Useful types.....	28
5.6.3 Useful sets of attributes.....	29
5.6.4 Information object class ATTRIBUTES.....	29
5.6.5 Attribute definitions.....	29
5.7 Encoding.....	30
Annex A (normative) ASN.1 Modules	31
Annex B (informative) Combined ERI data and local registrations	50
Annex C (informative) Correspondance with EFC attributes	54
Bibliography	56

European foreword

This document (EN ISO 24534-3:2016) 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 October 2016, and conflicting national standards shall be withdrawn at the latest by October 2016.

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.

This document supersedes EN ISO 24534-3:2010.

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

Endorsement notice

The text of ISO 24534-3:2016 has been approved by CEN as EN ISO 24534-3:2016 without any modification.

Introduction

A quickly emerging need has been identified within administrations to improve the unique identification of vehicles for a variety of services. Situations are already occurring where manufacturers intend to fit lifetime tags to vehicles. Various governments are considering the needs and benefits of ERI, such as legal proof of vehicle identity with potential mandatory usages. There is a commercial and economic justification both in respect of tags and infrastructure that a standard enables an interoperable solution.

Electronic registration identification (ERI) is a means of uniquely identifying road vehicles. The application of ERI will offer significant benefits over existing techniques for vehicle identification. It will be an enabling technology for the future management and administration of traffic and transport including applications in free-flow, multi-lane, traffic conditions with the capability to support mobile transactions. ERI addresses the need of authorities, and other users for a trusted electronic identification, including roaming vehicles.

This part of ISO 24534 specifies the vehicle-related data that can be exchanged between an onboard electronic registration tag (ERT) and an ERI reader/writer inside or outside the vehicle. The vehicle-related data consist of the vehicle identifier and may also include additional vehicle data as typically included in a vehicle registration certificate.

This part of ISO 24534 does not provide any accurate definitions for additional vehicle data items. This is left to the local registration authorities and/or local legislation. This part of ISO 24534 only provides the means for an unambiguous exchange of vehicle parameters registered by local registration authorities.

This part of ISO 24534 makes use of the basic automatic vehicle identification (AVI) definitions in ISO 14816.

Intelligent transport systems — Automatic vehicle and equipment identification — Electronic registration identification (ERI) for vehicles —

Part 3: Vehicle data

1 Scope

This part of ISO 24534 provides the requirements for an electronic registration identification (ERI) that is based on an identifier assigned to a vehicle (e.g. for recognition by national authorities) suitable to be used for the following:

- electronic identification of local and foreign vehicles by national authorities;
- vehicle manufacturing, in-life-maintenance, and end-of-life identification (vehicle life cycle management);
- adaptation of vehicle data, e.g. in case of international re-sales;
- safety-related purposes;
- crime reduction;
- commercial services;
- adhering to privacy and data protection regulations.

This part of ISO 24534 defines the vehicle identification data. This data is called the ERI data and includes the following:

- the vehicle identifier;
- possible additional vehicle-related information (as typically included in a vehicle registration certificate).

All additional vehicle data elements are defined as optional. It is left to local legislation and/or the discretion of a registration authority to use or not to use a particular data element. If used, the value is assumed to be the one registered by the registration authority in accordance with local legislation. This part of ISO 24534 only provides the syntax for all these data elements.

NOTE The secure application layer interfaces for the exchange of ERI data with an ERI reader or writer are specified in ISO 24534-4 and in ISO 24534-5.

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.

ISO 612:1978, *Road vehicles — Dimensions of motor vehicles and towed vehicles — Terms and definitions*

ISO 1176:1990, *Road vehicles — Masses — Vocabulary and codes*

ISO 3779, *Road vehicles — Vehicle identification number (VIN) — Content and structure*

ISO 3780, *Road vehicles — World manufacturer identifier (WMI) code*

ISO 3833, *Road vehicles — Types — Terms and definitions*

ISO/IEC 8824 (all parts), *Information technology — Abstract Syntax Notation One (ASN.1)*

ISO/IEC 8825-2:2008, *Information technology — ASN.1 encoding rules: Specification of Packed Encoding Rules (PER)*

ISO 14816, *Road transport and traffic telematics — Automatic vehicle and equipment identification — Numbering and data structure*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 additional vehicle data

ERI data (3.5) in addition to the vehicle identifier

3.2 attribute

type (3.12) with an associated identifier

[SOURCE: ISO/IEC 8824-1:2008, Annex G.2.15.1, modified]

3.3 distinguishing identifier

information which unambiguously distinguishes an entity

[SOURCE: ISO/IEC 9798-1, 3.12, modified]

3.4 electronic registration identification ERI

action or act of identifying a vehicle with electronic means for purposes as mentioned in the scope of this part of ISO 24534

3.5 ERI data

vehicle identifying data which can be obtained from an *ERT* (3.6)

Note 1 to entry: ERI data consist of the vehicle identifier and possible *additional vehicle data* (3.1).

3.6 electronic registration tag ERT

onboard ERI device that contains the *ERI data* (3.5) including relevant security provisions and one or more interfaces to access that data

Note 1 to entry: In case of high security, the ERT is a secure application module (SAM).

Note 2 to entry: The ERT may be a separate device or may be integrated into an onboard device that also provides other capabilities (e.g. DSRC communications).

3.7 periodic motor vehicle test

compulsory periodic (e.g. annual) test of the roadworthiness of a motor vehicle of above a specified age or a certificate of passing such a test

EXAMPLE The MOT test in the United Kingdom is an example.

3.8**privacy**

right of individuals to control or influence what information related to them may be collected and stored and by whom and to whom that information may be disclosed

[SOURCE: ISO 7498-2, 3.3.43]

Note 1 to entry: Since this term relates to the right of individuals, it cannot be very precise and its use should be avoided except as a motivation for requiring security.

3.9**registration authority**

<for vehicles> authority responsible for the registration and maintenance of vehicle records

Note 1 to entry: The authority may provide vehicle records to accredited organizations.

3.10**registration authority**

<for ERI data> organization responsible for writing *ERI data* (3.5) and security data according to local legislation

Note 1 to entry: The registration authority for ERI data may be the same as the *registration authority* (3.9) for vehicles. This part of ISO 24534, however, does not require this.

3.11**registration certificate**

vehicle registration document (paper or smart card) issued by the *registration authority* (3.9) for vehicles in which the vehicle and its owner or lessee are registered

3.12**type**

named set of values

[SOURCE: ISO/IEC 8824-1, 3.8.86]

4 Abbreviations

AEI	Automatic Equipment Identification
ASN.1	Abstract Syntax Notation One [as defined in ISO 8824 (all parts)]
AVI	Automatic Vehicle Identification
EEA	European Economic Area
EFC	Electronic Fee Collection
EN	Europäische Norm (German), English: European Standard
ENV	Europäische Norm Vorauskabe (German), English: European Pre-Standard
ERI	Electronic Registration Identification
ERT	Electronic Registration Tag
EU	European Union
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
VIN	Vehicle Identification Number

5 Requirements**5.1 Vehicle identification data**

This subclause is informative only.