

English Version

Intelligent transport systems - eSafety - Part 2 : eCall for HGVs and other commercial vehicles

Systèmes de transport intelligents - eSafety - eCall pour
les véhicules poids lourds et autres véhicules
commerciaux

Intelligente Verkehrssysteme - ESicherheit - Teil 2:
eCall für Schwerlastfahrzeuge und andere
kommerzielle Fahrzeuge

This Technical Specification (CEN/TS) was approved by CEN on 12 October 2018 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

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Contents	Page
European foreword	3
Introduction	4
1 Scope.....	5
2 Normative references.....	5
3 Terms and definitions	6
4 Symbols and abbreviations	8
5 Conformance.....	9
6 General overview of the eCall session for 112-European eCall for commercial vehicles	9
6.1 Context.....	9
6.2 Categories of vehicles — UNECE categories.....	10
7 General requirements for implementation of eCall for Category N vehicles	10
7.1 General.....	10
7.1.1 Introduction.....	10
7.1.2 Automatic or manual	10
7.1.3 Generation of a 112-eCall by a commercial vehicle.....	10
7.2 Triggering requirements	12
7.2.1 Triggering conditions.....	12
7.2.2 Data requirements	12
7.2.3 General.....	12
7.2.4 Enhancement of eCall to provide additionalData2 schema data.....	13
7.3 Cargo data.....	13
7.3.1 General.....	13
7.3.2 Distribution of MSD data	13
7.3.3 Commercial vehicle optional additional data concept Schema A.....	13
7.3.4 Commercial vehicle optional additional data concept Schema B.....	13
7.3.5 Commercial vehicle optional additional data concept AdditionalData2 schema.....	13
Bibliography.....	14

European foreword

This document (CEN/TS 17249-2:2018) has been prepared by Technical Committee CEN/TC 278 “Intelligent transport systems”, the secretariat of which is held by NEN.

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.

NOTE This document is complementary to EN 16072 and EN 15722 and presents adaptation requirements for the provision of *eCall* for HGVs and other commercial vehicles.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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.

Introduction

As a result of European Regulation, from 2018, all new model Category M1/N1 vehicles will be equipped with *112-eCall*. Other model Category M1/N1 vehicles may be voluntarily equipped with *112-eCall*.

The current *eCall* Regulation covers only M1 and N1 Category vehicles (cars and vans). The European Commission's "ICT Rolling Plan (2017) states the objective "*Action 1 Develop technical specification/standards for the implementation of eCall in vehicles of categories other than M1 and N1 and for other user types, taking into account requirements included within type approval regulation as well as ongoing activities in this area (pilots, CEF,...)*." And it goes on to explain "...for the extension to other vehicles types and services, such as Heavy Duty Vehicles, Power Two Wheelers or Hazardous Goods tracking, and other classes of vulnerable road users".

See CEN/TR 17249-1 for context.

The EC CEF project I_HeERO has also addressed the issues relating to *eCall* for HGVs, coaches and busses and vehicle centric solutions for powered two wheel vehicles (P2WV) and have passed these results to CEN/TC 278 PT1507 who are charged to provide specifications for the provision of *eCall* for Heavy Goods Vehicles, coaches and busses, agricultural tractors, and powered two-wheel vehicles.

Unlike other additional Categories of vehicles, considerable and substantive work has already been undertaken both in Standards Deliverables and practical testing of those deliverables in respect of HGVs and other *commercial vehicles*, leading to the publication of CEN/TS 16405:2017. This document takes this work further, and will cause CEN/TS 16405 to be revised.

Consistent with CEN/TS 16405, CEN PT 1507 have interpreted the loosely used term HGV's to include all *commercial vehicles*, including *rigid body trucks* and variants thereof, *prime mover* and trailer combinations (sometimes called "semi's") *road trains* (one *prime mover* with multiple trailers) and others. The term includes any *regulated commercial vehicles*. As with the existing provisions for *eCall* for Category M1/N1 vehicles, these are specified within the paradigm of being *OEM* fit equipment supplied with new vehicles.

The work of CEN PT1507 has provided CEN/TC 278/WG 15 with identification of data to be specified in a revision of CEN/TS 16405 for an additional Schema C, which may be additionally sent in an *eCall* that is not limited to 140 bytes. A revision of CEN/TS 16405 will provide the ASN.1 data definitions for Schema C, and will revise the data elements in the next edition of CEN/TS 16405.

1 Scope

The Scope of this document is limited to the provision of *eCall* from a *commercial vehicle prime mover /rigid body truck* designed for conveying cargo (UNECE Category N).

Within the context of *112-eCall* (operating requirements defined in EN 16072), this document defines specifications for the provision of *112-eCall* for *regulated commercial vehicles*, including *rigid body trucks* and variants thereof, *prime mover* and trailer combinations (sometimes called “semi’s”, *road trains* [one *prime mover* with multiple trailers]) and other *regulated commercial vehicles* (for example vans carrying medical supplies or radioactive material).

As with the existing provisions for *112-eCall* for Category M1/N1 vehicles, these are specified within the paradigm of being *OEM* fit equipment supplied with new vehicles.

The work of CEN/TS 16405 is adopted and extended in this document. (A revised edition of CEN/TS 16405(:2018) will remain the principal reference document for the content and definition of the *commercial vehicle optional additional data set*.)

This document specifies the requirements for the use of *112-eCall* by a *commercial vehicle prime mover /rigid body truck* and determines circumstances where it is appropriate to additionally provide new *optional additional data* as determined in CEN/TS 16405(:2018 or later) as Schema C for use in a packet switched environment which is not constrained by the 140 byte limit.

Unless superseded by European Regulation on some future date, all data schemas specified in CEN/TS 16405 are “*Optional Additional Data*” (OAD) concepts, as enabled in accordance with EN 15722 as part of the *minimum set of data*. As *OAD* they, and the elements within them, are, by definition, “optional” with use at the discretion of the operator of the vehicle.

NOTE 1 The provision of *eCall* from *IVS* located within trailers is not included in this document.

NOTE 2 The provision of *eCall* for vehicles via the aftermarket (post sale and registration) will be the subject of other work, and in respect of the operational requirements for any such aftermarket solutions for *commercial vehicles*, will use this document as a principle reference point.

NOTE 3 The *112-eCall* paradigm involves a direct call from the vehicle to the most appropriate *PSAP*. (Third party service provision by comparison, involves the support of an intermediary third party service provider before the call is forwarded to the *PSAP*). The specifications herein relate only to the provision of *112-eCall* or *IMS-112-eCall*, and do not provide specifications for third party service provision of *eCall*, although in the case of *112-eCall* for *commercial vehicles*, links to third party provision of service aspects (such as cargo contents) may be required.

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.

EN 15722:2015, *Intelligent transport systems - ESafety - eCall minimum set of data*

EN 16062, *Intelligent transport systems - ESafety - eCall high level application requirements (HLAP) using GSM/UMTS circuit switched networks*

EN 16072:2015, *Intelligent transport systems – ESafety - Pan-European eCall operating requirements*

CEN/TS 16405:2017, *Intelligent transport systems – Ecall - Additional data concept specification for heavy goods vehicles*

EN 16454, *Intelligent transport systems – ESafety - ECall end to end conformance testing*

CEN/TS 17184, *Intelligent transport systems – eSafety - eCall High level application Protocols (HLAP) using IMS packet switched networks*

CEN/TS 17240, *Intelligent transport systems – ESafety - ECall end to end conformance testing for IMS packet switched based systems*

CEN/TR 17249-1:2018, *Intelligent transport systems – eSafety – Part 1: Extending eCall to other categories of vehicle*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in CEN/TR 17249-1 and EN 16072 and the following terms and definitions apply.

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

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

NOTE The vehicle categorization definition will be found in UNECE Regulation, The United Nations. Economic Commission for Europe (UNECE), Inland Transport Committee (ITC), World Forum for Harmonization of Vehicle Regulations, Consolidated Resolution on the Construction of Vehicles (R.E.3). Revision 4 (January 2016).

3.1

112-eCall

‘eCall’ provided by a ‘Teleservice 12’ mobile communication network, as defined in EN 16072 and EN 16062 or CEN/TS 17184

3.2

ADR

European Agreement concerning the International Carriage of *dangerous goods* by Road: Accord Européen Relatif Au Transport International Des Marchandises Dangereuses Par Route (ADR)

3.3

CAN-BUS

data-bus standard for vehicles designed to allow microcontrollers and devices to communicate with each other in applications without a host computer

3.4

commercial vehicle

mechanically propelled road vehicle (vehicle type N1, N2 or N3) that is of a construction primarily suited for the carriage of goods or burden of any kind (not including people) and travelling on a road laden

Note 1 to entry: This includes vehicles designed or adapted to have a maximum weight exceeding 3,500 t, but explicitly excludes busses or other vehicles designed and constructed for the carriage of passengers (i.e. vehicle types M1, M2 or M3).

Note 2 to entry: See also 3.14, *regulated commercial vehicle*.