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English Version

Intelligent transport systems - eSafety - Part 5: eCall for UNECE category L1 and L3 powered two-wheeled vehicles

Systèmes de transport intelligents - eSafety - Partie 5 : eCall pour les véhicules à deux roues motorisés des catégories UNECE L1 et L3

Intelligente Verkehrssysteme - ESicherheit - Teil 5: ECall für UNECE-Kategorie L1 und L3 angetriebene zweirädrige Fahrzeuge

This Technical Specification (CEN/TS) was approved by CEN on 27 June 2022 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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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (CEN/TS 17249-5:2022) 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.

This document supersedes CEN/TS 17249-5:2019.

NOTE   This document is complementary to EN 16072 and EN 15722 and presents adaptation requirements for the provision of eCall for Powered Two Wheels Vehicles.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to announce this Technical Specification: 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, Türkiye and the United Kingdom.

Introduction

In accordance with European Regulation 2015/758, after 31st March 2018, all new model Category M1/N1 vehicles will be, as a result of European Regulation, from 2018, equipped with 112-eCall. Other model Category than M1/N1 vehicles may be voluntarily equipped with 112-eCall.

The eCall Regulation at the time of developing this deliverable covers only M1 and N1 Category vehicles (cars and vans). The European Commission's "ICT Rolling Plan" 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 Wheel Vehicles and other classes of vulnerable road users".

See CEN/TR 17249-1:2018.

Powered Two Wheel Vehicle (vehicle mounted) 112-eCall, using OEM systems included during the manufacture of the vehicle, present challenges to the eCall paradigm in that, in an accident, the rider is likely to be separated from the vehicle, usually by some distance. eCall equipment mounted on P2WVs is also subjected to far harsher environmental exposure than its in-car counterparts, and providing equipment, such as speakers, that will last and reliably operate for the lifetime of the vehicle, presents a significant challenge. This document takes these issues into account as a variation of the requirements specified for Category M1 and N1 vehicles and, in particular, does not provide the requirement for two-way voice dialogue in all models. Other features that characterize eCall are maintained as optional. An optional additional data element (or, in the future, a specific bit in the MSD) that enables the PSAP to identify where voice communications are possible or not, is added.

This document defines the additional high-level service requirements for the provision of eCall to Powered Two Wheel Vehicles of UNECE Category L1 and L3 (vehicle mounted). As with the existing provisions for eCall for Category M1/N1 vehicles, and other specifications in this series, these are specified within the paradigm of being OEM fit equipment supplied with new vehicles.

NOTE   The provision of eCall for vehicles via the aftermarket (post sales and registration), and the operational requirements for any such aftermarket solution for vehicle and will be the subject of other work, that will use the specifications of this document as a principle reference point.

1 Scope

In respect of 112-eCall (operating requirements defined in EN 16072), this document defines adaptations to eCall specifications defined in EN 16072 and other related documents to enable the provision of eCall for Powered Two Wheel 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.

For the purposes of the present document, the P2WV 'L' categories, as defined in Directive 2002/24/EC, Regulation (EU) No 168/2013, UNECE and as referenced/specified in EN 15722 apply.

This document includes only the requirements for Category L1 and L3 P2WV (vehicle based) with the exception of L1e-A (powered cycle), although other documents may subject other 'L' subcategories to use this document. Other Technical Specifications may be prepared for other UNECE category 'L' variants.

This document is a revision of CEN/TS 17249-5:2019 based on results achieved in sAFE project (sub-activity 3.5) [11] to obtain a specification allowing a more practical implementation of eCall for P2WVs.

The specifications herein relate only to the provision of pan-European eCall, and does not provide specifications for third party service provision of eCall. Other than in the 112-eCall paradigm, which involves a direct call from the vehicle to the most appropriate PSAP, third party service provision involves the support of an intermediary third party service provider before the call is forwarded to the PSAP.

NOTE   The provision of eCall for vehicles via the aftermarket (post sales and registration), and the operational requirements for any such aftermarket solution. will be the subject of other work, that will use the specifications of this document as a principle reference point.

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 15722:2020, *Intelligent transport systems — ESafety — ECall minimum set of data*

EN 16072:2022, *Intelligent transport systems — ESafety — Pan-European eCall operating requirements*

EN 16454:2022, *Intelligent transport systems — ESafety — ECall end to end conformance testing*

CEN/TS 17240:2018, *Intelligent transport systems — ESafety — ECall end to end conformance testing for IMS packet switched based systems*

EN 17870:2022, *Intelligent transport systems — ESafety — eCall Additional Dataconcept for equipment limitations*

3 Terms and definitions

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

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

- IEC Electropedia: available at https://www.electropedia.org/

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

3.1
112
single European emergency call number supporting *Teleservice 12*

[SOURCE: ETSI/TS 122 003]

3.2
ASN.1
abstract syntax notation one as specified in the various parts of ITU Recs 8824 and 8825 (ISO/IEC 8824 and ISO/IEC 8825 various parts)

3.3
data
representations of static or dynamic objects in a formalized manner suitable for communication, interpretation, or processing by humans or by machines

Note 1 to entry: In packet switched networks, voice is carried in packets of data.

3.4
data concept
any of a group of *data* structures (i.e. object class, property, value domain, *data elements,* message, interface dialogue, *association*) referring to abstractions or things in the natural world that can be identified with explicit boundaries and meaning and whose properties and behaviour all follow the same rules

3.5
data element
single unit of information of interest (such as a fact, proposition, observation, etc.) about some (entity) class of interest (e.g. a person, place, process, property, concept, state, event) considered to be indivisible in a particular context

3.6
(112) eCall
emergency call which is generated either automatically via activation of in-vehicle sensors or manually by the *vehicle occupants* (or person(s) riding on a vehicle that is not fitted with an enclosed compartment and/or (a) seatbelt(s)), and which, when activated, provides notification and relevant location information to the most appropriate *'Public Safety Answering Point'*, by means of *mobile wir*eless communications *networks,* carries a defined standardized '*Minimum Set of Data'* [MSD] and additional data notifying that there has been an incident that requires response from the emergency services, and if equipped establishes an audio channel between rider or pillion nearby and the most appropriate '*Public Safety Answering Point'*

3.7
(eCall) in-vehicle system
within the context of this European Standard 'in-vehicle system' or IVS refers only to an 'in-vehicle equipment' for the purposes of eCall (eCall in-vehicle equipment) and does not refer to any other in-vehicle equipment provided for purposes other than eCall

3.8
MSD
minimum set of data
direct, timely data content of an eCall message to the PSAP operator receiving the emergency call containing information about the location of the incident, providing detail characterising the vehicle, and potentially sometimes also providing additional data that is deemed relevant, as defined in EN 15722