PD CEN/TS 17234:2018

BSI Standards Publication

Intelligent transport systems – eSafety – eCall: Tests to enable PSAPs to demonstrate conformance and performance

bsi.

National foreword

This Published Document is the UK implementation of CEN/TS 17234:2018.

The UK participation in its preparation was entrusted to Technical Committee EPL/278, Intelligent transport systems.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Published by BSI Standards Limited 2018

ISBN 978 0 580 99042 7

ICS 03.220.20; 35.240.60

Compliance with a British Standard cannot confer immunity from legal obligations.

This Published Document was published under the authority of the Standards Policy and Strategy Committee on 31 December 2018.

Amendments/corrigenda issued since publication

Date	Text affected

TECHNICAL SPECIFICATION

SPÉCIFICATION TECHNIQUE

TECHNISCHE SPEZIFIKATION

CEN/TS 17234

November 2018

ICS 03.220.20; 35.240.60

English Version

Intelligent transport systems - eSafety - eCall: Tests to enable PSAPs to demonstrate conformance and performance

Systèmes de transport intelligents - eSécurité - eCall: Essais pour permettre aux PSAPs de démontrer leur conformité et leur performance

Intelligente Verkehrssysteme - eSicherheit - eCall: Prüfungen, die Rettungsleitstellen die Darstellung von Konformität und Leistung ermöglichen

This Technical Specification (CEN/TS) was approved by CEN on 15 July 2018 for provisional application.

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European foreword

This document (CEN/TS 17234:2018) 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.

This document is complementary to EN 15722, EN 16072, EN 16062, and EN 16454.

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, 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

eCall is an emergency call generated either automatically via activation of in-vehicle sensors or manually by the *vehicle occupants (3.23)*; when activated it provides notification and relevant location information to the most appropriate *Public Safety Answering Point (3.21)*, by means of *mobile wireless communications networks (3.16)*, carries a defined standardized *minimum set of data (3.15)* (MSD) notifying that there has been an incident that requires response from the emergency services, and establishes an audio channel between the occupants of the vehicle and the most appropriate *Public Safety Answering Point*. *eCall* has been regulated to be installed and available in all new model vehicles in Europe from 2018. Mobile Network operators have agreed to forward these calls, and '*Public Safety Answering Points*' are required by European Regulation to be able to receive *eCalls* by 2017. A large aftermarket is also expected, and vehicle manufacturers are also expected to voluntarily equip their existing model vehicles as well as new models. *eCall* currently only covers light vehicles, but is expected to be expanded to cover HGVs, long distance coaches, and powered two vehicle vehicles in the near future. *eCall* is expected to be a significant contributor in the fight to reduce road deaths and serious injuries.

eCall is regulated in the European Commission Recommendation 2011/750/EU of 8 September 2011 on support for an EU-wide *eCall* service in electronic communication networks for the transmission of in-vehicle emergency calls based on *112 (3.1)* (112-eCall), Decision no 585/2014/EU of the European Parliament and of the council of 15 May 2014 on the deployment of the interoperable EU-wide *eCall service (3.9)*; Commission Delegated Regulation (EU) no 305/2013 of 26 November 2012 supplementing Directive 2010/40/EU of the European Parliament and of the council with regard to the harmonized provision for an interoperable EU-wide eCall, and Regulation (EU) 2015/758 of the European Parliament and of the Council of 29 April 2015 concerning type-approval requirements for the deployment of the eCall *in-vehicle system (3.14)* based on the *112 (3.1)* service and amending Directive 2007/46/EC.

These Regulations refer to, and are dependent on, the CEN Standards EN 15722:2015, *Intelligent transport systems — eSafety — eCall minimum set of data (MSD)*; EN 16062:2015, *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*; EN 16102:2011, *Intelligent transport systems — eCall — Operating requirements for third party support*; EN 16454:2015, *Intelligent transport systems — ESafety — ECall end to end conformance testing*. Standards are also in development to support eCall using packet switched networks using IMS, eCall using cooperative ITS 'ITS Stations, and standards to broaden the scope of *eCall* to other classes of vehicle. ETSI standards deliverables for communications networks provide the communications specifications that underpin these application level standards.

EN 16454 provides the basis for conformance tests for all actors in the *eCall* chain.

Crucial to the success of *eCall* is the response offered by the 1st level PSAP and subsequent responses from the emergency response chain.

Building on, and consistent to EN 16454, this deliverable provides a suite of conformance and performance tests to enable PSAPs to claim conformance to the regulations and *eCall* Standards.

Unlike EN 16454, this standards deliverable also takes into account standards deliverables in development to carry *eCall* over packet switched networks using IMS.

1 Scope

The scope of this document is to define conformance and performance tests to demonstrate whether a PSAPis in compliance with the *eCall* Regulations and Standards.

This deliverable:

a) identifies the MANDATORY tests specified within EN 16454 that are appropriate for a PSAP to demonstrate its conformance to EN 16454 in accordance with European Commission Delegated Regulation (EU) No 305/2013;

b) specifies tests to verify that a PSAP has procedures in place to identify and decode registered optional additional *data concepts (3.5)* included in the *Minimum set of data (3.15)*;

c) provides OPTIONAL tests to measure aspects of PSAP performance in handling aspects of *eCall*.

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 (MSD)*

EN 16062:2015, *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*

EN 16102:2011, *Intelligent transport systems — eCall — Operating requirements for third party support*

EN 16454:2015, *Intelligent transport systems — ESafety — ECall end to end conformance testing*

CEN/TS 17148, *Intelligent Transport Systems — eSafety — ProForma eCall Agreement between TPSP and PARES*

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*

ETSI TS 100 910 V8.20.0 (2005-11), *Digital cellular telecommunications system (Phase 2+); Radio Transmission and Reception (3GPP TS 05.05 version 8.20.0 Release 1999)*

ETSI TS 103 412 V1.1.1 (2016-04), *Mobile Standards Group (MSG); Pan-European eCall end to end and in-band modem conformance testing; Prose test specification*

ETSI TS 121 133, *Universal Mobile Telecommunications System (UMTS); 3G Security; Security Threats and Requirements (3G TS 21.133 version 3.1.0 Release 1999)*