SLOVENSKI STANDARD
oSIST prEN IEC 63005-2:2019

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Video zapis dogodka o nesrečah v cestnem prometu - 2. del: Preskusne metode za vrednotenje delovanja osnovnih funkcij (TA 17)

Event video data recorder for road vehicle accidents - Part 2: Test methods for evaluating the performance of basic functions (TA 17)

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Ta slovenski standard je istoveten z: **prEN IEC 63005-2:2018**

ICS:

13.200	Preprečevanje nesreč in katastrof	Accident and disaster control
33.160.40	Video sistemi	Video systems

oSIST prEN IEC 63005-2:2019 **en,fr,de**

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100/3175/CDV

COMMITTEE DRAFT FOR VOTE (CDV)

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IEC TA 17 : MULTIMEDIA SYSTEMS AND EQUIPMENT FOR CARS

SECRETARIAT:	SECRETARY:
Korea, Republic of	Mr Ock-Woo Nam

OF INTEREST TO THE FOLLOWING COMMITTEES:	PROPOSED HORIZONTAL STANDARD:
	☐
	Other TC/SCs are requested to indicate their interest, if any, in this CDV to the secretary.

FUNCTIONS CONCERNED:

☐ EMC   ☐ ENVIRONMENT   ☐ QUALITY ASSURANCE   ☐ SAFETY

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TITLE:

Event video data recorder for road vehicle accidents - Part 2: Test methods for evaluating the performance of basic functions (TA 17)

PROPOSED STABILITY DATE: 2024

NOTE FROM TC/SC OFFICERS:

Additional file is clean version for your information.

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1   INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FDIS	Report on voting
XX/XX/FDIS	XX/XX/RVD

46

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48   the report on voting indicated in the above table.

49   This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

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52 the specific document. At this date, the document will be

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54 • withdrawn,

55 • replaced by a revised edition, or

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59 is ....

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Event video data recorder for road vehicle accidents -

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Part 2: Test methods for evaluating performance of basic functionalities

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92 ## 1 Scope

93 This part of IEC 63005 describes test methods on evaluating performance of basic
94 functionalities of EVDR described in part 1.

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96 ## 2 Normative references

97 The following documents are referred to in the text in such a way that some or all of their
98 content constitutes requirements of this document. For dated references, only the edition
99 cited applies. For undated references, the latest edition of the referenced document (including
100 any amendments) applies.

101 IEC 63005-1 *Event video data recorder for road vehicle accidents – Part 1: Basic*
102 *requirements*

103 IEC 60068-2-1 *Environmental testing – Part 2-1: Tests – Test A: Cold*

104 IEC 60068-2-6, *Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)*

105 IEC 60068-2-27 *Environmental testing – Part 2-27: Tests – Test Ea and guidance: Shock*

106 ISO 12233:2000 *Photography – Electronic still picture imaging — Resolution and spatial*
107 *frequency responses*

108 ## 3 Terms and definitions

109 For the purposes of this document, the following terms and definitions apply. ISO and IEC
110 maintain terminological databases for use in standardization at the following addresses:

111 · IEC Electropedia: available at http://www.electropedia.org/

112 · ISO Online browsing platform: available at http://www.iso.org/obp

113 **3.1   EVDR for road vehicle accidents**

114 system that stores vehicle video data of the accident on an electronic recording medium
115 before, during, and after collision accident events with other vehicles, with passers-by and
116 with any other objects

117 **3.2   event data**

118 information recorded by the EVDR to facilitate analysis of accident scenarios in the case of
119 collision accident events with other vehicles, pedestrians or objects

3.3   vehicle dynamics data

information on a vehicle's dynamic behaviour such as acceleration, angular velocity, and physical quantities related to collision

3.4   integrity verification value

information used to detect doctoring and/or deletion of event data

4   Abbreviations

EVDR   event video data recorder

FOV   field of view

fps   frames per second

g   gravitational acceleration

5   General requirements for tests

5.1   Test environment

The test environment of the event video data recorder shall be maintained within (23 ± 5) ℃ in temperature.

5.2   Simulation of accident events

An acceleration generating equipment is used to generate the required acceleration for the simulation of a road accident event.

5.2.1   Simulation device

The acceleration generating equipment shall be able to maintain 3g for 50ms at minimum. Peak acceleration error shall be within 10% of the absolute values of 0.5g, 1 g, 1.5g, and 2g respectively. And the equipment also shall be able to generate a triangular waveform with the peak greater than 2g.

The triangular waveform generated by the acceleration generating equipment for the simulation of a single or multiple accident event is illustrated in Fig. 1. Here, g_i is the peak acceleration value applied to the EVDR under test. The peak acceleration shall be applied for at least 50ms during the period of t_2, and the acceleration and deceleration period, t_1 shall be less than 10 seconds
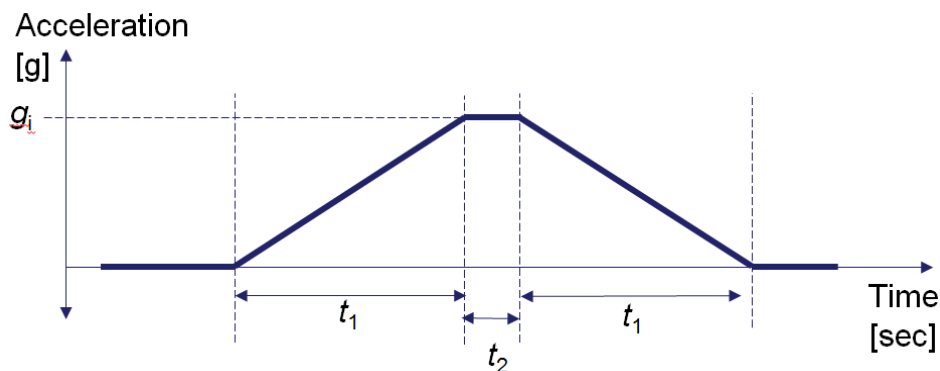
Figure 1 – An example of the triangular waveform caused by the acceleration generating equipment

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5.2.2   Applying a simulated accidents event

The simulated road accident event is generated using one of the following two methods.

a) **Using the event data recording function with the recording button on EVDR:** If an event data recording function is available with a kind of switching button, the simulation test can be conducted without applying acceleration.

b) **Using the acceleration generating equipment:** The following acceleration is generated and applied to the EVDR system.

- A triangular waveform is generated, with a peak acceleration of 2g lasting for at least 50ms (t_2 shall be longer than 50ms) and the acceleration and deceleration period, t_1 shall be within 10 seconds.

5.2.3   Simulating multiple collision events

The acceleration generating equipment shall be employed to generate acceleration for the multiple collision event test.

- A triangular waveform is generated, with a peak acceleration of 2g lasting for at least 50ms (t_2 shall be longer than 50ms) and the acceleration and deceleration period, t_1 shall be within 10 seconds.

5.3   Evaluating performance of storing acceleration

The acceleration storing performance shall be assessed beforehand for simulation test with acceleration generated by the acceleration generating equipment.

- A triangular waveform is generated, with a peak acceleration of 1.5g lasting for at l east 50ms (t_2 shall be longer than 50ms). Note that acceleration and deceleration p eriod, t_1 shall be within 10 seconds.

The vector sum of a_x and a_y stored in the EVDR shall have the maximum value within the range of (1.2~1.8)g for the compatibility of event data.

5.4   Test conditions

Only the main body of the EVDR is subject to the conditions listed below. If the GNSS receiver and/or video acquisition devices have been separately installed, the conditions do not apply to the external input devices.

- The DC voltage for operation specified in **Table 1** shall be supplied to the EVDR under test .

Table 1 – DC voltage for operation of the subject

DC voltage for operation V	Test voltage V
12	13.5 ± 0.5
24	27.0 ± 1.0

Note: 24 V conditions shall be applied if the device covers both 12 V and 24 V.