
Električna in hibridna cestna vozila - Karakteristike občutljivosti za radijske motnje - Mejne vrednosti in metode merjenja za zaščito zunanjih sprejemnikov pod 30 MHz - Dopolnilo A1

Amendment 1 - Electric and hybrid electric road vehicles - Radio disturbance characteristics - Limits and methods of measurement for the protection of off-board receivers below 30 MHz

Elektro- und Hybrid-Straßenfahrzeuge - Funkstöreigenschaften - Grenzwerte und Messverfahren zum Schutz von außerhalb befindlichen Empfängern unterhalb 30 MHz

Amendement 1 - Véhicules routiers électriques et hybrides électriques - Caractéristiques de perturbations radioélectriques - Limites et méthodes de mesure pour la protection des récepteurs extérieurs en dessous de 30 MHz

Ta slovenski standard je istoveten z: EN IEC 55036:2020/A1:2023

ICS:

33.100.01	Elektromagnetna združljivost na splošno	Electromagnetic compatibility in general
43.120	Električna cestna vozila	Electric road vehicles

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EUROPEAN STANDARD

EN IEC 55036:2020/A1

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2023

ICS 33.100.10; 33.100.20

English Version

Electric and hybrid electric road vehicles - Radio disturbance characteristics - Limits and methods of measurement for the protection of off-board receivers below 30 MHz
(CISPR 36:2020/AMD1:2023)

Véhicules routiers électriques et hybrides électriques -
Caractéristiques de perturbations radioélectriques - Limites
et méthodes de mesure pour la protection des récepteurs
extérieurs en dessous de 30 MHz
(CISPR 36:2020/AMD1:2023)

Elektro- und Hybrid-Straßenfahrzeuge -
Funkstöreigenschaften - Grenzwerte und Messverfahren
zum Schutz von außerhalb befindlichen Empfängern
unterhalb 30 MHz
(CISPR 36:2020/AMD1:2023)

This amendment A1 modifies the European Standard EN IEC 55036:2020; it was approved by CENELEC on 2023-06-21. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN IEC 55036:2020/A1:2023 (E)**European foreword**

The text of document CIS/D/483/CDV, future CISPR 36/AMD1, prepared by CISPR SC D "Electromagnetic disturbances related to electric/electronic equipment on vehicles and internal combustion engine powered devices" of CISPR "International special committee on radio interference" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 55036:2020/A1:2023.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2024-03-21 level by publication of an identical national standard or by endorsement
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INTERNATIONAL STANDARD

NORME INTERNATIONALE

INTERNATIONAL SPECIAL COMMITTEE ON RADIO INTERFERENCE
COMITÉ INTERNATIONAL SPÉCIAL DES PERTURBATIONS RADIOÉLECTRIQUES

AMENDMENT 1
AMENDEMENT 1

Electric and hybrid electric road vehicles – Radio disturbance characteristics – Limits and methods of measurement for the protection of off-board receivers below 30 MHz

Véhicules routiers électriques et hybrides électriques – Caractéristiques de perturbations radioélectriques – Limites et méthodes de mesure pour la protection des récepteurs extérieurs en dessous de 30 MHz

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

INTERNATIONAL SPECIAL COMMITTEE ON RADIO INTERFERENCE

**ELECTRIC AND HYBRID ELECTRIC ROAD VEHICLES –
RADIO DISTURBANCE CHARACTERISTICS –
LIMITS AND METHODS OF MEASUREMENT FOR
THE PROTECTION OF OFF-BOARD RECEIVERS BELOW 30 MHz****AMENDMENT 1****FOREWORD**

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Amendment 1 to CISPR 36:2020 has been prepared by CISPR subcommittee D: Electromagnetic disturbances related to electric/electronic equipment on vehicles and internal combustion engine powered devices.

The text of this Amendment is based on the following documents:

Draft	Report on voting
CIS/D/483/CDV	CIS/D/490A/RVC

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this Amendment is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications/.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

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- withdrawn,
- replaced by a revised edition, or
- amended.

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INTRODUCTION

<https://standards.iteh.ai/catalog/standards/sist/151fcaa4-c77c-4657-9c11-13d3bbb96677/sist-en-iec-55036-2020-a1-2023>

Delete the existing second paragraph.

1 Scope

Replace the existing second and third paragraphs with the following:

This document applies to the emission of electromagnetic energy which might cause interference to radio reception and which is emitted from electric and hybrid electric vehicles (see 3.2 and 3.3) propelled by an electric motor supplied with electric energy by internal rechargeable energy storage system (with voltages above 60 V) when operated on the road.

Replace the existing seventh paragraph with the following:

The radiated emission requirements in this document are not intended to be applicable to the intentional transmissions from a radio transmitter as defined by the ITU-R, including their spurious emissions.

3 Terms and definitions

3.2

electric vehicle

Replace the existing definition and the existing note to entry with the following new definition and new note to entry:

vehicle propelled exclusively by electric motor(s) powered by on-board REESS

Note 1 to entry: Vehicles equipped with an additional power source (e.g. auxiliary combustion engine, fuel cell) used to provide electric power to the electric motor/REESS only, without contributing to the mechanical propulsion of the vehicle, are considered electric vehicles for the purposes of this document.

3.7

traction battery

Replace the existing term and the existing definition with the following new term, new definition and new note to entry:

3.7

rechargeable energy storage system

REESS

storage system that provides electric energy for electric propulsion, which can be recharged

Note 1 to entry: Components of the REESS can be high voltage (HV) batteries.

Add, after the existing definition of 3.8, the following new term, definition and note to entry:

3.9

high voltage

HV

operating voltage above 60 V

Note 1 to entry: The term high voltage can be defined with a different voltage range in other standards.

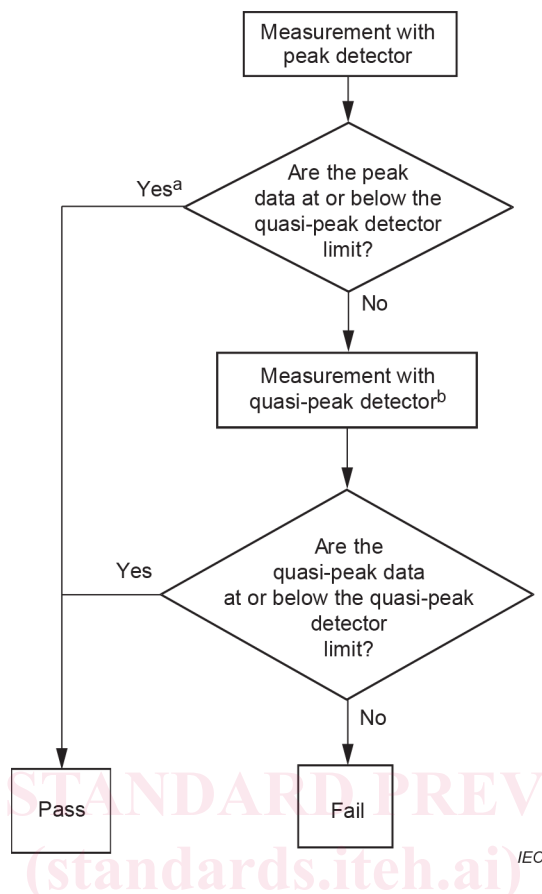
4.1 Determination of conformance of vehicle with limits

Replace the existing first paragraph with the following new paragraph:

The vehicle shall comply with the quasi-peak detector magnetic field strength limits specified in 4.2, when operated as per 5.4.2.2.

Add, after the second paragraph, the following new paragraph and new Figure 6:

If an initial peak detector prescan is performed (i.e., before any quasi peak detector measurements), then the compliance shall be determined based on the flowchart in Figure 6.



a Because the measurement result with peak detector is always higher than or equal to the measurement result with quasi-peak detector, this single detector measurement can lead to a simplified and quicker conformance process.

b This flow-chart is applicable for each individual frequency, i.e. only the emissions that are above the limit when measured with peak detector need to be remeasured with quasi-peak detector.

Figure 6 – Determination of conformance when using a peak detector prescan

Table 2 – Spectrum analyser parameters

Replace the existing table with the following new table:

Table 2 – Spectrum analyser parameters

Frequency range MHz	Quasi-peak detector		Peak detector	
	RBW at –6 dB	Minimum scan time	RBW at –6 dB	Minimum scan time
0,15 to 30	9 kHz	200 s/MHz	9 kHz	10 s/MHz

5.1.1.3 Scanning receiver parameters

Replace the existing first paragraph with the following:

The measurement time of the scanning receiver shall be adjusted for the CISPR frequency band and detection mode used. The bandwidth (BW), minimum measurement time and maximum step size are listed in Table 3.

Table 3 – Scanning receiver parameters

Replace the existing table with the following new table:

Table 3 – Scanning receiver parameters

Frequency range MHz	Quasi-peak detector			Peak detector		
	BW at -6 dB	Maximum step size	Minimum measurement time	BW at -6 dB	Maximum step size	Minimum measurement time
0,15 to 30	9 kHz	5 kHz	1 s	9 kHz	5 kHz	50 ms

NOTE The minimum dwell time for FFT based measurements should be 1 s. For further guidance on FFT-based measurement settings, see CISPR 16-2-3.

5.2.2.2 Ambient magnetic field requirements

Replace the existing text with the following new text:

The ambient noise level shall be at least 6 dB below the limits of disturbance given in Clause 4 or, otherwise, the combination of emissions from the vehicle (while operating as specified in this document) and ambient noise shall comply with those limits. The ambient level shall be verified periodically or when test results indicate the possibility of non-compliance.

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