AS/NZS CISPR 36:2021

STANDARDS NEW ZEALAND
TE MANA TAUTĪKANGA O AOTEAROA

STANDARDS Australia

Australian/New Zealand Standard™

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

AS/NZS CISPR 36:2021

This Joint Australian/New Zealand Standard™ was prepared by Joint Technical Committee TE-003, Electromagnetic Compatibility. It was approved on behalf of the Council of Standards Australia on 29 September 2021 and by the New Zealand Standards Approval Board on 6 October 2021.

This Standard was published on 22 October 2021.

The following are represented on Committee TE-003:

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EMC Society of Australia
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This Standard was issued in draft form for comment as DR AS/NZS CISPR 36:2021.

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ISBN 978 1 76113 539 2

Australian/New Zealand Standard™

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

First published as AS/NZS CISPR 36:2021.

Preface

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee TE-003, Electromagnetic Compatibility.

The objective of this document is to define limits for 3 m measurement distance and methods of measurement that are designed to provide protection for off-board receivers (at 10 m distance) in the frequency range of 150 kHz to 30 MHz when used in the residential environment.

NOTE Protection of receivers used on board the same vehicle as the disturbance source(s) is covered by AS/NZS CISPR 25.

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 propelled by an internal traction battery (see 3.2 and 3.3) when operated on the road.

This document applies to vehicles that have a traction battery voltage between 100 V and 1 000 V.

Electric vehicles to which AS/NZS CISPR 14.1 applies are not in the scope of this document.

This document applies only to road vehicles where an electric propulsion is used for sustained speed of more than 6 km/h.

Vehicles where the electric motor is only used to start up the internal combustion engine (e.g. “micro hybrid”) and vehicles where the electric motor is used for additional propulsion only during acceleration (e.g. “48 V mild hybrid vehicles”) are not in the scope of this document.

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

Annex C lists work being considered for future revisions by the IEC for potential adoption within Australia/New Zealand.

This document is an adoption with national modifications, and has been reproduced from, CISPR 36:2020, *Electric and hybrid electric road vehicles — Radio disturbance characteristics - Limits and methods of measurement for the protection of off-board receivers below 30 MHz .*

The modifications are additional requirements and are set out in Appendix ZZ, which has been added at the end of the source text.

Appendix ZZ lists the variations to CISPR 36:2020, for the application of this document in Australia and New Zealand.

As this document has been reproduced from an International Standard, a full point substitutes for a comma when referring to a decimal marker.

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

The terms “normative” and “informative” are used in Standards to define the application of the appendices or annexes to which they apply. A “normative” appendix or annex is an integral part of a Standard, whereas an “informative” appendix or annex is only for information and guidance.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

INTERNATIONAL SPECIAL COMMITTEE ON RADIO INTERFERENCE

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

FOREWORD

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International Standard CISPR 36 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 International Standard is based on the following documents:

CDV	Report on voting
CISPR/D/462/CDV	CISPR/D/464A/RVC

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

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

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

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

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INTRODUCTION

There is a specific need for documents to define acceptable low frequency performance of all electrical/electronic products. CISPR 36 has been developed to serve the electric and hybrid electric road vehicle and related industries with test methods and limits that provide satisfactory protection for radio reception.

Compliance with this document is sometimes insufficient for the protection of receivers used in the residential environment nearer than 10 m to the vehicle. It also sometimes does not provide sufficient protection for new types of radio transmissions.

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

1 Scope

This document defines limits for 3 m measurement distance and methods of measurement that are designed to provide protection for off-board receivers (at 10 m distance) in the frequency range of 150 kHz to 30 MHz when used in the residential environment.

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Annex C lists work being considered for future revisions.

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.

CISPR 16-1-1:2015, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 1-1: Radio disturbance and immunity measuring apparatus – Measuring apparatus*

CISPR 16-1-4:2019, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 1-4: Radio disturbance and immunity measuring apparatus – Antennas and test sites for radiated disturbance measurements*

CISPR 16-2-3:2016, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 2-3: Methods of measurement of disturbances and immunity – Radiated disturbance measurements*
CISPR 16-2-3:2016/AMD1:2019