AS 2344:2016

Australian STANDARD

Limits of electromagnetic interference from overhead a.c. powerlines and high voltage equipment installations in the frequency range 0.15 MHz to 3000 MHz

STANDARDS Australia

This Australian Standard® was prepared by Committee TE-003, Electromagnetic Compatibility. It was approved on behalf of the Council of Standards Australia on 4 November 2016.
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The following are represented on Committee TE-003:

- Australian Communications and Media Authority
- Australian Industry Group
- Australian Information Industry Association
- Consumer Electronics Supplier Association
- Curtin University of Technology
- Department of Defence, Australia
- Electrical Compliance Testing Association
- EMC Society of Australia
- Energy Networks Association
- Engineers Australia
- Free TV Australia
- Lighting Council Australia
- National Measurement Institute
- Wireless Institute Australia

Additional Interests:

- Lighting Council New Zealand
- Ministry of Business, Innovation and Employment, New Zealand

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Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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Australian Standard®

Limits of electromagnetic interference from overhead a.c. powerlines and high voltage equipment installations in the frequency range 0.15 MHz to 3000 MHz

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PREFACE

This Standard was prepared by the Australian members of Joint Standards Australia/Standards New Zealand Committee TE-003, Electromagnetic Compatibility, to supersede AS/NZS 2344:1997 *Limits of electromagnetic interference from overhead a.c. powerlines and high voltage equipment installations in the frequency range 0.15 MHz to 1000 MHz* and its Amendment 1 in 2007.

The objective of this Standard is to establish limits for electromagnetic interference (radio disturbance) from alternating current (a.c.) overhead powerlines and high voltage (HV) equipment installations in the frequency range 0.15 MHz to 3000 MHz. Significant changes incorporated in this edition include but are not limited to the following:

(a) The limits above 30 MHz have reduced and aligned with those of the CISPR product standards.

(b) The measurement distances from overhead power lines have been modified to align with generally accepted easement widths of the Network Service Providers in Australia.

This Standard only deals with the Australian region (see Figure 1 in this Standard), not all regions internationally. This follows the decision of IEC CISPR not to proceed with an international standard, and the decision of Standards New Zealand to develop their own region-specific Standard in 2004.

Appendix B from the amendment of 2007 has been taken into the main body of this revision.

Statements expressed in Notes to Tables are deemed to be normative requirements of this Standard.

The term ‘informative’ has been used in this Standard to define the application of the appendix to which it applies. An ‘informative’ appendix is only for information and guidance.

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STANDARDS AUSTRALIA

Australian Standard

Limits of electromagnetic interference from overhead a.c. powerlines and high voltage equipment installations in the frequency range 0.15 MHz to 3000 MHz

1 SCOPE AND APPLICATION

1.1 Scope

This Standard establishes limits for electromagnetic interference (radio disturbance) from alternating current (a.c.) overhead powerlines and high voltage (HV) equipment installations in the frequency range 0.15 MHz to 3000 MHz. The limits are specified in accordance with geographical zones and coverage areas. Australia is situated in Region 3 and the various coverage areas within Zones A, B and C of Region 3 are shown in Figure 1. These limits are specified for the protection of broadcast radio reception and other radio communication services, including navigation and safety-of-life services.

The limits assume the powerlines and equipment installations have a defined corridor or boundaries within which radio reception cannot be guaranteed and where special measures may be taken.

Outside these boundaries, a satisfactory level of reception, as defined by the International Telecommunication Union (ITU), can be expected.

Limits for single components of powerlines and equipment installations are under consideration.

1.2 Application

This publication applies to a.c. powerlines and high voltage equipment installations used in power systems for the generation, transmission and distribution of electric energy.

The limits herein apply to both the incidental radiation of radio frequencies fortuitously generated by the power system and to radio frequencies borne by the system.

Compliance of individual system components to the limits stated for these components does not imply compliance with system limits. However, the compliance of a component with its respective limit is a guide to the likely performance of the component when incorporated into a power system and a quantitative measure of electromagnetic interference quality for design and contractual purposes.

The limits set down herein are achievable by powerlines and high voltage installations with components in good working condition. Radio disturbance generated by faulty components (i.e. bad contacts or cracked insulators) may be expected to exceed these limits.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS/NZS CISPR

11 Industrial, scientific and medical equipment—Radio-frequency disturbance characteristics—Limits and methods of measurement

16 Specification for radio disturbance and immunity measuring apparatus and methods

16.1.1 Part 1.1: Radio disturbance and immunity measuring apparatus—Measuring apparatus

