

Australian/New Zealand Standard™

**Earth potential rise—Protection of
telecommunications network users,
personnel and plant**

Part 2: Application guide



AS/NZS 3835.2:2006

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee ET-007, Coordinating Committee on Power and Telecommunications. It was approved on behalf of the Council of Standards Australia on 10 April 2006 and on behalf of the Council of Standards New Zealand on 14 April 2006. This Standard was published on 27 September 2006.

The following are represented on Committee ET-007:

Australian Communications and Media Authority
Co-opted Member
Electrical Regulatory Authorities Council
Energy Networks Association
NZCCPTS
Telecommunications Carriers

Additional Interests:

Energex
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We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

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PREFACE

This Standard was prepared by the joint Standards Australia/Standards New Zealand Technical Committee ET-007-01, Earth Potential Rise, Coordination of Power and Telecommunications Systems. This Standard supersedes in part the EPR Code, Issue 1, 1984 (published jointly by the Australian Telecommunications Commission ATC (now Telstra Corporation) and ESAA (now ENA Energy Network Association)).

In New Zealand, this Standard supersedes the Application Guide for EPR, August 1989, published by the New Zealand Committee for the Co-ordination of Power and Telecommunications Systems (NZCCPTS).

The objective of this part of AS/NZS 3835 is to serve as an application guide for personnel responsible for safety in the application of AS/NZS 3835.1 Part 1: *Code of practice*.

Preparation of this Standard was undertaken to update the technical content of the original EPR Code and to remove those contractual and procedural matters better dealt with elsewhere.

This Standard makes reference to publications prepared by the NZCCPTS. Enquiries concerning these publications should be directed to the secretary of NZCCPTS. Contact details for the secretary and details of NZCCPTS publications are available at the web site <http://www.nzccpts.co.nz>. Some publications are available as free downloads from the above web site.

This Standard is Part 2 of a Series dealing with Earth Potential Rise (EPR). This Standard when complete will consist of the following parts:

AS/NZS

3835	Earth potential rise—Protection of telecommunications network users, personnel and plant
3835.1	Part 1: Code of practice
3835.2	Part 2: Application guide (this Standard)
3835.3	Part 3: Isolation arrangements for paired cable telemetering telecontrol service in LV areas and HV sites
HB 219	Earth potential rise—Protection of telecommunications network users, personnel and plant—Worked examples for the application guide

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.

Statements expressed in mandatory terms in notes to figures, are deemed to be requirements of this Standard. ‘Shall’ indicates a requirement is mandatory, while ‘should’ indicates a recommendation and good practice.

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard is a guide to the application of the EPR Code of practice for the protection of persons or plant prescribed in AS/NZS 3835.1. This Standard is intended for personnel responsible for ensuring safety in a telecommunications service environment.

1.2 APPLICATION

This Standard shall be read in conjunction with AS/NZS 3835.1:2006.

1.3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

1319 Safety signs for the occupational environment

60529 Degrees of protection provided by enclosures (IP Code)

AS/NZS

3835 Earth potential rise—Protection of telecommunications network users,
personnel and plant

3835.1 Part 1: Code of practice

60479 Effects of current on human beings and livestock

60479.1:2002 Part 1: General aspects

60950 Information technology equipment—Safety

60950.1 Part 1: General requirements

HB

101 Coordination of power and telecommunications—Low Frequency Induction (LFI): Code of practice for the mitigation of hazardous voltages induced into telecommunications lines)

102 Coordination of power and telecommunications—Low Frequency Induction (LFI): Application Guide to the LFI Code

219 Earth potential rise—Protection of telecommunications network users,
personnel and plant—Worked examples for the application guide

ANSI/IEEE

81 IEEE Guide for measuring earth resistivity, ground impedance, and earth surface potentials of a ground system

ESAA

EG1(2000) Substation earthing guide