

Australian/New Zealand Standard™

**Electrical installations – Electric
security fences**

This Joint Australian / New Zealand Standard was prepared by Joint Technical Committee EL/21 Installation of Electric Fences. It was approved on behalf of the Council of Standards Australia on 15 November 2002 and on behalf of the Council of Standards New Zealand on 20 December 2002. It was published on 10 January 2003.

The following interests are represented on Committee EL/21:

Australian Chamber of Commerce and Industry
Australian Dairy Farmers' Federation
Electrical Safety Organisation
Farmsafe Australia
Federated Farmers New Zealand
Ministry of Economic Development, New Zealand
Office of the Chief Electrical Inspector, Victoria
New Zealand Electric Fence Energizers Manufacturers Standards Working Group

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Electrical installations – Electric security fences

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FOREWORD

The Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL/21 on the Installation of Electric Fences in response to requests from Australian regulatory authorities and from the New Zealand Ministry of Commerce. This Standard is to supersede AS/NZS 3016:1994 on publication.

In the preparation of this Standard, reference was made to the New Zealand Ministry of Commerce document NZECP 21.2 *Electrical installations – Electric security fences*, and acknowledgement is made of the assistance received from that source. In addition, consideration was also given to IEC 60479-2 *Effects of current passing through the human body Part 2: Special aspects*.

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.

CONTENTS

| SECTION | <i>Page</i> |
|-----------------------------------------------------------|-------------|
| 1 Scope | 5 |
| 2 Referenced documents | 5 |
| 3 Definitions | 5 |
| 4 Components | 7 |
| 4.1 Energizers and ancillary equipment | 7 |
| 4.2 Barbed wire and razor wire | 7 |
| 4.3 Insulation | 7 |
| 5 Installation | 8 |
| 5.1 General | 8 |
| 5.2 Protection against weather | 8 |
| 5.3 Separation between electric fence conductors | 8 |
| 5.4 Underground wiring | 8 |
| 5.5 Insulation from buildings | 8 |
| 5.6 Warning signs | 8 |
| 5.7 Gates | 9 |
| 5.8 Installation near power and communication lines | 9 |
| 5.9 Earthing | 10 |
| 5.10 Connections | 10 |
| 5.11 Construction | 10 |
| 6 Fire risk | 12 |
| 7 Operation of electric fence | 13 |
| | |
| FIGURES | |
| 1 Symbol for warning sign | 9 |
| 2 Prohibited zone for pulsed conductors | 11 |
| | |
| TABLE | |
| 1 Clearances from power lines | 9 |
| | |
| APPENDIX | |
| A Typical electric security fence constructions | 14 |

NOTES

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard
Electrical installations – Electric security fences

1 SCOPE

This Standard sets out safety requirements for the installation and operation of electric security fences and their associated equipment.

It covers electric security fences powered by electric fence energizers supplied from all types of electric power sources (e.g. batteries, solar cells, diesel generator sets and supply mains).

It does not apply to electric fences which are intended primarily for the control or containment of animals, to installations in hazardous areas or to electric fence systems in which the electrified elements operate at safety extra-low voltage (SELV), and are intended solely to detect the presence of intruders.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS 1939 Degrees of protection provided by enclosures for electrical equipment (IP Code)

AS/NZS 3350.2.76 Electric fence energizers

IEC 60529 Degrees of protection provided by enclosures (IP Code)

3 DEFINITIONS

For the purpose of this Standard, the definitions below apply:

3.1 Connecting lead – an electric conductor which is not part of the fence, used to connect the energizer to the electric fence.

3.2 Building element – any structural and non-structural component or assembly incorporated into or associated with a building. Included are fixtures, services, drains, permanent mechanical installations for access, glazing, partitions, ceilings and temporary supports.

3.3 Earth electrode – a metal object intended to provide effective electrical contact with earth (e.g. a length of water pipe or a star-section post).

3.4 Electric fence – a barrier which includes one or more electric conductors, insulated from earth, to which electric pulses are applied by an energizer.

3.5 Electric security fence – an electric fence used for security purposes and a physical barrier electrically isolated from the electric fence.