

Australian Standard[®]

**Electrical installations—Electric
fences**

This Australian Standard was prepared by Committee EL/21, Installation of Electric Fences. It was approved on behalf of the Council of Standards Australia on 24 September 1990 and published on 11 February 1991.

The following interests are represented on Committee EL/21:

Australian Dairy Farmers Federation
Confederation of Australian Industry
Department of Agriculture and Rural Affairs, Vic.
Department of Primary Industry, Qld.
Electrical regulatory authorities
Electricity Supply Association of Australia
Telecom Australia
University of Melbourne

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PREFACE

This Standard was prepared by the Standards Australia Committee on the Installation of Electric Fences.

The Standard is intended to complement AS 3129, *Approval and Test Specification—Electric fence energizers*, and to supersede any installation requirements contained in that Standard.

In the preparation of this Standard reference was made to a draft international Standard, Installation and operation of electric fences, obtained from IEC Committee 61H—Safety of Electrically Operated Farm Appliances.

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STANDARDS AUSTRALIA

Australian Standard

Electrical installations—Electric fences

1 SCOPE This Standard sets out requirements for the installation and operation of electric fences and their associated equipment both outdoors and indoors.

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

It does not cover equipment, not associated with fences, that is capable of delivering electric shocks (e.g. cattle prods).

2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS

2401 Battery chargers for lead-acid batteries—Household type

3129 Approval and test specification—Electric fence energizers

3193 Approval and test specifications—Transformer type battery chargers

3 DEFINITIONS For the purpose of this Standard, the definitions below apply.

3.1 Electric fence — a barrier to animals which includes one or more electric conductors, insulated from earth, to which regular electric pulses are applied by an energizer.

3.2 Energizer — an appliance intended to regulate and control the supply of electrical energy to electric fences.

3.3 Fence circuit — that part of an energizer circuit which is connected to the fence. An energizer may have more than one fence circuit.

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

3.5 Electrode — a metal object intended to provide effective electrical contact with earth (e.g. a length of water pipe, or a star section post).

3.6 Fence earth system — one or more electrodes together with connecting leads and accessories which are used to maintain part of the fence in effective electrical contact with earth.

3.7 Insulator — a device intended to permanently provide resistance to the passage of current from wires carrying pulses.

3.8 Voltage — difference of potential normally existing between conductors and also between conductors and earth.

3.9 Shall — indicates that a statement is mandatory.

3.10 Should — indicates a recommendation.

3.11 May — indicates the existence of an option.

4 COMPONENTS

4.1 Energizers All mains-powered electric fence energizers shall comply with AS 3129.

NOTES:

1. AS 3129 is not applicable to battery-powered energizers.
2. Legislation exists in all Australian states requiring mains-powered electric fence energizers to be approved by the relevant inspecting authority. To qualify for approval, an energizer must comply with AS 3129 and, when approved, must be marked with an appropriate number.
Advice should be obtained from the manufacturer's agent or an agricultural advisory service regarding the compliance of energizers, which are not marked with an approval number.
Because of the hazards of using a non-complying energizer, energizers for which evidence of compliance with AS 3129 cannot be obtained should be removed from service.

4.2 Insulation Uninsulated fence wires and connecting leads shall be supported on insulators of durable non-conducting material. This requirement does not apply to connecting leads consisting of cable with high voltage insulation. Some types of hardwood and treated softwood are suitable non-conducting material and may be used to support electric fence wires without the use of insulators.

NOTE: The local agricultural advisory service should be consulted for advice on types of posts suitable for use without insulators in a particular area.