

Australian Standard™

**Electrical installations—Surface mines
and associated processing plant**

Part 5: Operating requirements

This Australian Standard was prepared by Committee EL-033, Electrical Installations for Outdoor Sites Under Heavy Conditions. It was approved on behalf of the Council of Standards Australia on 28 July 2004.
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The following are represented on Committee EL-033:

Australian Electrical and Electronic Manufacturers Association
Construction and Mining Equipment Association of Australia
Department of Mineral Resources NSW
Department of Natural Resources and Mines (Qld)
Minerals Council of Australia
Mining Interests
Ministry of Economic Development (New Zealand)
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Originated as AS 3007.5—1987.
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PREFACE

This Standard was prepared by Standards Australia Committee EL-033, Electrical Installations for Outdoor Sites Under Heavy Conditions, to supersede AS 3007.5—1987 which was based on IEC 60621-5:1987, *Electrical installations for outdoor sites under heavy conditions (including open-cast mines and quarries)*, Part 5: *Operating requirements*.

This Standard was produced from AS 3007.5—1987. Even though much of the technical content is sourced from IEC 60621-5, this Standard is not equivalent to IEC 60621-5. It has been updated to align with Standards Australia style including the following:

- (a) Numbering of all clauses.
- (b) The addition of lists of referenced Standards.
- (c) Updating of references to other Standards.

This Standard is Part Five of a series that includes the following:

AS

3007	Electrical installations—Surface mines and associated processing plant
3007.1	Part 1: Scope and definitions
3007.2	Part 2: General protection requirements
3007.3	Part 3: General requirements for equipment and ancillaries
3007.4	Part 4: Additional requirements for specific applications
3007.5	Part 5: Operating requirements (this Standard)

The object of the AS 3007 series is to specify requirements for the installation and operation of electrical apparatus and systems in open-cut mines, quarries, stockpiles and similar installations to provide for the safety of persons, livestock and property.

AS 3007.1 outlines the scope of the AS 3007 series and provides definitions for some of the terms used. AS 3007.2 specifies measures which are required for protection against electric shock in normal service from direct contact with live parts, for protection against electric shock from parts which may become live in the event of a fault (indirect contact), and for protection against the effects of overcurrent resulting from overload or short-circuit conditions. AS 3007.3 prescribes general requirements for equipment and ancillaries associated with the electrical installation. AS 3007.4 sets out the requirements which are specific to particular installations, together with exemptions from the general requirements of AS 3007.2 and 3, which apply for such installations. AS 3007.5 (this Standard) sets out the normal operating procedures which should be carried out to ensure the safety of personnel.

The AS 3007 series recognizes several types of power supply system and specifies the protective measures which are necessary for each system. Requirements for protection of persons from indirect contact are based on the concept of permissible voltage versus time limits, which take into account the pathophysiological effects of electric current passing through the human body, typical industry conditions, and the probability of persons being in contact with the plant.

The terms ‘normative’ and ‘informative’ are used to define the application of the appendix to which they apply. A normative appendix is an integral part of a standard, whereas an informative appendix is only for information and guidance

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STANDARDS AUSTRALIA

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Electrical installations—Surface mines and associated processing plant

Part 5: Operating requirements

1 SCOPE

This Standard specifies the normal operating procedures which should be carried out to ensure the safety of personnel. These procedures may be varied in certain circumstances where a planned operation is performed under controlled conditions.

NOTE: Attention is drawn to the fact that the requirements of Regulatory Authorities may differ from the requirements specified in this standard.

2 REFERENCED DOCUMENTS

The following standards are referred to in this Standard:

AS

2187 Explosives—Storage, transport and use

2187.1 Part 1: Storage

2187.2 Part 2: Use of explosives

3007 Electrical installation—Surface mines and associated processing plant

3007.2 Part 2: General protection requirements

IEC

60621 Electrical installations for outdoor sites under heavy conditions (including open-cast mines and quarries)

60621-5 Part 5: Operating requirements

BS

6657 Assessment of inadvertent initiation of electro-explosive devices by radio-frequency radiation. Guide

3 RESTRICTIONS ON ACCESS BY PERSONNEL

3.1 Access to normal operating areas

All personnel may have access to a normal operating area provided all barriers and enclosures required by Section 2 of AS 3007.2 are in place.

Barriers or enclosures provided in accordance with Clause 2.3.4 of AS 3007.2 shall be removed only by skilled or instructed persons, unless of the type described in Items (b), (c), (d) or (e) of that clause. When these barriers or enclosures are removed and the exposed live parts are not isolated in accordance with Clause 4.3 of this Standard, temporary barriers and warning signs shall be installed.

3.2 Access to electrical operating areas and closed electrical operating areas

Only the following persons shall be permitted access to an electrical operating area and a closed electrical operating area, unless all exposed live parts in the area have been isolated in accordance with Clause 4.3:

- (a) Skilled persons.
- (b) Appropriately instructed persons.
- (c) Ordinary persons when accompanied by skilled persons or appropriately instructed persons.