

Australian Standard™

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

**Part 3: General requirements for  
equipment and ancillaries**

This Australian Standard was prepared by Committee EL-023, Electrical Equipment in Coal Mines. It was approved on behalf of the Council of Standards Australia on 28 July 2004. This Standard was published on 30 August 2004.

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The following are represented on Committee EL-023:

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AS 3007.3—2004  
(Incorporating Amendment No. 1)

Australian Standard™

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

**Part 3: General requirements for  
equipment and ancillaries**

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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 3007.3—1987 which was based on IEC 60621-3:1979, *Electrical installations for outdoor sites under heavy conditions (including open-cast mines and quarries)*, Part 3: *General requirements for equipment and ancillaries*, including Amendment 1 (1986).

*This Standard incorporates Amendment No. 1 (May 2005). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.*

This Standard was produced from AS 3007.3—1987. Even though much of the technical content is sourced from IEC 60621-3, this Standard is not equivalent to IEC 60621-3. 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 Three 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 (this Standard)
3007.4	Part 4: Additional requirements for specific applications
3007.5	Part 5: Operating requirements

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 (this Standard) 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 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

### Australian Standard

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

#### Part 3: General requirements for equipment and ancillaries

### SECTION 1 SCOPE AND REFERENCED DOCUMENTS

#### 1.1 SCOPE

This Standard sets out requirements for the equipment and ancillaries associated with electrical installations within the scope of AS 3007.1.

#### 1.2 REFERENCED DOCUMENTS

The following standards are referred to in this standard:

##### AS

- |        |   |
|--------|---|
| 1081   | Acoustics—Measurements of airborne noise emitted by rotating electrical machinery                               |
| 1081.2 | Part 2: Survey method   |
| 1217   | Acoustics—Determination of sound power levels of noise sources (all parts)                                      |
| 1603   | Automatic fire detection and alarm systems (all parts)  |
| 1670   | Fire detection, warning, control and intercom systems—System design, installation and commissioning (all parts) |
| 2118   | Automatic fire sprinkler systems (all parts)  |
| 2380   | Electrical equipment for explosive atmospheres—Explosion-protection techniques (all parts)                      |
| 2441   | Installation of fire hose reels   |
| 2444   | Portable fire extinguishers and fire blankets—Selection and location  |
| 2665   | Smoke/heat venting systems—Design, installation and commissioning   |
| 3007   | Electrical installations—Surface mines and associated processing plant  |
| 3007.1 | Part 1: Scope and definitions   |
| 3007.2 | Part 2: General protection requirements   |
| 3007.4 | Part 4: Additional requirements for specific applications   |

##### AS/NZS

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|-----------|---|
| 1221      | Fire hose reels   |
| 1668      | The use of mechanical ventilation and air-conditioning in buildings                     |
| 1668.1    | Part 1: Fire and smoke control in multi-compartment buildings                           |
| 1850      | Portable fire extinguishers—Classification, rating and performance testing              |
| 61000     | Electromagnetic compatibility (EMC)   |
| 61000.3   | Part 3: Limits  |
| 61000.3.6 | Part 3.6: Assessment of emission limits for distorting loads in MV and HV power systems |