AS 3007.2—2004

Australian Standard™

Electrical installations—Surface mines and associated processing plant

Part 2: General protection requirements

STANDARDS AUSTRALIA

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
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Society of Automotive Engineers-Australasia

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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 3007.2—1987 which was based on IEC 60621-2:1987, *Electrical installations for outdoor sites under heavy conditions (including open-cast mines and quarries)*, Part 2: *General protection requirements.*

This Standard was produced from AS 3007.2—1987. Even though much of the technical content is sourced from IEC 60621-2, this Standard is not equivalent to IEC 60621-2. 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 Two 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 (this Standard)
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

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 (this Standard) 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 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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SECTION 1 SCOPE AND REFERENCED DOCUMENTS

1.1 SCOPE

This Standard prescribes general protection requirements for electrical installations within the scope of AS 3007.1. It outlines the 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.

1.2 REFERENCED DOCUMENTS

The following standards are referred to in this Standard:

AS
1243 Voltage transformers for measurement and protection

1824 Insulation co-ordination
1824.1 Part 1: Definitions, principles and rules
1824.2 Part 2: Application guide

3007 Electrical installations—Surface mines and associated processing plant
3007.1 Part 1: Scope and definitions
3007.4 Part 4: Additional requirements for specific applications

4436 Guide for the selection of insulators in respect of polluted conditions

60044 Instrument transformers
60044.1 Part 1: Current transformers

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

AS/NZS
60269 Low-voltage fuses
60269.2.0 Part 2.0: Supplementary requirements for fuses for use by authorized persons (fuses mainly for industrial application)
60269.2.1 Part 2.1: Supplementary requirements for fuses for use by authorized persons (fuses mainly for industrial application)—Sections I to V: Examples of types of standardized fuses

IEC
60364 Electrical installations of buildings
60364-1 Part 1: Fundamental principles, assessment of general characteristics, definitions
60364-4-41 Part 4-41: Protection for safety—Protection against electric shock

