

Australian Standard[®]

**ELECTRICAL EQUIPMENT FOR
COAL AND SHALE MINES—
ELECTRICAL PROTECTION
DEVICES**

**Part 4—LOCKOUT EARTH-FAULT
PROTECTION DEVICES**

This Australian Standard was prepared by Committee EL/23, Electrical Equipment in Coal Mines. It was approved on behalf of the Council of the Standards Association of Australia on 15 March 1988 and published on 17 June 1988.

The following interests are represented on Committee EL/23:

Australian Coal Association
Australian Electrical and Electronic Manufacturers Association
Confederation of Australian Industry
Department of Industrial Relations and Employment, N.S.W.
Department of Mines, Qld
Joint Coal Board
Institution of Mining Electrical and Mining Mechanical Engineers
Regulatory Authorities (Electrical)

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Part of AS 2081—1977 revised and redesignated
AS 2081.4—1988.

PREFACE

This Standard was prepared by the Association's Committee on Electrical Equipment in Coal Mines. It is one of a series of five Standards which collectively supersede AS 2081 — 1977, *Earth fault protection, monitoring and current limitation equipment for use in coal and shale mines*.

This series of Standards is as follows:

AS

- 2081 *Electrical equipment for coal and shale mines—Electrical protection devices*
 Part 1: *General requirements* (AS 2081.1)
 Part 2: *Earth-continuity monitoring devices* (AS 2081.2)
 Part 3: *Earth-leakage protection devices for use on systems incorporating earth-fault current limiters* (AS 2081.3)
 Part 4: *Lockout earth-fault protection devices* (AS 2081.4)
 Part 5: *Earth fault current limiters* (AS 2081.5)

The following are the major changes in this edition:

- (a) Former definitions have been amended and new definitions added.
- (b) Former requirements for relays have been amended to require a minimum degree of protection of IP53.
- (c) Reference to AS 1829 has been replaced by reference to AS 2380.7.
- (d) Where appropriate, the provisions of AS 3108.1 and AS 3126 have been called up.
- (e) Requirements for protection against false operation of earth-continuity monitoring devices and earth-leakage protection devices have been included.
- (f) The operating value test has been amended.

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard

**ELECTRICAL EQUIPMENT FOR COAL AND SHALE MINES—
ELECTRICAL PROTECTION DEVICES**

PART 4: LOCKOUT EARTH-FAULT PROTECTION DEVICES

SECTION 1. SCOPE AND GENERAL

1.1 SCOPE. This Standard specifies requirements for lockout earth-fault protection devices intended primarily for use in conjunction with trailing cables supplying mobile and portable equipment. In operation, the device monitors the condition of the cable prior to the application of power and prevents power being applied in the event of a fault between one or more active conductors and earth having resistance below a predetermined value.

1.2 REFERENCED DOCUMENTS. The documents below are referred to in this Standard.

AS

2081 Electrical equipment for coal and shale mines — Electrical protection devices
Part 1: General requirements (AS 2081.1)

2380 Electrical equipment for explosive atmospheres—Explosion-protection techniques
Part 7: Intrinsic safety i (AS 2380.7)

3108 Approval and Test Specification—Isolating transformers and safety isolating transformers
Part 1: General requirements (AS 3108.1)

3126 Approval and Test Specification for extra-low voltage transformers

1.3 DEFINITIONS. For the purpose of this Standard, the definitions given in AS 2081.1 apply.