

AS/NZS 2081:2011
Reconfirmed 2022

AS/NZS 2081:2011

Australian/New Zealand Standard™

Electrical protection devices for mines and quarries



AS/NZS 2081:2011

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-023, Electrical Equipment in Mines and Quarries. It was approved on behalf of the Council of Standards Australia on 23 September 2011 and on behalf of the Council of Standards New Zealand on 23 September 2011. This Standard was published on 4 November 2011.

The following are represented on Committee EL-023:

Australian Chamber of Commerce and Industry
Australian Coal Association
Australian Industry Group
Consult Australia
Department of Employment, Economic Development and Innovation
Department of Mines & Petroleum (WA)
Department of Trade and Investment, Regional Infrastructure and Services, NSW
Electrical Apparatus Service Association
Mining Electrical and Mining Mechanical Engineering Society
National Association of Testing Authorities Australia
Queensland Department of Environment and Resource Management
Solid Energy New Zealand
The Aviation and Marine Engineers Association
University of Newcastle
WorkCover New South Wales

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Web Shop at www.saiglobal.com.au or Standards New Zealand web site at www.standards.co.nz and looking up the relevant Standard in the on-line catalogue.

For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

RECONFIRMATION

OF

AS/NZS 2081:2011

Electrical protection devices for mines and quarries

RECONFIRMATION NOTICE

Technical Committee EL-023 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 14 February 2022.

Approved for reconfirmation in New Zealand on behalf of the New Zealand Standards Approval Board on 20 May 2022.

The following are represented on Technical Committee EL-023:

Australian Cablemakers Association
Australian Chamber of Commerce and Industry
Australian Industry Group
Aviation and Marine Engineers Association
Better Regulation Division (Fair Trading, SafeWork NSW, TestSafe)
Construction Forestry Miners and Energy Union
Department of Mines, Industry Regulation and Safety WA
Department of Regional NSW
Engineering New Zealand
Engineers Australia
Mining Electrical and Mining Mechanical Engineering Society
Minerals Council of Australia
National Association of Testing Authorities Australia
Resources Safety & Health Queensland
University of Newcastle
WorkSafe New Zealand

AS/NZS 2081:2011

Australian/New Zealand Standard™

Electrical protection devices for mines and quarries

Originated in Australia as AS C318—1958.
Previous editions, and first New Zealand editions, in part as AS/NZS 2081,
Parts 1 to 5 (2002).
Jointly revised, amalgamated and redesignated as AS/NZS 2081:2011.

COPYRIGHT

© Standards Australia Limited/Standards New Zealand

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher, unless otherwise permitted under the Copyright Act 1968 (Australia) or the Copyright Act 1994 (New Zealand).

Jointly published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001 and by Standards New Zealand, Private Bag 2439, Wellington 6140.

ISBN 978 0 7337 9954 9

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-023, Electrical Equipment in Mines and Quarries, to supersede Parts 1 to 5 of AS/NZS 2081 (2002), *Electrical equipment for coal and shale mines—Electrical protection devices*.

This Standard specifies the performance requirements for protection devices intended for use with electrical supply networks utilizing earth fault current limitation techniques (IT networks). These protection devices include the following:

- (a) Earth fault current limiting devices.
- (b) Earth continuity protection devices.
- (c) Earth fault protection devices.
- (d) Earth fault lockout protection devices.
- (e) NER integrity protection devices.
- (f) Frozen contact protection devices.

Prospective touch voltage versus operating time characteristics are referenced to facilitate the key objectives of this Standard.

This edition of the Standard differs from the previous editions in the following significant ways:

- (a) All parts have been combined into a single document.
- (b) Clarification of the Scope to indicate that the Standard is applicable to both above and below ground mines and quarries.
- (c) The addition of NER integrity protection devices.
- (d) The addition of frozen contact protection devices.
- (e) The inclusion of references to specific prospective touch voltage versus operating time characteristics that form the basis of the protection strategies implemented by the equipment covered by this Standard.
- (f) The addition of prescribed levels of immunity to conducted common mode signals and electromagnetic interference for protection devices containing active circuits.
- (g) The addition of requirements for vibration, shock and bump immunity.
- (h) Clarification of requirements for conformal coatings in lieu of environmental testing.
- (i) The revision of typical system electrical diagrams showing the application of the various protection systems detailed in this Standard.
- (j) The inclusion of partial discharge and impulse testing.

The term 'informative' has been used in this Standard to define the application of the appendix to which it applies. An 'informative' appendix is only for information and guidance.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-