

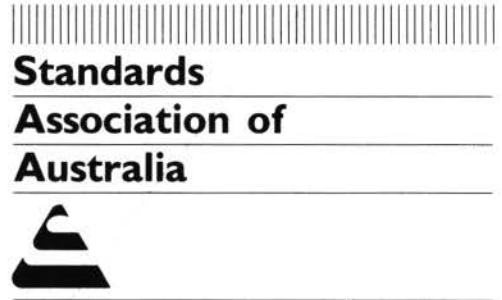
AS 3439.1—1993
Type-tested and partially type-tested assemblies
(IEC 439-1:1992)
(In Professional Package 24) 135pp L
Specifies requirements for type-tested and partially type-tested low voltage switchgear and controlgear assemblies for rated voltages up to 1000 V a.c. at frequencies not exceeding 1000 Hz, or 1500 V d.c. Applies to assemblies intended for use with generation, transmission, distribution and conversion of electrical energy and the control of electrical energy consuming equipment. This Standard is technically equivalent to and has been reproduced from IEC 439-1:1992.

Committee EL6: Supersedes AS 1136.1—1988:
Draft for Comment On 82127: Publication date 1993-12-20: ISBN 0 7262 8623 0.

AS 1136.1—1988

Amdt 1, 1989-03-13

WITHDRAWN T&S
DECEMBER 1993
SK BY
AS 3439.1-1993



Australian Standard® 1136.1—1988

LOW VOLTAGE SWITCHGEAR AND CONTROLGEAR ASSEMBLIES Part 1—GENERAL REQUIREMENTS

This Australian Standard was prepared by Committee EL/6, Industrial Switchgear and Controlgear. It was approved on behalf of the Council of the Standards Association of Australia on 22 December 1987 and published on 7 March 1988.

The following interests are represented on Committee EL/6:

Australian-British Chamber of Commerce
Australian Electrical and Electronic Manufacturers Association
Bureau of Steel Manufacturers of Australia
Department of Defence
Electrical Contractors Associations of Australia
Electricity Supply Association of Australia
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AUSTRALIAN STANDARD

**LOW VOLTAGE SWITCHGEAR AND
CONTROLGEAR ASSEMBLIES**
Part 1
GENERAL REQUIREMENTS

AS 1136.1—1988

First published as AS 1136—1974.
Second edition 1980.
Revised and redesignated AS 1136.1—1988.

PUBLISHED BY THE STANDARDS ASSOCIATION OF AUSTRALIA
STANDARDS HOUSE, 80 ARTHUR ST, NORTH SYDNEY, N.S.W.

ISBN 0 7262 4884 3

PREFACE

This Standard was prepared by the Association's Committee on Industrial Switchgear and Controlgear to supersede AS 1136—1980, *Switchgear and controlgear assemblies for voltages up to 1000 V a.c.*

It is based on the 1985 edition of IEC 439-1, *Low-voltage switchgear and controlgear assemblies, Part 1: Requirements for type-tested and partially type-tested assemblies*, and acknowledgement is made of the assistance received from this source. Further Standards in this series are under consideration to cover particular requirements for assemblies to which unskilled persons may have access for their use and assemblies for construction sites.

In this Standard a type-tested low-voltage switchgear and controlgear assembly is referred to by the abbreviation TTA. Similarly a partially type-tested assembly is referred to by the abbreviation PTTA. When both a TTA and a PTTA are being referred to, the word 'assembly' (or 'assemblies') is used. The Standard defines what is meant by an assembly, a TTA and a PTTA.

This Standard differs significantly from IEC 439-1 and this is indicated both in Appendix L and by a rule in the margin against the clause or part thereof affected. Some important differences are as follows:

- (a) The manufacturer of an assembly is responsible for the correct selection and installation of components having regard to their conditions of use within the assembly including any necessary derating. Appendix J has been added concerning the selections of components.
- (b) Minimum impulse withstand voltages and minimum creepage distances are specified.
- (c) The typical forms of segregation have been extended to cover a number of variations frequently encountered.
- (d) Appendix B lists items subject to agreement between the purchaser and the manufacturer.
- (e) Appendix D is included to give guidance for the design of assemblies intended to provide increased security against the occurrence of or the effects of internal arcing faults.
- (f) Appendix E is included for the verification of the performance of assemblies designed in accordance with the guidelines set out in Appendix D. It specifies standard test conditions with the arc initiated by the connection of fuse wire at selected terminals or connections on the load side of the protective device within each compartment tested and insulation may be removed for this purpose. It also provides for special internal arcing fault tests, which may be required.
- (g) Tests carried out on assemblies to Appendix E of previous editions of AS 1136 are recognized as meeting either the standard test or a special test to Appendix E of this Standard.
- (h) Appendix F is included to show the types of system earthing for which assemblies may need to be designed.
- (i) Alternative test method for Test Duties 1 and 2 is given in Appendix K.

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