

Australian Standard™

**Transformers for use on single-wire
earth-return distribution systems**

STANDARDS
Australia



This Australian Standard was prepared by Committee EL-008, Power Transformers. It was approved on behalf of the Council of Standards Australia on 13 March 2006. This Standard was published on 27 March 2006.

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**Transformers for use on single-wire
earth-return distribution systems**

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PREFACE

This Standard was prepared by the Standards Australia Committee EL-008, Power Transformers to supersede AS 2558—1982 on publication.

The objective of this Standard is to provide manufacturers, suppliers, test laboratories and purchasers with requirements for transformers used in single-wire earth-return (SWER) distribution systems.

The Standard applies to isolating and distribution transformers for use on SWER distribution systems only and it is intended to be used in conjunction with AS 60076.1, *Power Transformers, Part 1: General*, which applies to SWER transformers, except where its requirements are modified or amplified by this Standard.

Mounting arrangements for transformers used in SWER distribution systems are not covered by this Standard. In Australia, the mounting system usually follows the requirements contained in ESAA Doc 007. In New Zealand the purchaser and supplier should agree on the mounting system.

Although this is an Australian Standard, these transformers are used in New Zealand and hence information relevant to New Zealand requirements has been included.

The following changes have been made to the 1982 edition:

- The preferred rating of SWER isolating and distribution transformers have been revised.
- Figure 2.1 has been revised.
- Figures 2.2, 2.3 and 2.4 in the 1982 edition have been deleted.
- Table 4.1 has been revised.
- Appendix B has been deleted.
- The style of the document has been changed to conform with current practice.
- A number of editorial changes and revisions have been made.

The term 'normative' has been used in this Standard to define the application of the appendix to which it applies. A 'normative' appendix is an integral part of a Standard.

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STANDARDS AUSTRALIA

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Transformers for use on single-wire earth-return distribution systems

1 SCOPE AND GENERAL**1.1 Scope**

This Standard specifies requirements for isolating and distribution transformers for use on single-wire earth-return (SWER) distribution systems.

1.2 Applications

The SWER transformers, in addition to complying with this Standard, shall comply with the appropriate requirements of the AS 2374 series and AS 60076 series, except when modified or amplified by this Standard.

1.3 Referenced documents

The following Standards and specifications are referred to in this Standard:

AS

2374 Power transformers
2374.2 Part 2: Temperature rise

60076 Power transformers
60076.1 Part 1: General

ESAA

DOC 007 Specification for Polemounting Distribution Transformers

1.4 Service conditions

The service conditions contained in AS 60076.1 shall apply.

1.5 Definitions

For the purpose of this Standard, the following definitions apply. Other terms have the meaning ascribed to them in AS 60076.1.

NOTE: For the purpose of this Standard, a synthetic insulating liquid is regarded as an oil.

1.5.1 Transformer**1.5.1.1 SWER transformer**

A transformer for use on a single-wire earth-return system.

1.5.1.2 SWER isolating transformer

A transformer having two or more windings, one of which will supply a SWER system.

1.5.1.3 SWER distribution transformer

A transformer having one winding for connection to a SWER system and a second winding (low voltage) for connection to the load.

1.5.2 Single-wire terminal (SW)

That terminal of a SWER isolating or distribution transformer which is connected to the SWER conductor.