Australian Standard™

Power transformers

Part 4: Guide to the lightning impulse and switching impulse testing—Power transformers and reactors

This Australian Standard was prepared by Committee EL-008, Power Transformers. It was approved on behalf of the Council of Standards Australia on 15 December 2005.
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The following are represented on Committee EL-008:

Australasian Railway Association
Australian Chamber of Commerce and Industry
Australian Electrical and Electronic Manufacturers Association
Australian Greenhouse Office, Department of Environment and Heritage
Australian Institute of Petroleum
Energy Networks Association
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Part 4: Guide to the lightning impulse and switching impulse testing—Power transformers and reactors

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PREFACE

This Standard was prepared by the Standards Australia Committee EL-008, Power Transformers to supersede AS 2732—1984 on publication.

The objective of this Standard is to provide designers, manufacturers, purchasers and users of power transformers with additional information on the lightning and switching impulse testing of power transformers and reactors.

This Standard is identical with, and has been reproduced from IEC 60076-4, Ed.1.0 (2002), *Power transformers Part 4: Guide to the lightning impulse and switching impulse testing—Power transformers and reactors*.

The AS 60076 series, *Power transformers* consists of the following parts:

AS

60076.1 Part 1: General

60076.4 Part 4: Guide to the lightning impulse and switching impulse testing—Power transformers and reactors (this Standard)

60076.11 Part 11: Dry-type transformers

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1 Scope

This part of IEC 60076 gives guidance and explanatory comments on the existing procedures for lightning and switching impulse testing of power transformers to supplement the requirements of IEC 60076-3. It is also generally applicable to the testing of reactors (see IEC 60289), modifications to power transformer procedures being indicated where required.

Information is given on waveshapes, test circuits including test connections, earthing practices, failure detection methods, test procedures, measuring techniques and interpretation of results.

Where applicable, the test techniques are as recommended in IEC 60060-1 and IEC 60060-2.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

References to international standards that are struck through in this clause are replaced by references to Australian or Australian/New Zealand Standards that are listed immediately thereafter and identified by shading. Any Australian or Australian/New Zealand Standard that is identical to the International Standard it replaces is identified as such.

~~IEC 60060-1, *High-voltage test techniques – Part 1: General definitions and test requirements*~~

AS 1931.1, *High-voltage test techniques,* Part 1: *General definitions and test requirements* (identical to IEC 60060-1:1992)

~~IEC 60060-2, *High-voltage test techniques – Part 2: Measuring systems*~~

AS 1931.2, *High-voltage test techniques,* Part 2: *Measuring systems* (identical to IEC 60060-2:1994)

IEC 60076-3, *Power transformers – Part 3: Insulation levels, dielectric tests and external clearances in air*

~~IEC 60289, *Reactors*~~

AS 1028, *Power reactors and earthing transformers* (identical to IEC 60289:1988)

IEC 61083-1, *Instruments and software used for measurement in high-voltage impulse tests – Part 1: Requirements for instruments*

