



**AS/NZS 3760:2010**  
Incorporating Amendments No. 1 and No. 2

Joint Australian New Zealand Standard

# **In-service safety inspection and testing of electrical equipment**

Superseding AS/NZS 3760:2003

AS/NZS 3760:2010



This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-036 – In-service testing of electrical equipment. It was approved on behalf of the Council of Standards Australia on 2 September 2010 and by the Council of Standards New Zealand on 24 September 2010. It was published on 30 September 2010.

Amendment No. 1, a correction amendment, was approved for publication in Australia by the Standards Council of Australia on 13 April 2011, and for publication in New Zealand by the Acting Minister of Energy and Resources on 15 April 2011, and on behalf of the Standards Council of New Zealand on 19 April 2011.

Amendment No. 2, a correction amendment, was approved for publication in Australia by the Standards Council of Australia on 4 December 2012, and for publication in New Zealand by the Minister of Energy and Resources on 29 November 2012, and on behalf of the Standards Council of New Zealand on 30 November 2012. It was published on 21 December 2012.

The following interests are represented on Committee EL-036:

Australian Chamber of Commerce and Industry	Hire Industry Association of New Zealand
Australian Industry Group (AIG)	Housing Industry Association Australia
Australasian Lighting Industry Association	Institute of Electrical Inspectors Australia
Building Service Contractors of New Zealand (Inc.)	Joint Accreditation System of Australia and New Zealand (JAS-ANZ)
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Consumer Electronic Suppliers Association	New Zealand Electric Fence Energizers Manufacturers Standards Working Group
Department of Labour New Zealand	New Zealand Council of Elders
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Jointly published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6140.

ISBN (Print) 978-1-86975-618-5

ISBN (PDF) 978-1-86975-619-2

# **In-service safety inspection and testing of electrical equipment**

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Edition 2 AS/NZS 3760:1996  
Edition 3 AS/NZS 3760:2000  
Edition 4 AS/NZS 3760:2001  
Edition 5 AS/NZS 3760:2003  
Edition 6 AS/NZS 3760:2010  
Reissued incorporating Amendment No. 1 (April 2011)  
Reissued incorporating Amendment No. 2 (December 2012)

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## REFERENCED DOCUMENTS

Reference is made in this document to the following:

### JOINT AUSTRALIAN/NEW ZEALAND STANDARDS

AS/NZS 3000:2007	Electrical installations (known as the Australian/New Zealand wiring rules)
AS/NZS 3001:2008	Electrical installations – Re-locatable premises (including caravans and tents) and their site installations
AS/NZS 3002:2008	Electrical installations – Shows and carnivals
AS/NZS 3003:2003	Electrical installations – Patient treatment areas of hospitals and medical and dental practices and dialysing locations
AS/NZS 3010:2005	Electrical installations – Generating sets
AS/NZS 3012:2003	Electrical installations – Construction and demolition sites
AS/NZS 3019:2007	Electrical installations – Periodic verification
AS/NZS 3190:2009	Approval and test specification – Residual current devices (current-operated earth-leakage devices)
AS/NZS 3551:2004	Technical management programs for medical devices
AS/NZS 4249:1994	Electrical safety practices – Film, video and television sites
AS/NZS 4763 (INT):2006	Safety of portable inverters
AS/NZS 5761:2005	In-service safety inspection and testing – Second-hand electrical equipment prior to sale
AS/NZS 5762:2005	In-service safety inspection and testing – Repaired electrical equipment
AS/NZS ISO 9000:2005	Quality management systems – Series of Standards
AS/NZS ISO 31000:2009	Risk management
AS/NZS 60335.1:2002	Household and similar electrical appliances – General requirements
AS/NZS 61008.1:2004	Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs) – General rules
AS/NZS 61009.1:2004	Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs) – General rules

### AUSTRALIAN STANDARDS

AS 1674.2:2007	Safety in welding and allied processes – Electrical
AS 2790:1989	Electricity generating sets – Transportable (Up to 25 kW)
AS 60529:2004	Degrees of protection provided by enclosures (IP Code)

### NEW ZEALAND STANDARD

NZS 6115:2006	Electrical Installations – Mobile electro-medical connectable installations
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### INTERNATIONAL STANDARDS

IEC 60320:– (All parts)	Appliance couplers for household and similar general purposes
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### NEW ZEALAND LEGISLATION

Electricity Safety Regulations 2010

## FOREWORD

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL 036 – In-service testing of electrical equipment to supersede AS/NZS 3760:2003 and its Amendment No. 1 (2005) from the date of publication. This edition has undergone a complete revision.

In-service testing is a necessary part of any safety program to help ensure the safety of persons using electrical equipment in the workplace. This Standard specifies in-service safety inspection and testing protocols and criteria that satisfy these obligations, and provides a cost-effective approach to safety without jeopardizing personnel safety or involving excessive equipment downtime.

The philosophy of the document is to provide an inspection and testing regime capable of implementation with only simple instrumentation, and performed by a person not necessarily having formal qualifications or registration, but who has the necessary practical and theoretical skills, acquired through training, qualification, experience or a combination of these, to correctly undertake the tasks prescribed by this Standard.

Amd 2  
Dec '12

This Standard is not intended to demonstrate that equipment complies with the safety Standard appropriate to the equipment.

The methodology of the inspection and testing process is defined.

The frequency of repetition of that process is determined by the equipment type and by examination of the environment in which the equipment is used or working. For indicative purposes a number of different environments are provided with associated or suggested inspection/testing frequencies. These are based on the perception of the level of hazard and the degree of abuse to which the equipment is typically exposed. However, there will usually be multiple sub-environments within any location and the inspecting/testing frequency will be arrived at by an assessment of the actual environment in which the equipment is placed or used.

Words in **bold** in the text are defined in 1.4. When a definition concerns an adjective, the adjective and associated noun are also in **bold**.

## OUTCOME STATEMENT

AS/NZS 3760 will enable persons responsible for the safety of electrical equipment in the workplace to instigate an inspection and testing programme to achieve that aim. It also enables persons undertaking the inspection and testing to carry out the task in a safe and effective manner.



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STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

**Australian/New Zealand Standard**  
**In-service safety inspection and testing**  
**of electrical equipment**

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## **SECTION 1 – SCOPE AND GENERAL**

### **1.1 SCOPE**

This Standard specifies procedures for the safety inspection and testing of **low voltage** single phase and polyphase electrical equipment, connected to the electrical supply by a flexible cord or connecting device, and that

- (a) Is new equipment placed into service for the first time;
- (b) Is already in-service;
- (c) Has been serviced or repaired;
- (d) Is returning to service from a second-hand sale; or
- (e) Is available for **hire**.

This Standard also specifies procedures for the safety inspection and testing of

- (f) **Residual current devices (RCDs)** except those within the scope of AS/NZS 3003 and NZS 6115; and
- (g) Portable inverters that generate or produce **low voltage**.

Typical examples of equipment covered by this Standard are:

- (h) **Portable equipment**, hand-held equipment and **stationary equipment**, designed for connection to the **low voltage** supply by a **supply cord**, an appliance inlet or pins for insertion into a socket-outlet (see Figure G1);
- (i) **Cord sets, cord extension sets** and outlet devices (also known as **electrical portable outlet devices (EPODs)**, or power boards);
- (j) Flexible cords connected to **fixed equipment in hostile environments**;
- (k) Portable power supplies (includes power adaptor/plug-pack, both of the safety **isolating transformer** and switch-mode type);
- (l) Battery chargers including those for commercial or industrial use;
- (m) Portable and transportable heavy duty tools such as high pressure washers and concrete grinders.

#### **1.1.1**

This Standard applies only to equipment in-service at a place of work or public place, or offered for **hire**.

#### **1.1.2**

This Standard does not apply to electrical equipment (such as suspended light fittings), installed at a height of 2.5 m or greater above the ground, floor or platform, where there is not a reasonable chance of a person touching the equipment and, at the same time, coming into contact with earth or any conducting medium which may be in electrical contact with earth or through which a circuit may be completed to earth.

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