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Amendment 1 - Oct 1992

*Superseded by AS 3193-1995*

AS 3193—1990

Australian Standard®

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**Approval and test specification—  
Transformer type battery chargers**

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**STANDARDS AUSTRALIA** 

This Australian Standard was prepared by Committee EL/2, Electrical Approvals Standards. It was approved on behalf of the Council of Standards Australia on 20 March 1990 and published on 16 July 1990.

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The following interests are represented on Committee EL/2:

Australian Consumers Association  
Australian Electrical and Electronic Manufacturers Association  
Confederation of Australian Industry  
Consumer Electronics Suppliers Association  
Electrical Apparatus Approvals Authorities  
Electrical Testing Laboratories  
Electricity Supply Association of Australia  
Institution of Engineers Australia

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STANDARDS AUSTRALIA

Amendment No. 1  
to  
AS 3193—1990

Approval and test specification—Transformer type battery chargers

REVISED TEXT

The 1990 edition of AS 3193 is amended as follows; the amendments should be inserted in the appropriate place.

*SUMMARY:* This Amendment applies to Clauses 6.1.1, 6.1.2, 6.1.3, 18.6.1 and Figure A1.

Published on 12 October 1992.

AMDT  
No. 1  
OCT.  
1992

Page 4 Clause 6.1.1

Delete the words 'with the design and construction requirements of Clause 6.1.2 and 6.1.3 to comply'.

This Amendment forms part of the Specification on publication.

AMDT  
No. 1  
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1992

Page 4 Clause 6.1.2

Delete all text in Clause 6.1.2 but not the clause number and substitute the following:

VOID

This Amendment forms part of the Specification on publication.

AMDT  
No. 1  
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1992

Page 5 Clause 6.1.3

Delete all text in Clause 6.1.3 but not the clause number and substitute the following:

VOID

This Amendment forms part of the Specification on publication.

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Page 8 Clause 18.6.1

Add the following sentence to the fourth paragraph:

Any thermostat or temperature limiter which operates during the test of Clause 18.5 shall be short-circuited or rendered inoperative.

This Amendment forms part of the Specification on publication.

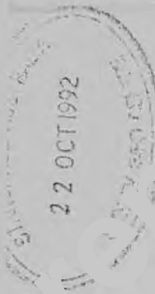
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Page 10 Figure A1

Delete all words after 'b' in the legend and substitute the following:

rated charging current

This Amendment forms part of the Specification on publication.



Australian Standard®

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**Approval and test specification—  
Transformer type battery chargers**

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First published as AS 3193—1978.  
Second edition 1982  
Third edition 1984  
Fourth edition 1990.

## PREFACE

This Specification was prepared by the Standards Australia Committee on Electrical Approvals Standards to supersede AS 3193—1984, *Transformer type battery chargers*.

It is one of a series of Approval and Test Specifications issued by Standards Australia. These Specifications are accompanied by a general Specifications AS 3100, contains definitions and general requirements for electrical materials and equipment. The purpose of these Specifications is to outline conditions which must be met to secure approval for the sale and use of electrical equipment in Australia. Only safety matters and related conditions are covered.

This edition was published to incorporate into the Specification Amendments Nos 1 to 4 to AS 3193—1984 and to effect changes to Clause 16.2 and Appendix A with regard to terms used.

This Specification supersedes AS 3193—1984 from date of publication.

Standards Australia desires to call attention to the fact that this Specification does not purport to include all the necessary provisions of contract.

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## STANDARDS AUSTRALIA

### Australian Standard

## Approval and test specification—Transformer type battery chargers

**1 SCOPE.** This Specification specifies essential safety requirements for fixed and portable transformer type battery chargers with input ratings not exceeding 2.5 kV.A, intended primarily for charging automotive type batteries.

For the purpose of this Specification a transformer type battery charger is referred to hereinafter as a 'charger'.

### 2 APPLICATION.

**2.1 General requirements of AS 3100.** This Specification shall be read in conjunction with AS 3100, and the appropriate provisions of AS 3100 shall apply to the construction of the charger and the insulation or safeguarding of parts which normally carry current or both.

**2.2 Specific requirements of this Specification.** A charger shall be deemed to conform to this Specification only if it complies with all the requirements of this Specification and passes the tests specified herein.

**2.3 Requirements of other Specifications.** Components incorporated in a charger which are depended upon for safety shall comply with the appropriate requirements of any relevant Approval and Test Specification unless such requirements are varied herein.

**3 REFERENCED DOCUMENTS.** The following documents are referred to in this Standard:  
STANDARDS

AS  
1939 Classification of degrees of protection provided by enclosures for electrical equipment

### APPROVAL AND TEST SPECIFICATIONS

AS  
3100 Definitions and general requirements for electrical material and equipment  
3108.1-2-3 Isolating transformers and safety isolating transformers  
3109 Appliance couplers for household and similar general purposes  
3109.1 Part 1: General requirements  
3121 Insulating mouldings  
3112 Plugs and socket outlets  
3133 Air break switches  
3161 Thermostats and energy regulators  
3191 Electric flexible cords

**4 DEFINITIONS.** For the purpose of this Specification the definitions below apply:

**4.1 Rated charging voltage**—the charging voltage(s) of the charger as given on the nameplate. This may be the nominal voltage of the battery to be charged.

NOTE: The rated charging voltage of a battery charger equals the product of the number of cells connected in series and the nominal voltage of one cell of the battery for which the charger is intended to be used.

**4.2 Rated charging current**—the direct current charging current(s) of the charger as given on the nameplate.

**4.3 Normal load**—the load obtained when the battery charger is operated at rated input voltage or at the upper limit of the rated input voltage range, the output circuit being connected as described in Clause 18.5.

### 5 MEANS OF CONNECTION.

#### 5.1 Input facilities.

**5.1.1 Connection by flexible cord.** Every charger designed for connection by means of a flexible cord shall be provided with one of the following means of connection to the supply:

(a) Group 1 or group 2 appliance coupler complying with AS 3109.1. The inlet shall be so arranged that the temperature of the inserted connector will not exceed the limiting temperatures specified in AS 3100.