

AS/NZS 4377:1996  
IEC 868-0:1991

Australian/New Zealand Standard®

---

**Flickermeter—Evaluation of flicker  
severity**

---

[IEC title: Flickermeter, Part 0: Evaluation of Flicker Severity]

## **AS/NZS 4377:1996**

---

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL/34, Electric Waveform Distortion. It was approved on behalf of the Council of Standards Australia on 7 February 1996 and on behalf of the Council of Standards New Zealand on 29 January 1996. It was published on 5 May 1996.

---

The following interests are represented on Committee EL/34:

Association of New Zealand Electrical Appliance Distributors  
Australasian Railway Association  
Australian Chamber of Commerce and Industry  
Australian Electrical and Electronic Manufacturers Association  
Bureau of Steel Manufacturers of Australia  
Electricity Engineers Association of New Zealand  
Electricity Supply Association of Australia  
Institution of Engineers, Australia  
Ministry of Commerce, New Zealand  
Monash University, Australia  
New Zealand Coordinating Committee on Power and Telecommunication Systems  
Telstra Corporation, Australia  
Transpower, New Zealand  
University of Canterbury, New Zealand  
University of Wollongong, Australia

---

**Review of Standards.** To keep abreast of progress in industry, Joint Australian/New Zealand Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.

Full details of all Joint Standards and related publications will be found in the Standards Australia and Standards New Zealand Catalogue of Publications; this information is supplemented each month by the magazines 'The Australian Standard' and 'Standards New Zealand', which subscribing members receive, and which give details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Joint Standards, addressed to the head office of either Standards Australia or Standards New Zealand, are welcomed. Notification of any inaccuracy or ambiguity found in a Joint Australian/New Zealand Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

AS/NZS 4377:1996

Australian/New Zealand Standard<sup>®</sup>

---

**Flickermeter—Evaluation of flicker severity**

---

PUBLISHED JOINTLY BY:

STANDARDS AUSTRALIA  
1 The Crescent,  
Homebush NSW 2140 Australia

STANDARDS NEW ZEALAND  
Level 10, Standards House,  
155 The Terrace,  
Wellington 6001 New Zealand

ISBN 0 7337 0406 9

## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL/34 on Electric Waveform Distortion. It is identical with and has been reproduced from IEC 868-0: 1991, *Flickermeter, Part 0: Evaluation of flicker severity*.

The objective of this Standard is to provide a method of flicker evaluation which is equally applicable to any kind of fluctuating load. It is complementary to AS/NZS 4376:1996, *Flickermeter, functional and design specifications*.

This Standard has been prepared on the basis of work undertaken by the International Union for Electroheat (UIE). The equipment described is the outcome of research by a study committee of the UIE, taking into account the experience acquired with various flickermeters previously studied and tested in a number of industrialized countries.

As this Standard is reproduced from an international Standard the following applies:

- (a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.
- (b) In the source text 'this International Standard' should read 'this Australian Standard'.
- (c) A full point substitutes for a comma when referring to a decimal marker.

References to international Standards should be replaced by references to equivalent Australian Standards as follows:

<i>Reference to International Standard or other Publication</i>		<i>Australian Standard</i>	
IEC		AS	
555	Disturbances in supply systems caused by household appliances and similar electrical equipment	2279	Disturbances in main supply network
555-3	Part 3: Voltage fluctuations	2279.3	Part 3: Limitation of voltage fluctuations caused by household and similar electrical appliances

### © Copyright — STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Users of Standards are reminded that copyright subsists in all Standards Australia and Standards New Zealand publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia or Standards New Zealand may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia or Standards New Zealand. Permission may be conditional on an appropriate royalty payment. Australian requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia. New Zealand requests should be directed to Standards New Zealand.

Up to 10 percent of the technical content pages of a Standard may be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia or Standards New Zealand.

Inclusion of copyright material in computer software programs is also permitted without royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia or Standards New Zealand at any time.

## CONTENTS

	<i>Page</i>
Clause	
1 Statistical evaluation . . . . .	1
2 Short-term flicker severity assessment . . . . .	3
2.1 Choosing the multipoint algorithm . . . . .	3
2.2 Practical checking of the $P_{st}$ evaluation . . . . .	4
2.3 Agreement between simplified assessment methods and evaluation . . . . .	6
3 Accuracy of the $P_{st}$ evaluation . . . . .	6
4 Interpolation . . . . .	8
4.1 Linear interpolation . . . . .	8
4.2 Non-linear interpolation . . . . .	8
4.3 Pseudo zero interpolation . . . . .	8
5 Smoothing percentile points . . . . .	9
6 Non-linear classification . . . . .	10
7 Performance tests including the classifier . . . . .	11
8 Evaluation of long-term flicker severity . . . . .	12
9 Reference . . . . .	13
FIGURES . . . . .	15

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- Looking for additional Standards? Visit Intertek Inform Infostore
  - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-