AS 2353—1999

Australian Standard™

Pedestrian push-button assemblies

This Australian Standard was prepared by Committee LG/6, Road Traffic Signals. It was approved on behalf of the Council of Standards Australia on 17 September 1998 and published on 5 January 1999.

The following interests are represented on Committee LG/6:

Australian Chamber of Manufactures

Australian Electrical and Electronic Manufacturers Association

AUSTROADS

Brisbane City Council

Department of Transport, South Australia

Metal Trades Industry Association of Australia

Roads and Traffic Authority of New South Wales

Traffic Control and Road Safety Industry Association

VicRoads

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

This Standard was issued in draft form for comment as DR 97515.

© Copyright - STANDARDS AUSTRALIA

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

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

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no 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 at any time.

Review of Australian Standards. To keep abreast of progress in industry, Australian 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 Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

AS 2353-1999

Australian Standard™

Pedestrian push-button assemblies

Originated as AS 2353—1990. Previous edition AS 2353—1992. Fourth edition 1999.

Published by Standards Australia (Standards Association of Australia) 1 The Crescent, Homebush, NSW 2140

PREFACE

This Standard was prepared by the Standards Australia Committee LG/6, Road Traffic Signals, to supersede AS 2353—1992. It is one of a number of Standards which set out requirements for the equipment associated with traffic signal installations. As at the date of publication of this Standard, these include the following:

AS

- 2144 Traffic signal lanterns
- 2276 Cables for traffic signal installations
- 2276.1 Part 1: Multicore power cables
- 2276.3 Part 3: Loop cable for vehicle detectors
- 2339 Traffic signal posts and attachments
- 2353 Pedestrian push-button assemblies (this Standard)
- 2578 Traffic signal controllers
- 2578.1 Part 1: Physical and electrical compatibility
- 2703 Vehicle loop detector sensors
- 2979 Traffic signal mast arms
- 4113 Traffic signal lamps
- 4113.1 Part 1: Lamps for 240 V a.c. operation
- 4113.2 Part 2: Lamps for a.c. operation at extra-low voltage
- 4191 Portable traffic signal systems

AS/NZS

- 2276 Cables for traffic signal installations
- 2276.2 Part 2: Feeder cable for vehicle detectors
- 4192 Illuminated flashing arrow signs

The objective of this Standard is to specify requirements for the design, construction and performance of push-button assemblies and associated equipment to facilitate pedestrian usage of signalized intersections or dedicated pedestrian crossings. It is intended for application by road and traffic authorities and their suppliers to facilitate the manufacture, purchase and use of pedestrian push-button assemblies.

This Standard was revised primarily to introduce more detailed requirements for audiotactile signals, which are designed to assist pedestrians who are visually impaired (see Section 3).

The terms 'normative' and 'informative' have been used in this Standard to define the application of the appendix to which they apply. A 'normative' appendix is an integral part of a Standard, whereas an 'informative' appendix is only for information and guidance.

CONTENTS

SECTIO	ON 1 SCOPE AND GENERAL	
1.1	SCOPE	4
1.2	REFERENCED DOCUMENTS	4
1.3	DEFINITIONS	5
1.4	ELECTRICAL SAFETY	6
1.5	WEATHER RESISTANCE	6
1.6	COLOUR AND SURFACE FINISH	6
1.7	MARKING	7
1.8	ENVIRONMENTAL CONDITIONS	7
1.9	DRIVER UNIT POWER SUPPLY	7
SECTIO	ON 2 BASIC FEATURES AND FACILITIES	
2.1	ENCLOSURE	9
2.2	TERMINAL BLOCK	9
2.3	PUSH-BUTTON AND SWITCH MECHANISM	10
2.4	PEDESTRIAN DEMAND INDICATOR LIGHT	10
2.5	DIRECTION ARROW	11
SECTIO	ON 3 AUDIO-TACTILE SIGNALS	
3.1	APPLICATION	15
3.2	REQUIRED SIGNAL TYPES	
3.3	GENERAL REQUIREMENTS	
3.4	AUDIBLE LOCATING SIGNAL	
3.5	AUDIBLE CROSSING SIGNAL	21
3.6	TACTILE LOCATING SIGNAL	23
3.7	TACTILE CROSSING SIGNAL	23
3.8	OFF STATE	23
3.9	SAFETY INTERLOCK	23
3.10	OPERATION OF AUDIO-TACTILE CROSSING SIGNAL	23
3.11	DRIVER UNIT WIRING LOOM	24
3.12	PROTECTION OF DRIVER UNIT	24
3.13	SOFTWARE	25
3.14	ELECTRONIC INTERFACE REQUIREMENTS	25
3.15	ELECTROMAGNETIC COMPATIBILITY	25
APPEN	DICES	
	PURCHASING GUIDELINES	26
В	MEASUREMENT OF AUDIBLE SIGNAL CHARACTERISTICS	
C	PERFORMANCE OF DRIVER UNITS UNDER HIGH AND LOW	
-	TEMPERATURE CONDITIONS	34
D	INTERFACE REQUIREMENTS FOR DRIVER UNITS AND	
	TRANSDUCERS WHERE SUPPLIED AS SEPARATE COMPONENTS	37

STANDARDS AUSTRALIA

Australian Standard

Pedestrian push-button assemblies

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard specifies requirements for the design, construction and performance of pedestrian push-button assemblies (see Clause 1.3) and associated equipment, which are designed to facilitate the safe movement of pedestrians at locations controlled by traffic signals. It includes requirements for the generation of audio-tactile signals, for use in conjunction with push-button assemblies, to assist pedestrians who are visually impaired.

NOTES:

- 1 See Appendix A for the information which should be supplied for the purchase of pedestrian push-button assemblies complying with this Standard.
- 2 See AS 1742.14 for requirements relating to the installation of pedestrian push-button assemblies. Advice on the use of pedestrian push-button assemblies in traffic signal installations is given in Part 7 of the Austroads Guide to Traffic Engineering Practice.

1.2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

- AS
- 1231 Aluminium and aluminium alloys—Anodized coatings for architectural applications
- 1259 Acoustics—Sound level meters
- 1259.1 Part 1: Non-integrating
- 1742 Manual of uniform control traffic devices
- 1742.14 Part 14: Traffic signals
- 1939 Degree of protection provided by enclosures for electrical equipment (IP Code)
- 2144 Traffic signal lanterns
- 2339 Traffic signal posts and attachments
- 2700 Colour Standards for general purposes
- 3147 Approval and test specification—Electric cables—Thermoplastic insulated—For working voltages up to and including 0.6/1 kV
- 3169 Approval and test specification—Flat, quick-connect terminations
- 3947 Low-voltage switchgear and controlgear
- 3947.5.1 Part 5.1: Control circuit devices and switching elements—Electromechanical control circuit devices

AS/NZS

- 1427 ISO metric machine screws
- 2053 Conduits and fittings for electrical installations
- 2053.4 Part 4: Flexible plain conduits and fittings of insulating material
- 2053.7 Part 7: Rigid metal conduits and fittings
- 3100 Approval and test specification—General requirements for electrical equipment



The remainder of this document is available for purchase online at <u>www.saiglobal.com/shop</u>

SAI Global also carries a wide range of publications from a wide variety of Standards Publishers:















Click on the logos to search the database online.