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Australian Standard 2353—1983

PEDESTRIAN PUSH-BUTTON ASSEMBLIES

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

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The following interests are represented on Committee LG/6:

Australian Automobile Association

Australian Electrical and Electronic Manufacturers Association

Australian Road Research Board

Confederation of Australian Industry

Department of Transport

National Association of Australian State Road Authorities

Railways of Australia Committee

State Traffic Authorities

University of Melbourne, Department of Optometry

University of New South Wales, Department of Transport Engineering

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AUSTRALIAN STANDARD

PEDESTRIAN PUSH-BUTTON ASSEMBLIES

AS 2353—1983

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PREFACE

This edition of this standard was prepared by the Association's Committee on Road Traffic Signals to supersede AS 2353—1980.

The standard specifies requirements for the design, construction and performance of pedestrian push-button assemblies which are used in conjunction with signalized foot crossings for the purpose of registering a pedestrian demand. Consideration was given to the inclusion of requirements for the provision of audible and tactile signals which are designed to assist visually handicapped people. The committee does not believe it is appropriate to specify requirements for such signals at the present stage of their development; however, to guide future development and to minimize the risk of confusion, repetition rates have been specified for audible signals.

The following changes have been incorporated in this edition:

(a) An increase in the maximum permissible actuating force for the push-button switch (see Clause 5.1).

(b) A reduction in the current rating required for the push-button switch (see Clause 5.2).

(c) Deletion of the requirement for the pedestrian demand indicator, where provided, to be located below the push-button (see Clause 6).

(d) Revision of the shape of the tactile arrow (see Fig. 2).

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
PEDESTRIAN PUSH-BUTTON ASSEMBLIES

1 SCOPE. This standard specifies requirements for the design, construction and performance of push-button assemblies which are intended for use in conjunction with signalized foot crossings for the purpose of registering a pedestrian demand.

2 REFERENCED DOCUMENTS. The following standards are referred to in this standard:

AS 1259	Sound Level Meters
AS 1427	ISO Metric Machine Screws
AS 1431	Control Switching Devices for Voltages Up to 650 V a.c. and 250 V d.c. Part 2—Push-button and Related control Switches (Including Indicator Lights)
AS 1939	Classification of Degrees of Protection Provided by Enclosures for Electrical Equipment
AS 2052	Metallic Conduits and Fittings
AS 2144	Traffic Signal Lanterns
AS 2339	Traffic Signal Posts and Attachments
AS 3100	Approval and Test Specification for Definitions and General Requirements for Electrical Materials and Equipment.

3 DEFINITIONS. For the purpose of this standard, the relevant definitions in AS 2144 and the following apply:

Pedestrian push-button assembly—an enclosure incorporating a push-button switch which is designed for use in conjunction with a signalized intersection or crossing to register a pedestrian demand. It may also incorporate, or have associated with it, facilities for the generation of audible signals.

4 ELECTRICAL SAFETY. The push-button assembly shall comply with the relevant requirements of AS 3100.

5 PUSH-BUTTON AND SWITCH MECHANISM.

5.1 Design and Construction. The assembly shall incorporate a switch of the spring-return, push-button plunger-operated type with at least one set of normally open contacts. The complete push-button and switch mechanism shall comply with the relevant requirements of AS 1431, Part 2.

The push-button switch shall be capable of being actuated when depressed by means of a flat surface having an area larger than that of the push-button. The displacement of the push-button necessary for actuation of the switch shall lie between 3 mm and 6 mm.

The force required to actuate the push-button switch shall lie within the range 3 N to 10 N. When depressed to the extent necessary to actuate the switch, the push-button mechanism shall exert a restoring force of not less than 3 N.

The push-button plunger and guide shall be designed so as to minimize the risk of jamming by foreign objects. The plunger mechanism shall be of robust construction and the exposed button shall be not less than 30 mm in diameter.

5.2 Rating and Mechanical Endurance. The switch shall be suitable for operation at 32 V a.c. or d.c. and shall have a current rating of at least 0.5 A. It shall be capable of withstanding, without failure, at least 10^7 operations when tested as prescribed in AS 1431, Part 2.

The switch insulation shall be such as will satisfactorily withstand the high voltage test prescribed in Clause 8.4 of AS 3100 conducted with an a.c. test voltage of 1000 V r.m.s.

5.3 Corrosion Resistance. The push-button and guide shall either be of materials which are inherently resistant to corrosion or be adequately treated to prevent corrosion.

6 PEDESTRIAN DEMAND INDICATOR. Where required by the purchaser, an internally illuminated translucent bezel or panel shall be incorporated in the front of the enclosure, to indicate when a pedestrian demand has been recorded.

The indicator shall be shielded or otherwise designed so as to provide a distinct contrast between the illuminated and non-illuminated state under all viewing conditions.

NOTE: Requirements for the luminance of the illuminated indicator, and for the degree of sun-phantom which can be tolerated when the indicator is not illuminated, are under consideration.

The lamp utilized in the indicator shall—

(a) be suitable for operation on an electrical supply of 32 V a.c. r.m.s.; and

(b) have a rated wattage of not greater than 25 W.

7 ENCLOSURE.

7.1 Size and Construction. The enclosure shall be of robust construction and shall be free from sharp corners or projections. The material of the enclosure and fixing components shall either be inherently resistant to corrosion or be treated to prevent corrosion.

The overall external dimensions of the enclosure shall be within the limits prescribed in Table 1. Space shall be provided within the enclosure to permit entry, at the top and bottom, of a 16 mm diameter screwed conduit complying with AS 2052.

NOTE: The space at the top and bottom of the enclosure is necessary to permit the entry of electrical wiring in the occasional circumstances where the normal entry in the rear of the enclosure (see Clause 7.3) cannot be used, e.g. where the push-button assembly is mounted onto a wooden pole or the like.