AS 2578—2009

Australian Standard®

Traffic signal controllers

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- ARRB Transport Research
- AUSTROADS
- Australian Industry Group
- Brisbane City Council
- CIE Australia Inc.
- Department for Transport, Energy and Infrastructure, SA
- IES: The Lighting Society
- Lighting Council of Australia
- Main Roads Department, Qld
- Main Road Western Australia
- Roads and Traffic Authority of NSW
- VicRoads

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PREFACE

This Standard was prepared by Standards Australia Committee LG-006, Road Traffic Signals, to supersede AS 2578.1—1983, *Traffic signal controllers*, Part 1: *Physical and electrical compatibility*.

The objective of this Standard is to provide mechanical, electrical and functional requirements for traffic signal controllers for physical and electrical interchangeability and for functional compatibility between controllers of different manufacture.

The terms 'normative' and 'informative' are used 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.

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FOREWORD

The Standard is structured as follows:

Section 1 provides the scope, definitions and general requirements, such as the environmental requirements and the expansion capability of controllers to meet the various configurations that may be required.

Section 2 provides the mechanical and electrical requirements for the controller housing, including the Flasher Unit and Site Identification Encoder, but excluding the Logic Module.

Section 3 provides the requirements for the controller Logic Module electronics.

Section 4 provides the requirements for the controller software and the functional requirements for the controller software.

Appendix A provides a guide for information that should be provided to a manufacturer when purchasing a controller.

Appendix B provides details of the data format for Electronic Identities for electronic modules.

Appendix C provides details for connectors and connector pin functions for connectors for the Logic Module.

Appendix D provides details of the connectors and connector pin functions for connectors for the Flasher Unit.

Appendix E provides details of the connectors and connector pin functions for connectors for the Site Identification Encoder.

Appendix F provides the mechanical details for all of the connectors defined in Appendices C to E.

Appendix G provides informative information regarding hazards and the approach to achieving functional safety.

Appendix H provides additional information for the controller housing. This includes terminal block arrangements and electrical wiring diagrams.

STANDARDS AUSTRALIA

Australian Standard
Traffic signal controllers

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies the mechanical, electrical and functional requirements for the control equipment used for operation of road traffic signals, with the objective of ensuring that, as far as practicable—

(a) controllers from different manufacturers will be physically interchangeable; and

(b) controllers from different manufacturers will have functional compatibility.

NOTE: The requirements of this Standard may not ensure total physical and electrical interchangeability, but should enable a replacement controller to be installed with a minimum of alteration.

The Standard seeks to ensure compatibility between the electronic modules (i.e. the Logic Module, the Flasher Unit and the Site Identification Encoder) mounted in the controller housing. The Standard is necessarily prescriptive in some areas to achieve this purpose.

NOTE: Compliance with this Standard may not ensure full compatibility between Logic Modules and housings of different manufacture since the method of dimming the signal displays is not specified.

The Standard specifies general requirements for the design and construction of traffic signal controllers to meet the needs of users. The Standard specifies technology that has been proven in the field to provide safe and reliable operation.

1.2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

1055 Acoustics—Description and measurement of environmental noise (series)

1275 Metric screw threads for fasteners

1319 Safety signs for the occupational environment

2353 Pedestrian push-button assemblies

2700 Colour standards for general purposes

2703 Vehicle loop detector sensors

60068 Environmental testing

60068.2.6 Part 2.6: Tests—Test Fc: Vibration (sinusoidal)

60068.2.29 Part 2.29: Tests—Test Eb and guidance: Bump

60269 Low-voltage fuses

60269.1 Part 1: General requirements

60529 Degrees of protection provided by enclosures (IP Code)