

AS/NZS 4601

Australian/New Zealand Standard™

Vehicle immobilizers



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This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL/31, Intruder Alarm Equipment and Installations. It was approved on behalf of the Council of Standards Australia on 5 November 1999 and on behalf of the Council of Standards New Zealand on 2 November 1999. It was published on 5 December 1999.

The following interests are represented on Committee EL/31:

Australian Chamber of Commerce and Industry
Australian Electrical and Electronic Manufacturers Association
Australian Security Industry Association
Australian Security Intelligence Organization
Department of Defence
Institution of Engineers Australia
Insurance Council of Australia
Metal Trades Industry Association of Australia
New Zealand Security Industry Association
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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL/31, Intruder Alarms Equipment and Installation.

The objectives of this Standard are to provide a consumer's guide to good quality after-market vehicle security immobilizer systems (VSISs) and to provide a benchmark for reference by insurance companies when determining whether to offer lower insurance premiums for vehicles fitted with a VSIS.

It is hoped that insurance companies will use this Standard as the benchmark to determine whether owners of vehicles with a VSIS will be granted lower insurance premiums.

During the development of this Standard the Federal Chamber of Automotive Industries (FCAI), representing the manufacturers of motor vehicles, did not support the publication of the Standard for the following reasons:

- (a) For original equipment immobilizer fitment, vehicle manufacturers follow European requirement ECE R97, this being internationally recognized, adopted as regulation in some countries and proposed for adoption as an ADR requirement in Australia.
- (b) The Standard incorporates unique requirements when compared to ECE R97.
- (c) Potential adverse effects on motor vehicle reliability and serviceability as a result of electrical items not authorized by the vehicle manufacturer being fitted and operating in conjunction with original equipment electrical systems on the vehicle.

These concerns have been acknowledged. However, the Committee believe that the system requirements specified in this Standard are acceptable for aftermarket vehicle immobilizers.

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STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard

Vehicle Immobilizers

SECTION 1 SCOPE

1.1 SCOPE

This Standard specifies requirements for the performance of vehicle security immobilizer systems (VSIS's) in road vehicles such as private cars, and commercial and heavy goods vehicles.

1.2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

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| 1939 | Degrees of protection provided by enclosures for electrical equipment (IP Codes) |
| 3300 | Approval and test specification—General requirements for household and similar electrical appliances |

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|-----------|---|
| 3548 | Limits and methods of measurement of radio disturbance characteristics of information technology equipment |
| 3749 | Intruder alarm systems—Road vehicles |
| 3749.1 | Part 1: Performance requirements |
| 3749.2 | Part 2: Installation and maintenance |
| 4268 | Radio equipment and systems—Short range devices |
| 4268.1 | Part 1: Technical characteristics and test methods for radio equipment in the frequency range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz |
| 4268.2 | Part 2: Technical characteristics and test methods for radio equipment to be used in the 25 MHz to 25 GHz frequency range with power levels ranging up to 1 W |
| 61000 | Electromagnetic compatibility (EMC) |
| 61000.4 | Part 4: Testing and measurement techniques |
| 61000.4.3 | Part 4.3: Radiated radio-frequency electromagnetic field immunity test |
| 61000.4.6 | Part 4.6: Immunity to conducted disturbances induced by radio-frequency fields |

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| 6300 | Approval and test specification—General requirements for household and similar electrical appliances |
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ISO

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| 7637 | Road vehicles—Electrical disturbance by conduction and coupling |
| 7637-1 | Part 1: Passenger cars and light commercial vehicles with nominal 12 V supply voltage—Electrical transient conduction along supply lines only |
| 7637-3 | Part 3: Vehicles with nominal 12 V or 24 V nominal supply voltage electrical transient transmission by capacitive and inductive coupling via lines other than supply lines |

IEC

61000 Electromagnetic compatibility (EMC)

61000-4 Part 4: Testing and measurement techniques

61000-4-2 Section 2: Electrostatic discharge test immunity test

ASTM

B117 Standard practice for operating salt spray (fog) apparatus

1.3 DEFINITIONS

For the purpose of this Standard, the definitions listed in AS 3749.1 and those below apply.

1.3.1 Coded plug

A digital device, which requires a plug with an electrical or electronic code with a minimum of 10 000 combinations, used to unset the VSIS by inserting the plug into a socket.

1.3.2 Coded proximity device

A contactless device with a minimum of 10 000 combinations, which is used to unset the VSIS.

1.3.3 Control equipment

The component of the VSIS which processes the setting and unsetting commands and accepts the signals from sensors to allow setting.

1.3.4 Key

A device that purposely and authoritatively provides a method of operating a system that is designed to be operated only by that device.

1.3.5 May

Indicates the existence of an option.

1.3.6 Optical status indicator

A visible component of the VSIS which indicates the set/unset state of the VSIS.

1.3.7 Passive arming

A function that automatically sets the VSIS system.

1.3.8 Randomly encrypted

A code that changes randomly whenever the VSIS is set or unset.

1.3.9 Remote unsetting

A method of remotely unsetting the VSIS.

1.3.10 Set

The state of the system wherein an immobilized condition can be indicated.

1.3.11 System override

A method of unsetting the VSIS in the event of malfunction of either the VSIS or its deactivation device.

1.3.12 Unset

The state of the system wherein the vehicle can be moved under its own power.

1.3.13 Unsetting device

A device that is used to unset the VSIS.