

AS/NZS 4755.3.1:2014

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Australian/New Zealand Standard™

**Demand response capabilities and
supporting technologies for electrical
products**

**Part 3.1: Interaction of demand
response enabling devices and
electrical products—Operational
instructions and connections for air
conditioners**



AS/NZS 4755.3.1:2014

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-054, Remote Demand Management of Electrical Products. It was approved on behalf of the Council of Standards Australia on 6 November 2014 and on behalf of the Council of Standards New Zealand on 31 October 2014. This Standard was published on 20 November 2014.

The following are represented on Committee EL-054:

Airconditioning and Refrigeration Equipment Manufacturers Association of Australia
Australian Industry Group
Clean Energy Council
Consumer Electronics Suppliers Association
Consumers Federation of Australia
Copper Development Centre Australia
CSIRO
Department of Industry (Commonwealth)
Electricity Engineers Association, New Zealand
Electricity Networks Association New Zealand
Energy Networks Association
Heating, Ventilation and Air Conditioning New Zealand
Smart Grid Australia
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This Standard was issued in draft form for comment as DR AS/NZS 4755.3.1:2014.

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Demand response capabilities and supporting technologies for electrical products

Part 3.1: Interaction of demand response enabling devices and electrical products—Operational instructions and connections for air conditioners

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-054, Remote Demand Management of Electrical Products, to supersede AS/NZS 4755.3.1:2012.

This Standard forms part of a series that is intended to define the nomenclature, architecture and operational instructions for systems that can be used to remotely control electrical products, and to define the demand response capabilities of products. AS 4755—2007, *Framework for demand response capabilities and supporting technologies for electrical products*, will have its title and designation changed to become AS/NZS 4755.1. When complete, the series will comprise the following:

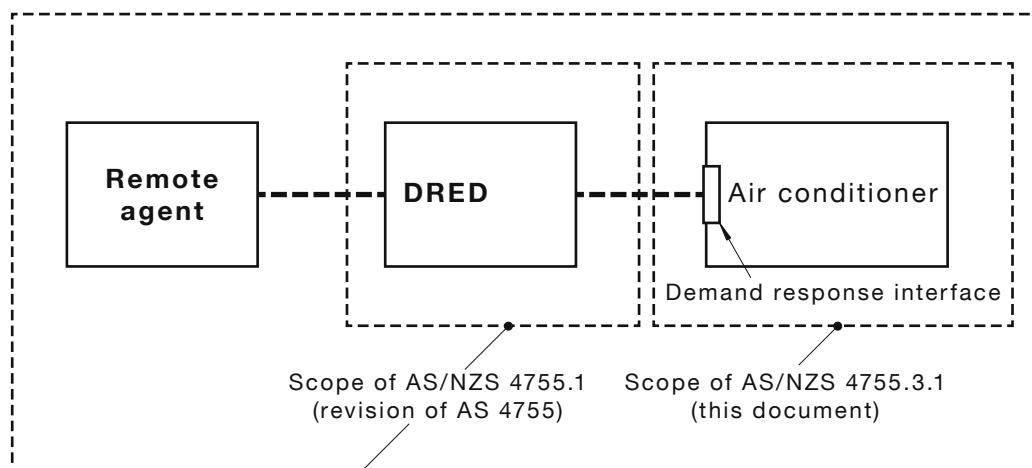
AS/NZS

- 4755 Demand response capabilities and supporting technologies for electrical products
- 4755.1 Part 1: Framework for demand response capabilities and requirements for demand response enabling devices (DREDs)
- 4755.3.1 Part 3.1: Interaction of demand response enabling devices and electrical products—Operational instructions and connections for air conditioners (this Standard)
- 4755.3.2 Part 3.2: Interaction of demand response enabling devices and electrical products—Operational instructions and connections for devices controlling swimming pool pump-units
- 4755.3.3 Part 3.3: Interaction of demand response enabling devices and electrical products—Operational instructions and connections for electric storage and electric-booster storage water heaters
- 4755.3.4 Part 3.4: Interaction of demand response enabling devices and electrical products—Operational instructions and connections for grid-connected charge/discharge controllers for electric vehicles (EVSEs)

Detailed standards covering demand response operational instructions and interfaces with demand response enabling devices (DREDs) for other electrical products may also be prepared as needs are identified.

The diagram below depicts the structure of this Standard, AS/NZS 4755.3.1. This Standard covers the interaction of air conditioners with DREDs.

This Standard does not cover all aspects of construction and performance, which may be subject to other standards.



It is recommended that this Standard be read in conjunction with AS/NZS 4755.1.

The AS/NZS 4755 series creates a framework that will allow off-the-shelf equipment, communications technologies and electrical products to be integrated and adapted so that demand management solutions may be developed and deployed in a timely and economical fashion.

Although the series has been developed to support situations where demand response is initiated or managed by a remote agent, with the consent of the owner or user of the electrical product, there is no technical barrier that prevents the owner or user managing the operation of compliant electrical products through their own home area network, via the demand response interface.

This Standard pertains to a particular electrical product, the air conditioner. The Standard specifies, for air conditioners—

- (a) a standard demand response interface;
- (b) a standard set of operational instructions;
- (c) the required responses to the operational instructions;
- (d) the markings to be applied to products complying with the standard; and
- (e) the methods of testing to verify compliance.

This Standard is intended to support demand response programs that optimize the operation of the electricity supply system and allow the efficient planning and use of capital equipment, while minimizing the risks to the comfort and amenity of air conditioner users.

The costs and benefits of making this Standard mandatory are the subject of consideration by Australian and New Zealand Governments. If compliance were mandated, it would also be mandatory to register product details with the regulators of the national energy labelling and minimum energy performance standards program. Information about the status of this Standard and registration procedures (if required) is available at the Australian Government Energy Rating website (www.energyrating.gov.au).

The principal differences between this and the previous edition are as follows:

- (i) The reference power level for demand response has been changed from an absolute value (i.e. the energy used while operating at rated capacity in a controlled test environment) to a relative value (i.e. the energy used during normal operation at the same temperature and humidity conditions, either in a controlled environment or in the field).
- (ii) A test to ensure that response in DRM 2 differs from response in DRM 3 has been added.
- (iii) The prohibition on over-capacity operation (Clause 2.7 in the previous edition) has been removed.
- (iv) The required response in the event that the DRED transmits more than one OI at a time has been added (in a new Clause 2.7). This Clause will take effect from the date of publication of this Standard. However, Australian regulatory authorities have indicated that, in the event that compliance with this Standard becomes mandatory, they intend to accept products that would otherwise comply with this Standard (i.e. other than with Clause 2.7) as compliant for up to 3 years from publication of this revision. Users of this Standard should check the Australian Government Energy Rating website (www.energyrating.gov.au) regarding its status for regulatory purposes.

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