

Australian/New Zealand Standard™

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

**Part 3.2: Interaction of demand
response enabling devices and
electrical products—Operational
instructions and connections for
devices controlling swimming pool
pump-units**



AS/NZS 4755.3.2:2014

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 4 June 2014 and on behalf of the Council of Standards New Zealand on 5 June 2014.

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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
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Electricity Engineers Association, New Zealand
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This Standard was issued in draft form for comment as DR AS/NZS 4755.3.2.

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Demand response capabilities and supporting technologies for electrical products

Part 3.2: Interaction of demand response enabling devices and electrical products—Operational instructions and connections for devices controlling swimming pool pump-units

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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 4755.3.2:2012.

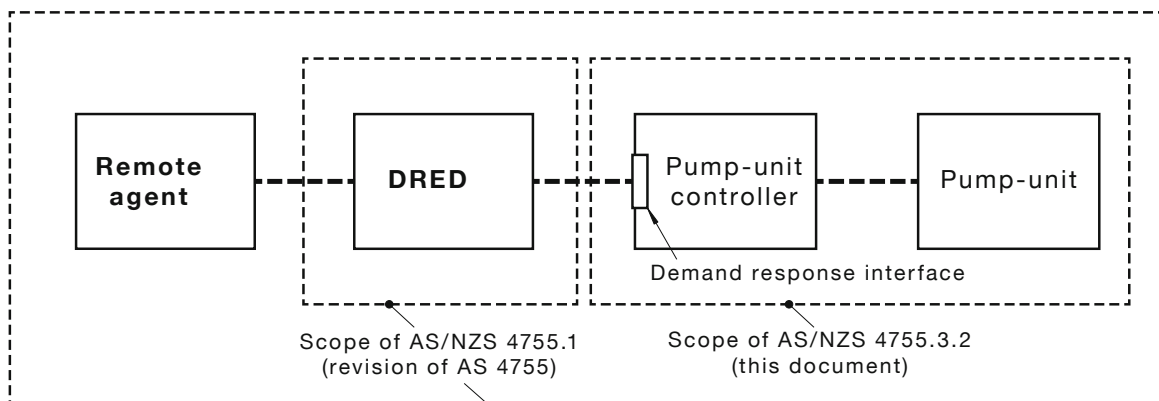
This Standard forms part of a series of Standards that is intended to define the nomenclature, architecture and operational instructions for systems that can be used to remotely control electrical products, and to define the demand response capabilities of products. AS 4755—2007, *Framework for demand 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
- 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 (this Standard)
- 4755.3.3 Part 3.3: Interaction of demand response enabling devices and electrical products—Operational instructions and connections for electric storage and electric-boosted 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

The diagram below depicts the structure of the AS/NZS 4755 series. This Standard covers the interaction of pump-unit controllers with demand response enabling devices (DREDS) and with pump-units.

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 reason that prevents the owner or user taking direct responsibility for demand response, by managing the DRED independently of any remote agent, provided the DRED meets the requirements of AS/NZS 4755.1.

This Standard pertains to a particular electrical product, the swimming pool pump-unit controller. The Standard specifies, for pool pump-unit controllers—

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

Detailed standards covering demand response operational instructions and interfaces with DREDS for other electrical products may also be prepared as needs are identified.

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 amenity of swimming pool users.

Where pump-units with integral or separate controllers subject to this Standard are installed for use in pools where pump-unit operation is subject to health and safety requirements, or a user does not accept interruption to operation for other reasons, the demand response interfaces should not be used.

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 (<http://www.energyrating.gov.au>).

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

- (i) The scope of the Standard has been clarified with regard to integral and hard-wired controllers.
- (ii) A new Clause 2.9 has been added to clarify the required response in the event that the DRED asserts more than one OI at a time. 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 were to become mandatory, they intend to accept products that would otherwise comply with this Standard (i.e. other than with Clause 2.9) as compliant, for up to 3 years from publication of this revision. Users of this Standard should check the Australian Government Energy Rating website (<http://www.energyrating.gov.au>) to find out its status for regulatory purposes.
- (iii) A new Clause 3.7, Optional low voltage power supply, has been added. This does not require manufacturers to provide such a power supply but provides guidelines in case they do.
- (iv) The definitions and terminology have been updated to make this Part consistent with other Parts of the Standard.

Statements expressed in mandatory terms in notes to tables and figures are deemed to be requirements of this Standard.

The term 'normative' has been used in this Standard to define the application of the appendix to which it applies. A 'normative' appendix is an integral part of a Standard.

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Australian/New Zealand Standard**Demand response capabilities and supporting technologies for electrical products**

Part 3.2: Interaction of demand response enabling devices and electrical products—Operational instructions and connections for devices controlling swimming pool pump-units

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard—

- (a) applies to pump-unit controllers that do not contain a DRED, and have a demand response interface intended to connect with a DRED;
- (b) specifies a set of operational instructions that will meet the requirements of remote agents wishing to control the energy consumption of pump-units; and
- (c) specifies two alternative methods of connecting the demand response interface to the DRED.

Pump-unit controllers covered by this Standard include, but are not restricted to, the following:

- (i) Controllers integral with pump-units within the scope of AS 5102.1.
- (ii) Separate pump-unit controllers, including the following:
 - (A) Time clocks intended for installation between the mains electricity supply and the pool equipment.
 - (B) Sanitization controllers intended to regulate the operation of the pump-unit as well as the sanitizer.
 - (C) Heater controllers intended to regulate the operation of the pump-unit as well as the heater.

A pump-unit controller is not covered by this Standard if—

- (1) it uses three-phase power; or
- (2) it incorporates a chlorinator with an output of 50 g/h or greater.

NOTE: If compliance with this Standard is made mandatory by the relevant Australian and New Zealand regulatory authorities, then any exclusions of product types or other criteria for limiting regulatory scope will be included in the regulations.