AS/NZS 3003:1999

Australian/New Zealand Standard™

Electrical installations—Patient treatment areas of hospitals and medical and dental practices

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee HT/21, Wiring of Medical Treatment Areas in Hospitals. It was approved on behalf of the Council of Standards Australia on 23 November 1998 and on behalf of the Council of Standards New Zealand on 7 December 1998. It was published on 5 February 1999.

The following interests are represented on Committee HT/21:

Association of Consulting Engineers, Australia
Australian Chamber of Commerce and Industry
Australian Dental Association
Australian Federation for Medical and Biological Engineering
Australian Nursing Federation
Australian Private Hospitals Association
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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee HT/21, Wiring of Medical Treatment Areas in Hospitals, to supersede, in part, AS 3003—1985. It specifies special requirements for electrical installations in patient treatment areas of hospitals. These requirements are additional to those specified in AS 3000, *SAA Wiring Rules*.

This Standard encourages reference to AS/NZS 2500, *Guide to the safe use of electricity in patient care*, and particularly the flow chart included therein, to enable the level of electrical supply protection necessary to be determined by evaluating the type of procedures to be undertaken in a particular area and the type of equipment used. Treatment areas in which medical electrical procedures are to be electively undertaken can then be identified and wired as body-protected electrical areas or cardiac-protected electrical areas to provide the necessary level of electrical shock protection in the mains supply wiring and, where appropriate, earthing systems.

The earliest consultation between hospital management and the electrical design engineers is recommended, to jointly evaluate the elected procedures likely to be undertaken, in order to determine which areas of the hospital or medical or dental practice should be wired as body-protected electrical areas or as cardiac-protected electrical areas.

This Standard is intended to apply only to installations (or alterations or additions thereto) made or carried out after the date on which the Standard is published. However, it is strongly recommended that hospital managements carefully evaluate the procedures undertaken within existing installations, and that they take steps to implement the appropriate electrical safety requirements specified herein for areas that are used for cardiac-type procedures or for procedures involving the regular use of medical electrical equipment.

While the Standard is intended to apply to new installations or extensions, some guidance is given concerning conversion of older installations.

Changes to the 1985 edition include the following:

(a) Revision of the definitions of body-protected and cardiac-protected areas.

(b) Introduction of the term ‘leakage protected circuit’ to describe a circuit protected by a residual current device or an isolated electrical supply.

(c) Introduction of the term ‘leakage protective device’ to describe either a residual current device or an isolated electrical supply.

(d) Introduction of requirements for earth leakage protection for socket-outlets which are outside the defined protected electrical areas but which would normally be expected to be used to power equipment located within the area.

(e) Removal of the requirements for access to overcurrent protective devices.

(f) The number of socket-outlets at patient locations no longer mandated.

(g) Inclusion of requirements for socket-outlets intended for cleaning purposes.

(h) Removal of requirements for the design, construction and testing of isolated electrical supplies and their relocation in AS/NZS 4510.

(i) The revised presentation information on testing and commissioning in a more logical sequence for the convenience of persons carrying out the tests.

(j) Alterations to the requirements relating to equipotential earthing systems in cardiac-protected areas.

The terms ‘normative’ and ‘informative’ have been used in this Standard 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.