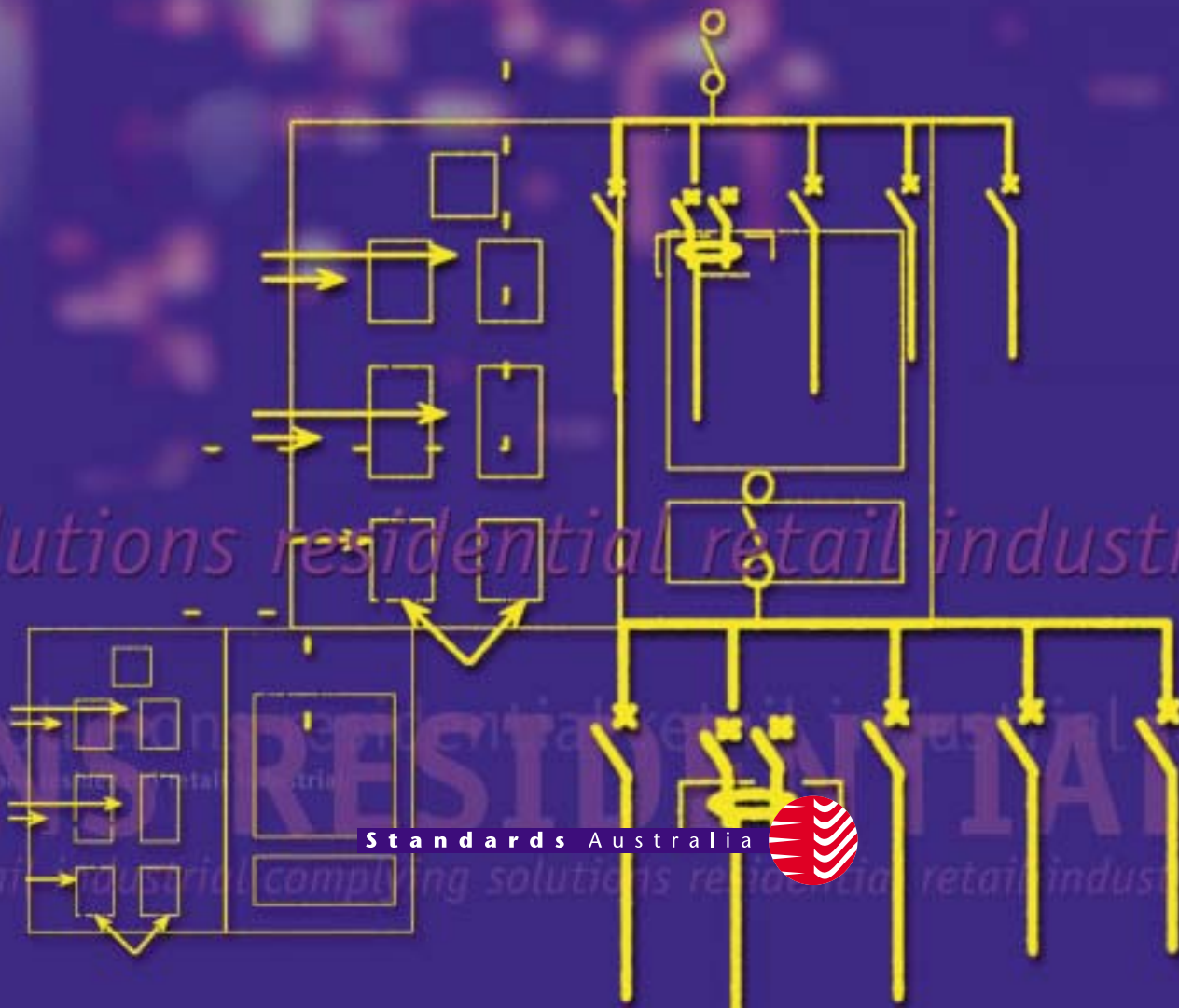


HB 301—2001

Electrical installations

Designing to the Wiring rules



Electrical installations

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Preface

AS/NZS 3000 Wiring rules is a performance-based standard, which sets out the minimum requirements for the design, construction, and testing of electrical installations. The requirements are intended to protect persons, livestock, and property from electric shock, fire and physical injury hazards.

This handbook includes typical electrical installation scenarios, and each of these has been developed to include a “complying solution”. In this sense a “complying solution” is one solution which meets the performance requirements of AS/NZS 3000.

As such, there are many ways of complying with AS/NZS 3000. This document has been produced as a design guide for commonly encountered electrical installations. While the design principles apply equally to larger and more complex installations, it is not the intention of this handbook to attempt to address the detailed design needs of those installations.

This handbook will be reviewed periodically to take account of the changes in design and installation procedures and relevant Standards.

The work of Bruce Walsh (Ballengearry Consulting Pty Ltd) who prepared this handbook, and the direction of Standards Australia, is recognized and greatly appreciated.

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Foreword

This handbook contains the following sections:

Section 1 consists of a **narrative** which explains the process and procedure of designing an electrical installation of the type contained in this handbook. The phases of design include the brief, planning, the detailed design, and the narrative and flowcharts take the designer step by step through the process. The narrative includes theory and practice which the designer may apply to electrical designs generally. The requirements for testing and verification of the installation are also included and explained.

Section 2 consists of a suite of **complying solutions** which are detailed and include a short narrative where necessary to explain the detailed design further. The solutions have been presented using a common format and layout so that the designer following this document can readily adapt and modify the solution to suit a different application.

Similarly the designer may adapt the procedure in this document to develop other complying solutions, and to implement different formats and styles for presentation.

The **complying solutions** include:

1. Residential—Multiple detached units
2. Residential—Multiple grouped units with common walls—Single level
3. Residential—Multi (3) storey—18 units
4. Retail development—Single level—10 units
5. Multi (3) storey office building
6. Light industrial units—Detached—Single level
7. Light industrial units—Grouped
8. Pro-forma design record—Separate document

Sketches and **records** are presented to provide the designer with the reference material necessary to make submissions to Electricity Distributors, and to document the installation.

This document includes the **installation** and **testing** details for the complying solutions which allows the designer to verify the installation as being complete.

The pro-forma design record has been provided as a separate document so it may be copied and used as necessary as an aid to designing electrical installations.

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