

AS 7530:2018



Australian  
**STANDARD**<sup>®</sup>

**Electrical systems**

**RISSB**   
RAIL INDUSTRY SAFETY AND STANDARDS BOARD

Rolling Stock Standard



This Australian Standard® AS 7530 Electrical systems was prepared by a Rail Industry Safety and Standards Board (RISSB) Development Group consisting of representatives from the following organisations:

Queensland Rail	DPTI SA	RTBU
Bombardier	TfNSW (ASA)	

The Standard was approved by the Development Group and the Rolling Stock Standing Committee in November, 2018. On November 26, 2018 the RISSB Board approved the Standard for release.

This standard was issued for public consultation and was independently validated before being approved.

Development of the Standard was undertaken in accordance with RISSB's accredited process. As part of the approval process, the Standing Committee verified that proper process was followed in developing the Standard.

RISSB wishes to acknowledge the positive contribution of subject matter experts in the development of this Standard. Their efforts ranged from membership of the Development Group through to individuals providing comment on a draft of the Standard during the open review.

I commend this Standard to the Australasian rail industry as it represents industry good practice and has been developed through a rigorous process.



**Paul Daly**  
Chief Executive Officer  
Rail Industry Safety and Standards Board

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## AS 7530:2018

# Electrical systems

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## Document control

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## 1 Introduction

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### 1.1 Purpose

This Standard represents a common national approach, defining the minimum performance requirements for rolling stock electrical systems.

### 1.2 Scope

This Standard provides known good practice for design, construction and maintenance requirements for on board electrical systems, wiring, separation of wiring, conduits, earthing requirements.

This Standard represents passenger rolling stock requirements and excludes locomotives, freight vehicles, and infrastructure maintenance vehicles.

### 1.3 Compliance

There are two types of control contained within Australian Standards developed by RISSB:

- (a) Requirements.
- (b) Recommendations.

**Requirements** – it is mandatory to follow all requirements to claim full compliance with the Standard.

Requirements are identified within the text by the term 'shall'.

**Recommendations** – do not mention or exclude other possibilities but do offer the one that is preferred.

Recommendations are identified within the text by the term 'should'.

Recommendations recognize that there could be limitations to the universal application of the control, i.e. the identified control cannot be applied, or other controls could be appropriate or better.

For compliance purposes, where a recommended control is not applied as written in the standard it could be incumbent on the adopter of the standard to demonstrate their actual method of controlling the risk as part of their WHS or Rail Safety National Law obligations. Similarly, it could also be incumbent on an adopter of the standard to demonstrate their method of controlling the risk to contracting entities, or interfacing organisations where the risk may be shared.

Controls in RISSB standards address known railway hazards as included in Appendix A.

### 1.4 Referenced documents

#### 1.4.1 Normative references

The following referenced documents are indispensable for the application of this Standard:

- (a) AS 1319 Safety signs for the occupational environment
- (b) AS 1397 Continuous hot-dip metallic coated steel sheet and strip—Coatings of zinc and zinc alloyed with aluminium and magnesium
- (c) AS/NZS 2053 (series) Conduits and fittings for electrical installations