

Type Approval - Signalling

CODE OF PRACTICE



Notice to users

This RISSB product has been developed using input from rail experts from across the Rail Industry and represents good practice for the industry. The reliance upon or manner of use of this RISSB product is the sole responsibility of the user who is to assess whether it meets their organisation's operational environment and risk profile.

Document control

Document identification

Document Title	Version	Date
Type Approval - Signalling	1.0	21 September 2017

Document history

Publication Version	Effective Date	Reason for and Extent of Change(s)	
1.0	21 September 2017	First Publication	

Approval

Name	Date
Rail Industry Safety and Standards Board	21/09/2017

Code Change Procedures

The RISSB maintains the master for this document and publishes the current version on the RISSB website. Any changes to the content of this publication require the version number to be updated.

Changes to this publication must be approved according to the procedure for developing management system documents.

The RISSB will identify and communicate changes to this publication.

Copyright

© RISSB

All rights are reserved. No part of this work is to be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of RISSB, unless otherwise permitted under the Copyright Act 1968.

Contents

1	Introduc	tion	4
	1.1	Purpose	4
	1.2	Scope	4
	1.3	Terms and definitions	4
	1.4	References	5
	1.5	Responsibilities	5
2	Type ap	proval guidance	6
	2.1	Product Information Packs	
	2.2	Failure modes and hazards	7
	2.3	Type approval decision	7
	2.4	Changed type approval	
	2.5	Grandfather rights	8
	2.6	Document descriptions	9
3	Type ap	proval assessment	. 10
	3.1	Type approval or supplier approval?	
	3.2	Product Information Pack review	
	3.3	Changed type approved equipment	15
	3.4	Approval of non- compliances	16
4	Trials		
	4.1	Assessment of trial viability	
	4.2	Trial management	
5	Standar	ds	
	ndix A	Product Information Pack indices	
прро	A.1	General – supplier approval	
	A.2	Equipment categories	
	A.3	Product Information Pack index matrix	
	A.4	Guidance notes for product information	
	A.5	Example Product Information Pack index	
Anne	ndix B	Failure mode & hazard lists	
Appo	B.1	General hazards	
Anna	ndix C	Differences and changes checklists	
Appe	C.1	Checklist 1: context differences	
	C.2	Checklist 2 - change control- assessment	
A 10 10 0			
Appe	ndix D	Trial checklists	
	D.1	General conditions for trial	
	D.2	Signals and indicators	
	D.3 D.4	Points and back drives	
	D.4 D.5	Track circuits, mechanical treadles and rail circuits	
	اد.ن	Level crossing systems and equipment	JU

	D.6	Relays, timers and flashers	52
	D.7	Axle counters and electronic treadles	53
	D.8	Software configurable logic controllers (including interlockings and crossing controllers)	
	D.9	Asset protection devices	55
	D.10	Power supply equipment	56
	D.11	Monitoring equipment	57
	D.12	Circuit protection devices	58
	D.13	Train protection equipment	59
	D.14	Remote telemetry units	60
	D.15	Data communications	61
Appe	ndix E	Standards	
	E.1	General	
	E.2	Signals and wayside indicators	62
	E.3	Points and detectors	62
	E.4	Track circuits, mechanical treadles and rail circuits	62
	E.5	Level crossing systems and equipment	62
	E.6	Relays	
	E.7	Axle counters and electronic treadles	63
	E.8	Software configurable logic controllers, (including interlockings)	63
	E.9	Asset protection devices	
	E.10	Power supply equipment	63
	E.11	Monitoring equipment	
	E.12	Circuit protection devices	63
	E.13	Train protection equipment	63
	E.14	Remote telemetry units	63
	E.15	Data communications	63
Appe	ndix F	Case studies	64
	F.1	Assessable change	65
	F.2	Non-assessable change	67
	F.3	Provisional approval	68
1	F.4	Change to grandfather approved product	70
	F.5	Trial	72
•		sion diagram - type approval or supplier approval?	
Figur	e 2 Decis	sion diagram product Information pack review	13
Figur	e 3 Decis	sion diagram, change assessment	15
Figur	e 4 Decis	sion diagram non-compliance assessment	17
Figur	e 5 Decis	sion diagram – trial viability	19

1 Introduction

1.1 Purpose

This Code of Practice provides guidance on the application of AS 7702 for signalling products and promotes a common understanding of type approval requirements between suppliers of product for signalling applications and Rail Transport Operators (RTO).

1.2 Scope

This Code of Practice is intended to be applied to the type approval of signalling products. The following will be included within this Code of Practice:

- a) Guidance on which products needs to be type approved.
- b) Detailed guidance on information to support type approval.
- c) Scaling the type approval for the risks on the criticality.
- d) Addressing incremental adjustments to existing type approvals.
- e) Addressing incremental adjustments to grandfather approvals.
- f) Application of provisional or interim approvals.
- g) Identifying practices for trialling equipment during assessment.
- h) Guidance on cross acceptance of products.

1.3 Terms and definitions

General railway technical terms can be referred to the RISSB Glossary.

For the purposes of this document, the definitions given in AS 7702 and the following apply:

Accredited Standards Authority: International Standards Organisation or International Electrotechnical Commission or its members for example Standards Australia, New Zealand Standards Organisation, American National Standards Institute, British Standards Institute.

Application condition: A condition that restricts the use of the product in some way. This may be restricting it for use in certain types of designs, location types or operating environments. The application conditions are to manage non-compliance items against the baseline assessment requirements.

Approved Supplier: A supplier approved to provide goods to the RTO as per the requirements of the RTO procurement processes defined in their SMS.

Assessing RTO: The Assessing RTO is the RTO that is currently assessing a product for type approval as distinct from any other RTO who has already type approved the product.

Component: A piece of hardware that is used to make up an elemental part of a product that can be traced to a specific single standardised and recognised set of requirements. If the product must comply with a range of different standardised set of requirements than it cannot be considered a component.

Derogation: A permanent non-compliance against an RTO specified requirement. All type approval derogations must be formally accepted and approved by the Assessing RTO with any necessary conditions to control the risk.

Grandfather Rights: Equipment approved for use based on historical performance, without a product information pack and approval certificate. The RTO will decide under what conditions the equipment may continue to be used and whether it can be used in new installations.