

Certificate No. NESA S083

Version No 1.0

Approval date 11 May 2022

Approved by Acting General Manager Technical Standards

This certificate is issued to

Supplier Thales Australia, Ground Transportation Systems

In respect of

Manufacturer Thales Australia
Ground Transportation Systems
Prabal Nandi
Technical Sales and support engineer
274 Victoria Road
Rydalmere
NSW 2116
Australia

Product description Train Protection and Warning System

Item identification See attached list of approved items

Application Railway signalling safety enforcement– ARTC Victorian North East Line Only

Relevant Standards SPS 05 Electrical & Components (Ratings & Construction Requirements)

SPS 02 Environmental Conditions

ESC-09-02 Lightning and Surge Protection Requirements

Conditions of Approval

General

1. The approval of the TPWS trackside equipment is only for use on the Victorian North East line from Melbourne to Albury.
2. Only items on the Approved Items List shall be used in designs for ARTC or installed on the ARTC network.
3. Project Engineers and Third-Party Contractors shall inform the supplier Thales that the equipment is to be used on the ARTC network when placing the order.
4. Technical manual version update shall be informed to ARTC Standards by Project/Third Party Contractors/Users with gap analysis.
5. Project/V/Line shall make available training courses for Maintenance of the product for ARTC signal maintenance

NEW EQUIPMENT AND SYSTEM APPROVAL CERTIFICATE

	<p>staff to undertake maintenance, fault finding, installation, set to work and testing.</p> <p>6. Project shall provide all tools and spares to ARTC business unit before commissioning of TPWS on ARTC network.</p>
Supplier	<p>7. All documentation from the supplier supporting this system shall be in English. All diagnostic systems, support systems and tools associated with the Product shall display all information in English.</p> <p>8. The Supplier shall submit to ARTC any updates to the support documents listed in this approval.</p> <p>9. The supplier grants to ARTC the permission to publish the documents on the ARTC Engineering Intranet or Extranet so that those signals staff internal and external involved in supporting the system may reference the information.</p> <p>10. All items shall be fitted with a readily visible label stating the Manufacturer/Supplier, Product group, item name, revision level, serial number, date of manufacturer and manufacturer's identification product number.</p>
Signal Designers	<p>11. Any individual working with or designing TPWS for the ARTC network shall have competency at Level 2 or higher.</p> <p>12. All designs for application on the ARTC network shall be in accordance with the relevant ARTC engineering and signalling standards.</p> <p>13. All details and settings for the design shall be included in the circuit sheets</p> <p>14. Designs and design report are to be reviewed and accepted by ARTC corridor engineer before starting the construction work at site.</p>
Signal Maintenance, Installation & Testing	<p>15. Any individual working with the product on the ARTC network shall have completed the training course for maintenance. Project shall provide required training and mentorship to ARTC signal maintenance staff to achieve the required competency level.</p> <p>16. There are no field serviceable components within the units. Any failed units shall be replaced.</p>

A general condition of approval is that the supplier remains accredited to ISO 9001 specifically for these products and ARTC is advised on a 12 monthly basis that accreditation is current. ARTC reserves the right to conduct its own audit of the manufacture and supply of these components to AS 19011.

Any subsequent change to the design, materials or manufacturing process is not covered by this approval. The manufacturer should notify ARTC of any modification or changes in order to obtain a valid updated certificate. This may require the submission of a Product Information Pack in accordance with AS7702 for the changed product.



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Note/Comments

Issue date 11/05/2022

Expiry date N/A

Issued by

ARTC Manager Signalling Standards

APPROVED ITEMS LIST

Table 1 – TPWS Trackside Equipment

Part Number	Product Name	Description	Rev
604366-20	Module PS & Signalling interface (red)	Gold plated contacts	0
604367-20	Module OSS Normal Direction (ND) (yellow)	Gold plated contacts	0
604367-21	Module TSS Normal Direction (ND) (green)	Gold plated contacts	0
604367-22	Module OSS Wrong Direction (WD) (blue)	Gold plated contacts	0
604367-23	Module TSS Wrong Direction (WD) (brown)	Gold plated contacts	0
606630-30	Assembly TPWS Baseplate OSS ND	Gold plated contacts	0
606630-31	Assembly TPWS Baseplate TSS ND	Gold plated contacts	0
606630-32	Assembly TPWS Baseplate OSS WD	Gold plated contacts	0
606630-33	Assembly TPWS Baseplate TSS WD	Gold plated contacts	0
606777-13	Cable tail 35 metres type C3		0
606777-14	Cable tail 15 metres type C3		0
604369-02	Aerial TPWS Loop type 3		0
608666-00	Standard gauge Trackside Commissioning Test Jig Kit (includes 608410-01, 608411-00 & 245675)		
606974-01	TPWS Trackside Test Kit (includes 606940-01 & 606915-02)		
6001056-00	MK2 Aerial Decoupler Tool		
1001043	TPWS Fluke Meter Model 287		
608035-26	TSS Kit : Dual Aerial Bracket		
608036-26	OSS Kit : Single Aerial Bracket		
100240	TPWS Loop Aerial Spacer Kit – 10mm		
100241	TPWS Loop Aerial Spacer Kit – 20mm		

Reference technical manuals.

Table 2 Manuals for TPWS

Identification	Title	Version
HB1376-5	User Technical Specification for the TPWS Trackside Equipment	26 June 2018

Table 3 Sleeper Mounting Equipment

Kit No.6 is the preferred mounting kit for the sleepers with Fastclips on the North East Line.

The other items are provided as alternatives where different sleepers are installed.

Fixing method and sleeper material	Colour code	Kit No.	Train Stop Mounting Kit Thales Part No.	Overspeed Sensor Mounting Kit Thales Part No.
Fastclip fastenings	Green	6	608035-26	608036-26
Pandrol fastenings for Concrete F23-F28, F40, Steel & Slab track	Orange	1	608035-21	608036-21
Fastclip fastenings on Concrete inc. F41, G44, EG47 & some steel Not for new supply – see Kit 6	White	2	608035-22	608036-22
SHC fastenings on Concrete	Black	3	608035-23	608036-23
Timber coach screws	Brown	4	608035-24	608036-24
Other Concrete, Hilti stud anchors	Brown	5	608035-25	608036-25
Vossloh W14 fastenings on G45 Concrete	Blue	7	608035-27	608036-27
Fastclip fastenings on Corus600D steel	Red	9	608035-29	608036-29
Resilient Mounted Rail LVT, Fischer Highbond Anchor system kit	Brown	10	608035-30	608036-30