

NEW EQUIPMENT AND SYSTEM APPROVAL CERTIFICATE

Certificate No. S 01-0912-100
Approval date 17/07/2017
Approved by GM Technical Standards
Report no. TAR-01-0912-130

This certificate is issued to

Supplier Alstom
 Level 1, 631 Karel Ave
 Jandakot, Western Australia 6164

In respect of

Manufacturer GETS
Product EC5
Item identification Computer Based Interlocking
Application ARTC Network Wide
Relevant Standards SCP17 Computer Based Interlocking Requirements
 SPS05 Electrical & electronic Components
 SCP23 Requirements

Conditions of Approval

General	1. For use in accordance with ARTC specifications SPS05, SDS 25 and standard typical circuits only.
	2. Only components and software from Appendix 2 may be used.
	3. Only the latest approved version of the executive software, together with the associated development system software, may be used in new works installations.
Supplier	4. All documentation from the supplier supporting this system shall be in English. All diagnostic systems and support systems associated with the Product shall display all information in English.
	5. The Supplier shall submit to ARTC any updates to the documents detailed in Appendix 1. The Supplier shall permit ARTC to publish these documents on its Engineering Extranet for use by signals technical staff when working on the system on the ARTC network.
	6. The Supplier remains accredited to ISO 9001 specifically for these products.
	7. Any subsequent change to the design, materials or manufacturing process is not covered by this approval. The Supplier shall notify ARTC of any modification or changes in order to obtain a valid updated certificate.
	8. GETS will make available training courses for signals staff for Maintenance of EC5 (including fault finding) and for Set to Work and Testing of EC5. These may be separate courses.
Signal Designers	9. Circuit and data design must ensure a healthy communications link status is proved against all down proved functions/contacts before outputs can be driven.
	10. Type approval only covers data communications link to EN 50159:2010 category 3. The system is not approved for use with category 4 or 5 communications networks including radio data links.

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	11. Any individual working with or designing a EC5 system must complete the respective training course and have this documented in their SOC
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Issue date

18 July 2017

Expiry date

Issued by



John Furness

ARTC Manager Standards

Type Approval Status

Issue 1 – S-01-0912-100 GETS – EC5 - Current

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Table 1 - Approved Item List - S 01-0912-1300

Part No.	Item Type	Description	Conditions of Use
Safety-related Functional Hardware.			
Interlocking Processor units.			
-000	VPM-1	Vital Peripheral Master Module	
251432-000	VPM-3	Vital Peripheral Master Module	
251121-000	CI-1	Chassis Information Module	
251441-000	CI-2	Chassis Information Module	
251124-000	CDU-1	Control Display Unit	
Input / Output units.			
251134-000	VIO-44S	Vital Input / Output Module	
Interface Units			
251123-000	VTI-2S	Vital Track Interface	
800-096000-011	TIP-2	Track Inductor Panel	
251125-000	VLD-C6S	Vital Lamp Driver Module	
Power Supply Units			
-000	CPS-1	Central Power Supply	
Safety-related Non-functional Hardware			
300752-000	Chassis	9 Slot Chassis	
227444-000	VIO-44S	Personality Module	
Communications units		Communications link for vital data must be a closed system.	
251329-000	CIO-1A	Communications Input/Output	
Safety Software			
083025-606	Release 6.06	Vital Interlocking Software Release	For use on VPM-3

VPM-3 Interlocking Only Software				
Release	Processor	SW Label	Executive CRC	File CRC
6.06	A	VPM-3 Exec Bld 0033	545bec5e	6be7665b
	B		c3a70104	f312563b
	C		78a35c67	Dac7e6b5

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Table 2

Referenced Documents for EC5 Computer Based Interlocking

Manuals and Documentation			
100373-010 AU0	Manual	System Operation and Maintenance Vol. One	
100373-010 AU0	Manual	System Operation and Maintenance Vol. Two	
083044-000 AA0	Manual	Reduced Test Validation Procedure	
CWD-GL00-PRO- GL000-SIG-SI- 6200 Rev C01	Procedure	SIA VHLC/EC5 Factory Acceptance Testing Requirements	