

NEW EQUIPMENT AND SYSTEM APPROVAL CERTIFICATE

Certificate No. 08-08-10-009

Approval date 03 May 2006
Approved by Manager Standards and Systems
Report no. TAR -08-08-10-009
Report date April 2005

This certificate is issued to

Supplier Frauscher Sensor Technology Australia Pty Ltd
Suite 2, Level 4, 84 William Street,
Melbourne, Victoria, 3000

In respect of

Manufacturer Frauscher Sensor Technology
Product description Frauscher ACS2000 axle counter system
Item identification Refer to Approved Item List.
Application ARTC Network Wide
Relevant Standards SPS 01 Standard Requirements for signalling Electronic Systems
SPS 02 Environmental Conditions
SCP 17 Computer Based Interlocking Requirements
EN50126 Railway Applications – The Specification and Demonstration of Reliability, Availability, Maintainability and Safety
EN50129 Railway Applications Communications, Signalling and Processing Systems – Safety Related Electronic Systems for Signalling
EN50159 Railway Applications – Communication, signalling and processing systems – Safety-related communication in transmission systems
ESI-06-02 Resetting Axle Counters

Relevant Equipment Manuals ACS2000 D10002-01-2.1 Part I Structure of Documents
ACS2000 D10002-02-1.2 Part II System Description
ACS2000 D10002-03-1.2 Part III Performance Data
ACS2000 D10002-04-1.2 Part IV Project Planning
ACS2000 D10002-05-2.1 Part V Types of Boards
ACS2000 D10002-06-1.2 Part VI Commissioning
ACS2000 D10002-07-1.2 Part VII Acceptance

NEW EQUIPMENT AND SYSTEM APPROVAL CERTIFICATE

ACS2000 D10002-08-1.2 Part VIII Maintenance

ACS2000 D10002-09-2.1 Part IX Diagnostics

ACS2000 D10002-10-1.2 Part X Operation

ACS2000 D10002-11-1.2 Part XI Safety Regulations

ACS2000 D10002-12-2.1 Part XII Specification of Boards

Conditions of Approval

1. For use in accordance with ARTC signals construction standards and signal design standards and guidelines.
2. For use in accordance with approved axle counter reset procedures only, Signal Engineering Instruction ESI-06-02
3. All ACS2000 system data shall be treated as signal design data and shall not be subject to field changes.
4. ACS2000 vital signal control function shall only be used with closed data communications networks to category 1 of EN50159-2010.
5. Designers of the signalling system using the ACS2000 shall have completed the ACS2000 design training course and have the competency skill rating for the ACS2000 system.
6. Manufacturer's guidance on installation and maintenance to be observed.
7. Only components from the Approved Item List (table below) shall be used.
8. Any change to the components or performance of the components to be submitted to ARTC for approval.

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.

Note/Comments NIL.

Issue date 5 October 2016 **Expiry date** N/A

Issued by



John Furness
ARTC Manager Standards

NEW EQUIPMENT AND SYSTEM APPROVAL CERTIFICATE

Approved Item List

Certificate No. 08-08-10-009

Manufacturer Frauscher

Product description ACS2000 axle counter system

The following lists the individual items of equipment that are approved and Conditions of Use. Only these items and versions are approved and any or all other items must be submitted for approval.

Model No.	Version	Description	Conditions of Use
10021	N/A	Rail Claw SK140	
10023	N/A	Clamping Bolt BBK11	
10024	N/A	Clamping Bolt BBK17.5	
10025	N/A	Clamping Bolt BBK22	
10034	N/A	GAK Cable Box SKV20	
11749	GS03	Wheel Sensor RSR180/S—250-5m tail cable	
14620	GS03	Wheel Sensor RSR180/S—250-10m tail cable	
18607	GS03	Wheel Sensor RSR180/S—250-15m tail cable	
16254	GS03	Wheel Sensor RSR180/S—250-25m tail cable	
12205	N/A	Protection Tube 4.8 m	
14475	N/A	Protection Tube 9.8 m	
17443	N/A	Protection Tube 14.8 m	
16906	N/A	Protection Tube 24.8 m	
13753	GS01	Voltage protection BSI004	
21512	GS03	Testing / Simulation Plate – PB200	
10108	N/A	Board Rack BGT04 84TE	
10265	N/A	Board Rack BGT05 42TE	
13516	GS03	Backplane ABP002-2 21TE	
13517	GS03	Backplane ABP002-3 25TE	

NEW EQUIPMENT AND SYSTEM APPROVAL CERTIFICATE

13518	GS03	Backplane ABP002-4 29TE	
13519	GS03	Backplane ABP002-5 33TE	
13520	GS03	Backplane ABP002-6 37TE	
13521	GS03	Backplane ABP002-D2 28TE	
13522	GS03	Backplane ABP002-D3 32TE	
13523	GS03	Backplane ABP002-D4 36TE	
13524	GS03	Backplane ABP002-D5 40TE	
13525	GS03	Backplane ABP002-D6 44TE	
13482	GS03	Axle Counting Board ACB010	
10114	GS02	Fuse Board SIB006	
13641	GS01	Fuse Board SIC006	
12756	GS05	Evaluation Board AMC001	Must not to be used for new works
13881	GS01	Evaluation Board IMC006	
16213	GS03	Evaluation Board IMC006	
14735	GS04	Digital Input/Output Board DIOB104	
20792	GS02	Diagnostic System FDS	
15521	GS01	Bus Transfer Entity BTE001	

N/A = not applicable