

**Manufacturer:**  
C Scope

**Issue :** 5  
**Valid From :** 23-06-2017

## C SCOPE CABLE DETECTION SYSTEM

### Product Description

C Scope Cable detection system MXL4,CXL4 and DXL4 Receivers. MXT4 and SGV4 Transmitters

### Product Image




### Scope of Acceptance

Full product acceptance is granted to the use of this product in line with the conditions and limitations defined on this certificate.

Network Rail Acceptance Panel (NRAP) hereby authorises the product above for use and trial use on railway infrastructure for which Network Rail is the Infrastructure Manager under the ROGS regulations.

Reviewed by:

Authorised by:



Steve Rennolds  
Product Acceptance Specialist

Malcolm Miles  
Professional Head of Plant

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## Specific Conditions

The following Conditions are specific to the approved product/s contained within this Certificate. These conditions must be adhered to in addition to the Network Rail General Conditions contained within the "General Terms and Conditions" section. Failure to adhere to these conditions may result in the withdrawal or suspension of Acceptance of some, or all of the items contained within the accepted configuration.

### Manufacturer

- 1) See General Terms and Conditions

### User

1)	Only to be used in accordance with a Safe System of Work and on site operational risk assessments.
2)	Not to be used in live third or fourth rail areas.
3)	Only authorised personnel are to operate the equipment. Equipment must only be operated as directed by the manufacturer's instructions and associated training requirements.
4)	Personal Protective Equipment to be worn at all times when operating the equipment.
5)	The C Scope CXL4,DXL4,MXL4,MXT4 and SGV4 Cable detection system must be used in conjunction with NR/GN/TRK/7001/TWI3G101 How to carry out cat scan of a site and NR/L3/MTC/RCS0216/SP05 Use of Cable Avoidance Tool (C.A.T.) or company equivalent controls.
6)	Each party in the Network Rail supply chain procuring and receiving a product is responsible for ensuring it is fit for it's intended purpose. Any deficiency must be taken up immediately with the supplier. If the deficiency is a design or manufacturing fault likely to affect performance and/or the safe operation of the railway this shall be reported in writing to Network Rail Acceptance Services.
7)	Maintenance and calibration must only be completed by in accordance with the manufacturers instructions and be undertaken by a competent trained person, manufacturer or representative.
8)	Only equipment that is in-date maintenance and calibration is to be used.
9)	Signal Clamps should not be applied to items such as Railway Signaling or Telecommunication Cables without a Safe System of Work that confirms interaction

## Product Configuration

### System or Complete Assembly

Part No.	Description	Catalogue No.
ZCSCAT-33	Cable Avoidance Tool	094/020009
ZCSCATXD-33	Cable Avoidance Tool	094/020008
ZCSSG-33	Transmitter (design schematic A4/587/3402 Issue 3)	094/007003
ZCSSGA-33	Transmitter (design schematic A4/609/4029 Issue 2)	094/007027
ZCSSGV-33	Transmitter with intermediate power settings and LCD display.(design schematic A4/609/4207 Issue 1 and A4/609/4029 Issue 2	094/007028
ZX4-SGV4	SGV4 Signal Generator Visual	094/007070
ZX4-MXT4	MXT4 Multifrequency Transmitter	094/007071
ZX4-CXL4CAT	CXL4 Cable Avoidance Tool	094/007072
ZX4-CXL4CAT-D	CXL4 Cable Avoidance Tool with Data logging	094/007073
ZX4-CXL4-DBG	CXL4 Cable Avoidance Tool with GPS	094/007074
ZX4-DXL4-D	DXL4 Cable Avoidance Tool with Data logging	094/007075
ZX4-DXL4-DBG	DXL4 Cable Avoidance Tool with GPS	094/007076
ZX4-MXL4-D	MXL4 Precision Locator With Data Logging	094/007077
ZX4-MXL4-DBG	MXL4 Precision Locator With GPS	094/007078

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## Assessed Documentation

Reference	Title	Doc. Rev.	Date and Applies to Cert. issue No.	
BL1793/001/C-QF-002 (Issue 1)	WS Atkins Rail Limited-C-Scope Cable Avoidance System:Safety Assessment Report	-----	07.12.99	1
-----	Results of trials carried out at Ashford	-----	21.05.04	3
-----	Results of trials carried out at Watford	-----	14.09.04	3
A4/609/4195	SGA & SGV Signal Generator Unit specification	-----	22.10.04	3
A4/609/4196	SGA & SGV Signal Generator Circuit description	-----	22.10.04	3
A4/609/4197	SGA & SGV Signal Generator Single fault failure analysis	-----	22.10.04	3
A4/609/4029	SGV main PCB Circuit Diagram, Issue 2	-----	-----	3
A4/609/4207	SG Cat Display Circuit Diagram, Issue 1	-----	-----	3
-----	Comparison between ZSSG-33,ZSSGA-33 & ZCSSGV-33 generators	-----	-----	3
-----	Reliability statement	-----	22.04.05	3
-----	EMC Test Certificate 5833/04	-----	22.11.04	
UK008894	ISO 9001:2008 Certificate	-----	Exp 15/09/2018	4
CECERT2P	Declaration of Conformity 2014/30/EU, BS EN 61000-6-3,BS EN 61000-6-1, 2014/53/EU, EN300-330, EN301-489	-----	FEB 2017	4
Letter	IPR Declaration	-----	-----	4
-----	INVESTIGATION OF COMPLIANCE OF PRODUCTS MXL4,CXL4 and DXL4 Receivers. MXT4 and SGV4 Transmitters,	-----	-----	4
Email	EMC/EMF Confirmation from specialist NWR Engineer	-----	21/04/2017	4

## Manuals and Training Materials

Reference	Title	Doc. Rev.	Date and Applies to Cert. issue No.	
A4/100/5306 Issue A	Service Manual	A	March 2017	4
Instruction Manual- Part no.B1094E	Instruction Manual	1	2017	4

## Certificate History

Issue	Date	Issue History
1	05.01.00	First accepted for use
2	15.09.04	Re-acceptance following national trials
3	16.06.05	Additional acceptance of transmitters ZCSSGA-33 & ZCSSGV-33

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4	24.04.17	Additional acceptance of C Scope Cable detection system MXL4,CXL4 and DXL4 Receivers. MXT4 and SGV4 Transmitters
5	23.06.17	Certificate amended as authorised by Head of Plant to remove limitation "Possession working only - this product is only to be used in a possession in compliance with GE/RT8000 Rule Book when used on or near the line". Training limitation amended.

## Contact Details

**Manufacturer**

**C Scope. Simon Fry.**  
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**Lead Reviewing Engineer**

**John Harrison Engineer STE**  
<mailto:John.Harrison@networkrail.co.uk>

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## General Terms & Conditions

### 1) General

- 1) This certificate can only be amended by Network Rail Product Acceptance, the Professional Head or nominated delegate. Any alterations made by a other persons will invalidate the entire certificate.
- 2) Failure to abide by the requirements in this Certificate of Acceptance may invalidate the certificate, thereby restricting the right to operate the product and / or limiting the future supply and deployment of the product on the infrastructure.
- 3) Upon the review date this certificate and the product it relates to is invalid and not accepted for use. Manufacturers are to make an application for a review prior to the review date.

### 2) Manufacturer

The Manufacturer shall:

- 1) Ensure that all products supplied comply with the standards defined in the Acceptance Requirements or otherwise documented as part of the assessment, including meeting the reliability requirements included in the Acceptance Requirements and in any deed of warranty for the relevant certificate number.
- 2) Notify Network Rail Product Acceptance:
  - a. Within 48 hours, of any deficiencies affecting the quality, functionality or safety integrity of the product (including corrective action undertaken or proposed).
  - b. Of any intended change to the accepted product; changes include:
    - i. a change to the product configuration (to the actual product or its application);
    - ii. a variation to or addition of manufacturing locations or processes;
    - iii. a change in the name or ownership of the manufacturing company;
    - iv. any changes to the ability or intention to support with technical services, spares or repairs.
- 3) The Manufacturer shall provide Network Rail Product Acceptance or National Supply Chain (NSC) at least 12 (twelve) months notice of its intention to discontinue supply or to provide such notice as is reasonable if such discontinuance is outside its control and will offer the opportunity of a Last Time Buy to Network Rail together with date for last order placement and supply of the parts affected. The introduction of proposed alternative products shall be communicated to Network Rail Product Acceptance.
- 4) Provide further copies of operating and maintenance manuals to purchasers / users of the product as necessary (including certificates of conformance, calibration etc).
- 5) Provide further copies of training manuals and an appropriate level of training to purchasers or users of the product as necessary.
- 6) Where applicable, specialist technical support, repairs and servicing of the product shall be carried out by the Original Equipment Manufacturer (OEM) or authorised agent only.
- 7) Network Rail may request information from the manufacturer to prove product compliance with clauses 1 and 2 above and reserve the right to suspend and/or withdraw any application where information is not forthcoming within a reasonable timeframe.
- 8) In accordance with Network Rail's Quality Assurance Policy Statement 2011, where the specification and/or Product Acceptance Certificates specify quality assurance classifications (QA1 to QA5) for the products, the manufacturer shall comply with the specified level of quality assurance for each product and allow Network Rail access to carry out its quality assurance checks.
- 9) The manufacturer shall give Network Rail's representatives access at all reasonable times to its premises and allow them to inspect its quality systems and production methods and, if requested, to inspect, examine and test the products both during and after their manufacture and the materials being used in their manufacture.

### 3) Conditions of Use

Specifiers, installers, operators, maintainers, etc. using the product shall:

- 1) Comply with the certificate conditions. If a condition is not understood guidance must be sought from Network Rail Product Acceptance.
- 2) Check that the application of use complies with the relevant certificate's scope of acceptance.
- 3) Report any defect if it is a design or manufacturing fault likely to affect performance and/or the safe operation of the railway in writing to Network Rail Product Acceptance.
- 4) Inform Network Rail Product Acceptance in writing of a change to the product configuration (or to the actual product or its application).
- 5) Operate, maintain and service the product in accordance with Network Rail standards and Operation and Maintenance manuals as appropriate.
- 6) Be appropriately trained and authorised for the installation, maintenance and use of the product.
- 7) Only send products for repair or reconditioning to the Original Equipment Manufacturer (OEM) or authorised agent.
- 8) Users are to be aware that Product Acceptance is not a substitute for design approval.

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Railways and Other Guided Systems (ROGS) Regulations

- 1) Where the product is to be used in areas where Network Rail is not the Infrastructure Manager (e.g. leased stations), the sponsor shall additionally obtain formal consent from the Infrastructure Manager for the locality where the equipment is to be installed. This may include a requirement for additional safety verification. The decision of that Infrastructure Manager is binding, and cannot be overridden by Network Rail except by the escalation processes established in the ROGS regulations
- 2) As required in Railway Group Standard GE/RT8270, at each use of this product the project or group responsible for installation and commissioning shall be required to demonstrate compatibility with:

- a. All rail vehicle types that have access rights over the area affected by the change
- b. Infrastructure managed by others
- c. Neighbours.

Railway Interoperability Regulations

- 3) For interoperable constituents of systems the project or group responsible for installation and commissioning shall be required to demonstrate compliance with the relevant Technical Specifications for Interoperability (TSI) where appropriate.
- 4) An authorisation from the national safety authority (i.e. the Railway Safety Directorate of the Office of Rail Regulation) is required before the equipment is to be used in revenue earning service.

**5) Supply Chain Arrangements**

- 1) Certificates of acceptance do not imply any particular quantity of supply nor any exclusivity of supply.
- 2) Products may be purchased by Network Rail or its agents, suppliers or contractors.
- 3) Manufacturers should note that it is not necessary to enter into any exclusive supply arrangements with resellers or other suppliers.