

TECHNICAL INSTRUCTION

TI 108
Issue 1
July 2008
Expires: See page 2
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NETWORK RAIL - SIGNAL ENGINEERING Axle Counter within Neutral Section

Relevant Standard: NR/GN/SIG/11900

Background

As part of the West Coast reliability improvement programme, a recent investigation on poorly performing axle counter sections has identified interference affecting the ISDN communication link between the EAK and ACE. This interference has been identified as being due to a rise in earth potential at neutral sections which causes the common mode varistors to operate, causing imbalance of the ISDN link leading to a disturbance of the axle counter section concerned.

Scope

This TI covers all AzLM installations on AC electrified areas and other sites as directed where EAK's are located within or in close proximity (30m) to a neutral section. Note: the limits of the neutral section can be identified by the position of the entry and exit APC magnets.

Abbreviations & Definitions

EAK – Detection Point Electronics (Yellow Mushroom)
ACE - Axle Counter Evaluator
ISDN – Integrated Services Digital Network
PDCU - Power and Data Coupling Unit.
APC- Automatic Power Control

Compliance Requirements

Existing Installations

On all West Coast AC electrified sites, this technical instruction is mandatory and for immediate implementation. In addition, it shall also be implemented where specifically instructed by the Head of Signal Engineering.

New Schemes

For Projects not yet reached GRIP Stage 4, the instruction on *New Schemes* (page 2) shall apply.

For Projects not yet reached GRIP Stage 5, this TI should be considered for implementation.

Originator's Details:-

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Action Required

New schemes

The EAK and associated detection points shall not be provided within or closer than 30m of a neutral section.

Existing schemes

To reduce the effects of interference, the varistors shall be removed from all EAKs within or in close proximity of a neutral section. The APC magnets shall be used as the reference to determine extent of the neutral section. In addition the associated PDCUs shall be upgraded to the latest version (Thales part No: - 3CR 01892 BAAB) and earthed at the REB only. The signalling diagrams shall be updated to reflect this change.

Further guidance on this Technical Instruction shall be sought from the Originator.

Staff to be Briefed

Maintainers, Signalling Project Engineers, Designers and Testers.

Expiry Date

To be withdrawn when the complete suite of axle counter standards is reissued.

END

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