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Business Process Document

Train Actuated Disconnecter (TAD)

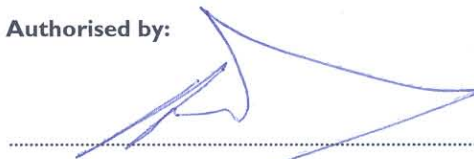
Endorsement & Authorisation

Endorsed by:



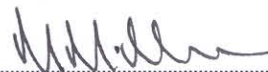
A Simmons (Head of Signal Engineering)

Authorised by:



A McNaughton (Chief Engineer)

Accepted for issue by:



M McManus, National Standards Manager

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Issue record

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Implementation

This specification has been produced for immediate implementation and shall be utilised for the development of the TAD system.

Compliance

This Network Rail Company Standard is mandatory and must be complied with from 7th October 2006.

When this Company Standard is implemented, it is permissible for all projects, which have formally completed GRIP Level 4, to continue to comply with the Issue of any relevant Network Rail Standards current when GRIP Level 4 was reached and not to comply with requirements contained herein unless the designated Standard Owner has stipulated otherwise in the accompanying Briefing Note.

Where the Standard Owner has specified that all projects will comply with the requirements, specific authority not to comply can be sought in the usual manner using the appropriate non-compliance authority processes described in Network Rail Standard, [NR/SP/STP/045](#) Managing the Process for Non-compliance Authority (formerly RT/LS/P/045).

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1 Purpose

This Product Specification gives the requirements for a device that detects electrical noise from a train whilst it occupies a specific section of track, and then applies a shunt or disconnection to the track circuit containing that section of track.

2 Scope

There are two methods of TAD deployment, permanently wired in to the track circuit to disconnect its circuit (like a track circuit interrupter), or wired separately to the track circuit with its own power supply and applying an electrical shunt directly to the rails (like a TCAID). All types of conventional track circuit and traction area are included in this application, though the electrical shunt type cannot be used on electrified lines and the method of wiring in the permanently wired type may vary according to track circuit type.

3 Reference Documentation

BR967	Specification for Railway Signalling Apparatus: Environmental Conditions
EN 50121-4	Railway applications – EMC – Part 4: Emission and immunity of the signalling and telecommunications apparatus
RT/E/PS/11762	Track Circuit Assister Interference Detectors

4 Definitions

a.c.	Alternating Current
ATP	Automatic Train Protection
AWS	Automatic Warning System
d.c.	Direct Current
EMC	Electro-Magnetic Compatibility
MIMS	Minicom Information Management System
MTBF	Mean Time Between Failures
RoHS	Restriction of Hazardous Substances
Rx	Receiver
SIHB	Signalling Installation Handbook
SIL	Safety Integrity Level
SMS	Signalling Maintenance Specifications
SMTH	Signalling Maintenance Testing Handbook
TAD	Train Actuated Disconnecter
TCA	Track Circuit Assister (fitted to certain trains)
TCAID	Track Circuit Assister Interference Detector
TPWS	Train Protection and Warning System
Tx	Transmitter