

/// trainborne - neutral section - zero gap

Rugged system for extreme reliability, within long endurance applications and harsh environments

APC

Automatic Power Control system



Features

- Compact design
- Robust system
- Status LED's on control unit
- Receiver bogie mounted or at main underbody
- Receiver available with conduit length to suit application
- Receiver conduit fitted with quick release bayonet connector
- Receiver compatible with Automatic
- Warning system
- Terminal box available to ease receiver changeover

Description

The Automatic Power Control system cuts the incoming power supply to a traction unit for short periods. This is required where power supplied from one part of a power distribution system is separated from another by a neutral section. Its fitment prevents damage to the power distribution system or the vehicle.

The onboard Automatic Power Control system consists of a control unit and a receiver. The system detects a track magnet positioned shortly before the beginning of the neutral section and sends a signal to the incoming power circuit breaker controller to open the circuit breaker. Once the system detects a second magnet positioned after the neutral section a second signal is sent to close the circuit breaker.

The control unit can be mounted inside the vehicle cab or integrated into an equipment rack. The receiver is a very robust unit and can be mounted on the vehicle main underbody or a bogie.

Application

All railway applications with different sections in electrified railway lines. For example, when different sections of power supply are isolated from each other via an insulated material into the contact wire, the APC system detects the marking of the neutral section and controls a circuit breaker to interrupt the circuit between the pantograph and the onboard electro-nic equipment. This prevents damage/wear and tear to the pantograph and overhead line or third rail.

Railway compliancy

- BS EN 50155: 2021 - Railway applications. Rolling stock. Electronic equipment
- BS EN 50125-1: 2014 - Environmental conditions for rolling stock/ onboard equipment
- GM/RT2111 - Rolling Stock Subsystem and Interfaces to AC Energy Subsystem
- EN 50121-3-2: 2017 - Railway applications: Electromagnetic compatibility - Rolling stock
- IEC 60529: 1989, COR1:2019 - Degrees of protection provided by enclosures (IP Code)
- CENELEC - EN 61373: 2010 - Railway applications - Shock and vibration tests
- EN IEC 60068-2: 2007 - Part 1 - Test A: Cold and part 2 - test B: Dry heat
- IEC 61000-4-4: 2012 - Electromagnetic compatibility (EMC)
- EN 55022: 2010 - IT equipment: Radio disturbance - Limits and methods of measurement
- EN 45545-2:2015 - Fire protection on railway vehicles. Requirements for fire behavior on materials and products.
- TI/UK - RIA 12: 1984 - General Specification for Protection of Traction and Rolling Stock. Electronic equipment from transients and surges in DC control systems.

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