



UNIAC1 Axle Counting System



UNIAC1

SECURE AND RELIABLE WHEEL DETECTION WITH UNIAC1

UNIAC1 is a complete system for detecting the occupancy of track sections and turnouts. The wheel sensors in a track section report on the occupancy status by sensing the number and direction of wheels entering or leaving that section. If all wheels entering can be accounted for as leaving the section, the track can be declared to be unoccupied – otherwise the track is declared occupied. Internal diagnostics monitor the health of the sensors and will raise an alarm and set the track status to occupied if a sensor is removed from the rail.

UNIAC1 can be installed on ballasted or embedded track in yards, main lines or sidings for all types of rail traffic.

Technical Data

- Max. number of axles in the axle counting circuit: 1023
- Electrical interface: Dry NO and NC contacts, binary output, secure Ethernet link
- Event memory and diagnosis
- No track side electronic components
- Safety critical design

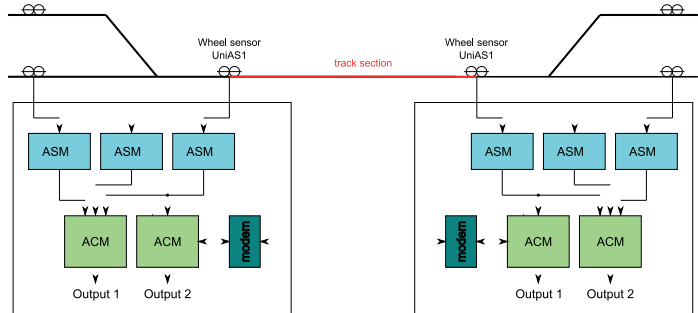
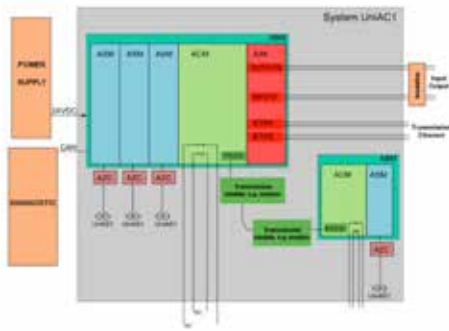


UNIAC1

Modular System Architecture

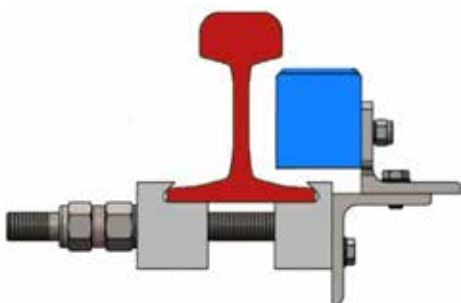
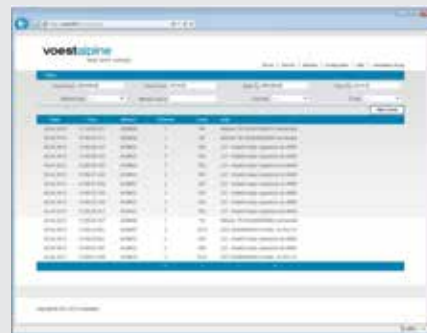
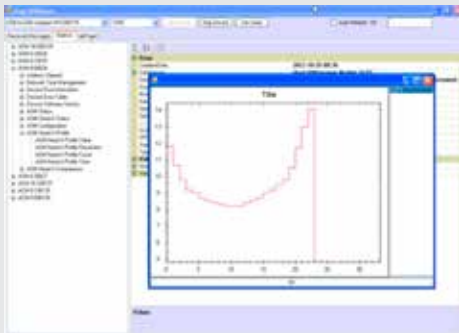
With its compact 19" construction and modular architecture, the system provides solutions for all possible demands concerning axle counters.

Each ACM counting module is connected directly with up to 6 axle counters. This can be duplicated to 12 axle counters by using two ACM counting modules connected by modem. Using this connection, it is also possible to divide the counting section to enable – for example – the monitoring of the counter data and the status (free/occupied) of a single-track section on two stations.



Diagnosis

In addition to reporting the counting data, the UNIAC1 System provides a wide range of diagnosis possibilities within the Advanced Diagnostic Module (ADM). This Module is not only equipped with a standard Ethernet interface, which reports all states of the card and the historical data of the system, but also with a secure Ethernet interface. Using the secure protocol, it is possible to establish a direct Ethernet connection to head controllers and signal boxes.



Installation

The axle counter is mounted with a rail clamp, easily positioned via two axis alignment on the clamp. The axle counter evaluation modules (ASM) are self-calibrating.

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