Intertech·Rail

The *IntertechRail* Digital Wheel Sensor is a state-of-the- art microprocessor controlled digitizing wheel sensor for urban rail, mainline and train yard applications.

It is the only wheel sensor on the market with solar and wireless capabilities. Using dual sensors, our system can detect train speed up to 250 kph within 0.2%. Our unique majority logic configurations minimize miscounts.
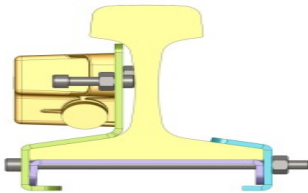
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Sensor Head Unit - Standard

Dual sensor wheel sensor head that is fastened to the rail to detect passing wheels of a train. Sensor waveforms are passed to the wheel counter unit on the wayside via buried cable in weather proof conduit.

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Mounting Bracket

Shock absorbing bracket that clamps the wheel sensor head to the rail. Allows the wheel sensor height to be adjusted. Does not require drilling into the rail. Fits both model of sensor head. Configurations available for AREMA 115lbs, 132lbs, 136lbs, 60Kg and ASCE75 rail. Brackets can be customized for any rail profile upon request.

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Wheel Counter Unit - Wired

Driver module for the wheel sensor heads. Each WCU connects up to two sensor heads. Waveforms are collected from the sensors, digitized, and sent to the SYS module for analysis over the RS485 bus. Quadrature outputs provide four discrete outputs – two per sensor head.

Safe

Designed to meet CENELEC SIL4 standards for safety

Fail-safe operation

Does not interfere with track circuits or other vital systems

Virtual train simulation mode for easy self-test and diagnostics

Works well with any ballast condition

Reliable

Low power requirements ideal for solar powered operation

Protected from EMC/EMI, lightening, UV, shock

Pre and post data processing provides more reliable detection with fewer resets

Sensitive electronics are mounted on the wayside away from the vibrations on the track

Planar PCB magnetic design of the coils allows for a lower profile sensor with less weight without fragile ferrite core

Accurate

Speed detection to 0.2% accuracy up to 250 kph using dual sensors

Detects all wheel flange sizes

Corrects for miscounts from truck mounted motors and brakes

Patent-pending majority logic corrects for one wheel miscount in a block

Configurable detection threshold to adjust sensitivity

Configurable

Function block programming environment for system logic

DIP switch selector for sensor address

DIP switch selector for quadrature pulse mode with a programmable 'long pulse' on detection

Potentiometer to adjust frequency feedback loop for environmental conditions

Adjustable mounting bracket does not require drilling of the rail