

ULTRASONIC BROKEN RAIL DETECTOR

COST EFFECTIVE

- EASY INSTALLATION
- NO TRACK MODIFICATION
- SECTION COVERAGE UP TO 1000m
- LOW MAINTENANCE COST

The Ultrasonic Broken Rail Detector is designed to reliably detect breaks in train rails under harsh environmental conditions. The design of the system also makes it suitable for solar powered, remote operation, and features special signal processing and diagnostic techniques to ensure reliable operation.

System installation is quick and easy and does not require track modification, fitting of track bonds, or trenching.

PRINCIPLE OF OPERATION

Rail continuity is established at Receivers by monitoring the presence of ultrasonic signals, inserted in rails by Transmitters both sides of the specific Receiver. Failure to detect a specific signal signifies a broken rail condition.

Autonomous, high power Transmitter Units are interleaved with Receiver Units. Transmitters bi-directionally insert coded ultrasonic signals into both rails. These signals are received and processed by Receivers to determine the direction of arrival, and integrity of the signal. A separate plug-in unit interfaces the Receiver Unit to radio telemetry equipment, cell phone modem, or fibre-optic link, and is configurable for customer specific remote sensing and telemetry requirements.

Equipment failures are remotely detectable by virtue of the physical arrangement of the system, frequency selectivity, code detection techniques, onboard detection logic, and built in diagnostic features which in combination effectively eliminate false alarming.



FEATURES

- Detection of clean breaks
- Detection of large flaws
- Notification of train presence
- Continuous operation
- Full rail coverage
- Remote sensing of equipment failures
- Scan intervals down to a few minutes
- Robust, rust free components
- Suitable for solar powered operation
- Field proven reliability

INSTALLATION & MAINTENANCE

- User friendly setup and tuning
- Front panel setting and detection status indication
- Front panel detection activity indication
- RS232 setting and data extraction
- Easy fitting and removal of rail mounted ultrasonic transducers
- Minimal preventative maintenance required

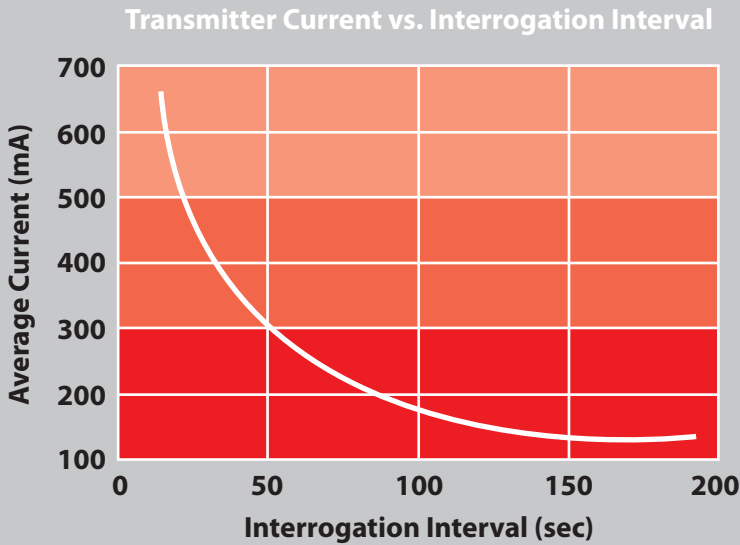
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TRANSMITTER

- User friendly front panel parameter setting and status check
- On-board transducer presence and condition monitoring
- Suitable for solar powered operation



RECEIVER

- User friendly front panel parameter setting and status check
- Sophisticated code detection, filtering, and detection logic
- Low power design: suitable for solar powered operation
- Caters for 40db signal loss due to temperature and developing flaw related effects
- On-board detection history and diagnostic data storage

RELIABILITY

- Environmental Stress Screened Electronics (ESS)
- Field proven over many years under extreme environmental- and rail operational conditions
- Operating temperature range: -15 to 65 °C

QUALITY

- General: ISO 9001
- Inspection: IPC Class 3
- Corrosion Resistant Materials



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Railsonic reserves the right to change specifications without prior notification