



Condition Monitoring Application Guide

Level/Grade Crossings

System Overview

TrackSense is designed with your organization in mind. Unlike expensive, rigid systems, it offers an affordable, modular solution which is compatible with off-the-shelf sensors, enabling you to select the tools that best suit your needs. With a user friendly interface that streamlines daily tasks, TrackSense promises to deliver lasting value and support long after your purchase. TrackSense can monitor key performance data for any rail asset, including:

 Point Machines	 Power Supplies	 Battery Banks	 Axle Counting	 Level Crossings	 Safety Signals	 Track	 Track Circuits
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Level/Grade Crossing Monitoring

Level crossing monitoring is most effective with sensors placed on key components like the barriers and warning systems. Measuring the electrical signals or current draw during operation produces a waveform that reflects the performance of the system.

Changes in the waveform may indicate faulty barrier movement, malfunctioning warning lights, or failure in the detection system. This monitoring ensures the safety and reliability of level crossings, which are critical for both rail and road users.

Optional Additional Sensors

Monitoring can be further improved with the addition of any of the following sensors:

- Voltage Sensors
- Auxiliary Sensors (temperature, impact, noise, wind speed etc.)
- Earth Leakage Detector Module (monitors power supply voltage/earth quality)

Minimum Requirements

- 1x TS Logger Module
 - Collects data for analysis
- 1x TS Analog Module
 - 6 analog input channels
- 1x 4-20mA Current Sensor

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Wiring Block

Below is an example wiring block. Wiring in practice may vary depending on circumstances.

