tracksense

Condition Monitoring Application Guide

Level/Grade Crossings

System Overview

TrackSense is designed with your organisation in mind. Unlike expensive, rigid systems, it offers an affordable and modular solution with ongoing support to future-proof your investment. With powerful analytics, an intuitive interface for streamlined task management and compatibility with off-the-shelf sensors, TrackSense adapts to deliver the ideal solution for your requirements. 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

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)

Wiring Block

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

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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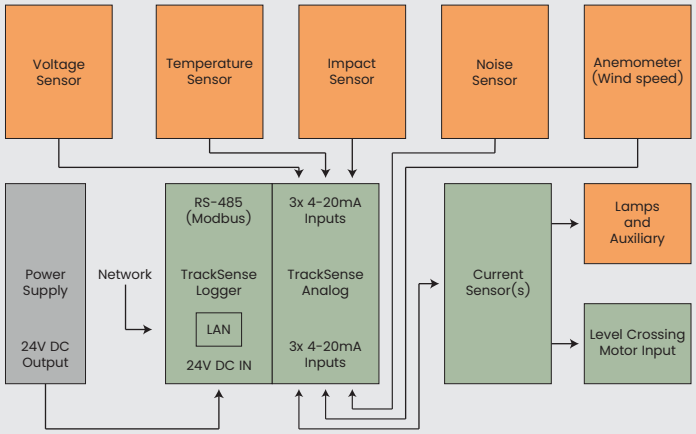
Modules and Sensors:



Note: Combining applications may require extra modules and sensors.

Notes:

Modules in green are required
Modules in orange are optional

Some sensors will be available with 4-20mA, Modbus, or digital outputs. You may select any option at your discretion.