



24/7 Insight in Critical Rail Assets

The customer is king, so as an operator, you want your rail network to be available continuously. However, constant availability requires a rail network to be in a state of good repair. This necessitates maintenance activities, which consequently affect availability. In other words: in a busy rail network there is limited time for repair or maintenance work. A catch 22? Luckily, nowadays technologies are available that provide thorough insight into the health of rail assets at any point of time.

As an industry leader, Strukton Rail developed **POSS[®]**, a non-invasive, easy-to-install rail asset monitoring solution. POSS[®] remotely monitors operational parameters in assets such as switch machines, track circuits and crossings, and pairs it with our expert domain knowledge. On the backend, the POSSOnline application generates notifications when deviations from normal behavior occur and automatically sends out alarms/warnings when thresholds are exceeded. To avoid false alarms, thresholds are temperature compensated by algorithms (automated adjustment).

POSS[®] has been in service since 1999 with several rail networks across the globe reaping the benefits. POSS[®] is a proven predictive maintenance tool enabling authorities to detect both mechanical and electrical anomalies within a switching system and associated infrastructure well in advance. As part of the effort to continually improve, Strukton Rail provides updates to the POSS[®] solution on a regular basis. Since 2019, we offer POSSOnline R7, with built-in, state-of-the-art algorithms for autonomous analysis of the data.

POSS[®] Operational Impact:

POSS[®] has proven to provide the following potential and benefits:

- Increased efficiency: 24/7 insight in asset health & asset quality safeguarding.
- Fewer breakdowns: automatic threshold exceedance notifications allow for preventive maintenance actions.
- Higher network availability: less inspections required, fewer breakdowns and swifter breakdown repair. Smart algorithms allow for efficient use of maintenance time.
- Lower OPEX: up to 75% reduction on switch maintenance costs.
- Lower CAPEX: adequate maintenance extends lifetime of assets

Easy to install
Non-invasive
User-friendly
Real-time data
Cost efficient
Asset manufacturer independent

Switch Performance Parameters

An adequate performance of a switch is directly related to the amount of power needed for the motor to move the points. Deviations in current consumption indicate a potential problem. Special POSS[®] measuring units (data loggers) monitor the current and phase angle, if necessary, and are installed in the relay bungalow. The data collected by the data loggers are presented in graphs showing in detail each individual stage of point reversal and the errors, if present. Alarms can be generated for each individual stage of the point reversal process as well. There is no electrical connection between POSS[®] and the signaling system, which makes it non-invasive, easy to install and asset manufacturer independent.

