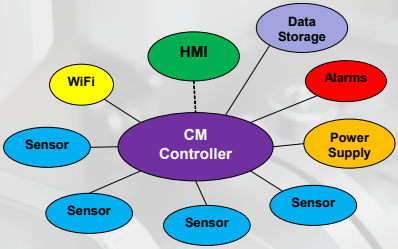
Condition Monitoring

Modular based system for monitoring switchgear and connected Infrastructure



Key Features

- Modular design comprising central controller/data logger, remote access panel together with a large range of sensors.
- Enables predictive servicing based on actual data rather than routine time based maintenance.
- Can be factory fitted or retrofitted on site.
- All events can be date and time stamped for accurate performance history.
- Internal algorithms compare and contrast conditions based upon initial settings.
- Alarms triggered if condition falls outside predetermined parameters or if a trend is detected.

Typical parameters monitored include:

- Primary Circuit Current
- Voltage
- Contact Timing
- Torque required to operate switch
- Contact/conductor temperature via thermal imaging
- Number of cycles performed in a given period
- Time installed
- Time since last maintenance
- Time since last cycle
- Humidity & Temperature within the cabinet
- ΣI^2t (Contact wear by calculation)

Condition Monitoring Controller

The central element is the condition monitoring controller, this performs the following functions:

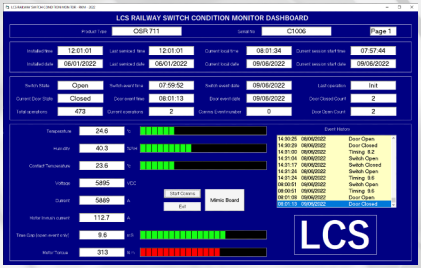
- Data acquisition from the various sensors.
- Diagnostics, in-built algorithms interpret the data and determine appropriate outputs.
- Alarm output.
- HMI interface.

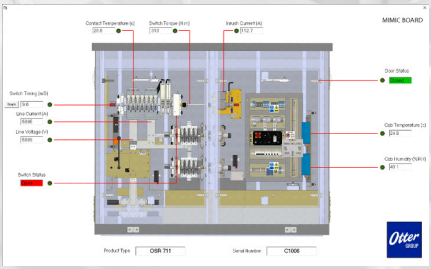
The controller can be DIN mounted and installed into an existing cabinet or can be provided complete within its own custom made enclosure.

Human Machine Interface HMI

The data can be displayed in a number of formats to suit the user. Here are displayed two options:

- A dashboard displaying the characteristics with a bar graph indicating a level of performance.
- Alternatively a mimic display showing the equipment being monitored with the sensors and associated data displayed.





Accelerometer

For difficult to measure directly conditions, an accelerometer can be employed. When a mechanical device such as a fast acting switch operates it causes a distinct series of vibrations, like a unique fingerprint. Should a subsequent operation produce a different profile then this could be an indication of a change in performance.