Remote Condition Monitoring

- Track Circuit / Axle Counter
- Point Machine
- Battery HMU
- Energy Information System (EIS)

www.efftronics.com
**Point Machine Health Monitoring Unit (PHMU)** reduces maintenance cost and improves availability by enabling predictive maintenance through Remote Condition Monitoring.

**FEATURES**

- Non-invasive method for measuring current.
- Online Point machine operating current and voltage – graphical representation
- Online alarms for faults
  - Initial High Peak current
  - Obstruction at Point
  - Friction clutch problem
  - Carbon brush worn out
  - Overload protection timer is less
  - Point operated detection failed
  - Point machine not operated – Point failed
- Identification of abnormal current signature by superimposing historical data
REPORTS

Current signature of point with spring setting device and thick web switches

High thrust clamp lock point machine

Carbon Brushes Worn Out
Roughness in current curve

Obstruction in Point
High operating current more than 3 Amps

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DC Track Circuit HMU reduces maintenance cost and improves availability by enabling predictive maintenance through Remote Condition Monitoring.

**FEATURES**

- Non invasive measurement with galvanic isolation
- Measures Feed end current and Relay end current
- Generates alarms for
  - Over energisation
  - Under energisation
  - Leakage more than set limit
"B9AT" --- Relay & Feed end current characteristics

"B10T" --- Relay & Feed end current characteristics

Current Signature
Battery Health Monitoring System (BHMS) is an intelligent system that monitors battery health & efficiency to provide safe guidance & improve battery performance.

**FEATURES**

- Bank & Individual Battery / Cell voltages
- Charging, Discharging currents
- Load currents (Optional)
- Internal Resistance (Calculated at Battery Bank Discharge)
- Ambient temperature of Battery environment
- Terminal Temperature of Batteries / Cells (Optional)
- Charged AH, Discharged AH & Net charge of Battery Bank
- Various reports for identifying the Failures & Utilization of Battery Bank
BHMS

40+ Installations

Online status of Battery bank state

Graphical representation of Bank parameters

Graphical comparison of Failed & healthy battery
Supervisory system which collects and organizes energy consumption information from facility’s electrical network and presents it as meaningful & actionable insights.

**FEATURES**

- Real Time energy monitoring
- Forecast demand
- Highlights opportunities to conserve energy
- Early alerts when maximum demand crosses
- Facilitates in improving load efficiency
- Helps in Phase balancing
- On-line power consumption information of the plant.
- SMS and Email alerts in case of faults.
- Shift wise and Phase wise Energy consumption for user specified duration.

**REPORTS**

- Online Power Reports
- Demand Comparison Report
- Energy Consumption - Load wise