

MONITORING SOLUTION FOR EPC'S

**Ensure EPC Project Success with Electrical Asset
Condition Monitoring!**



The monitoring of electrical assets is of paramount importance in EPC (Engineering, Procurement, and Construction) projects. Electrical assets, such as power distribution systems, generators, transformers, and control panels, are critical components in any industrial or construction project.

Here's why monitoring electrical assets in EPC is crucial

► Risk Mitigation

Monitoring electrical assets helps identify potential risks and faults before they escalate into major issues. By continuously monitoring parameters like voltage, current, temperature, and power quality, any anomalies or deviations can be detected early. This allows for timely preventive measures, reducing the risk of equipment failure, electrical hazards, and costly downtime.

► Optimal Performance

Effective monitoring ensures that electrical assets operate at their optimal performance levels. By tracking key performance indicators, such as energy consumption, load balance, and efficiency, project managers can identify areas of improvement and implement energy-saving measures. This leads to reduced operational costs and enhanced overall project performance.

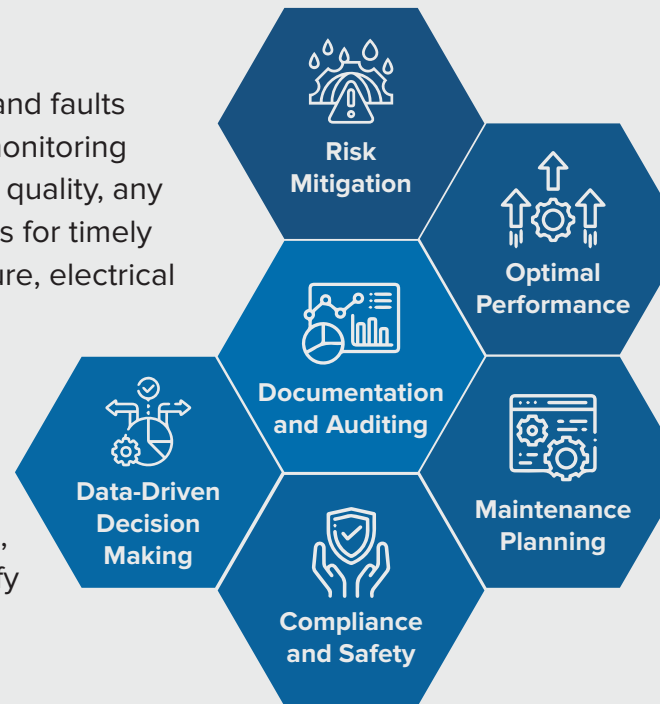
► Maintenance Planning

Effective monitoring ensures that electrical assets operate at their optimal performance levels. By tracking key performance indicators, such as energy consumption, load balance, and efficiency, project managers can identify areas of improvement and implement energy-saving measures. This leads to reduced operational costs and enhanced overall project performance.

► Data-Driven Decision Making

Continuous monitoring of electrical assets generates data that can be analyzed to derive actionable insights. By leveraging data analytics and trending analysis, project managers can make informed decisions regarding asset performance optimization, energy management, and future capacity planning.

In conclusion, monitoring electrical assets in EPC projects is vital for risk mitigation, optimal performance, maintenance planning, compliance, safety, data-driven decision making, and documentation. By proactively monitoring electrical assets, project teams can ensure reliable operation, minimize downtime, improve project efficiency, and enhance overall project success.

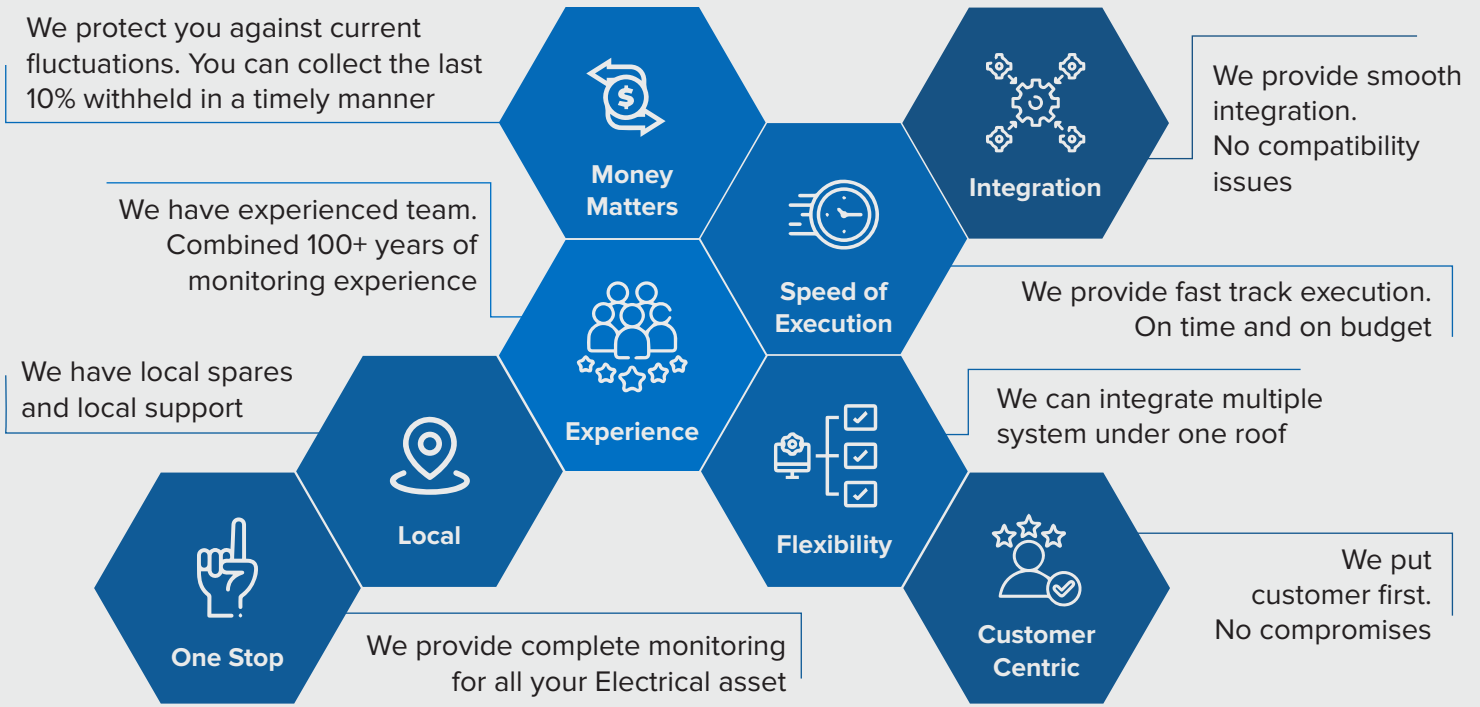


► Compliance and Safety

Monitoring electrical assets helps ensure compliance with regulatory standards and safety requirements. By monitoring parameters like electrical grounding, insulation integrity, and safety interlocks, adherence to electrical codes and standards can be verified, promoting a safe working environment for personnel, and reducing the risk of accidents.

► Documentation and Auditing

Monitoring electrical assets provides a documented record of asset performance and maintenance activities. This documentation is crucial for audits, compliance verification, and warranty claims. It also facilitates knowledge transfer, allowing future project teams to benefit from historical data and insights.



Assets that can be Monitored in EPC

Electrical assets are an integral part of EPC (Engineering, Procurement, and Construction) projects, playing a crucial role in providing power, control, and automation for various industrial and construction applications. These assets encompass a wide range of electrical equipment and systems that are essential for project success.

Following are the electrical assets widely found in EPC projects:



Power Distribution Systems

This includes electrical switchgear, distribution panels, transformers, circuit breakers, and relays. These assets ensure efficient and reliable power distribution throughout the project site.

Power Transformers

Enable power distribution, facilitate grid integration of renewable energy, regulate voltage levels, ensure system stability, manage loads efficiently, support scalability, maintain power quality, and protect valuable assets.



Generators

Diesel or gas generators are often employed to provide backup power during construction or in areas with unreliable power supply. These assets ensure uninterrupted power availability for critical operations.

Motors and Drives

Electric motors and motor drives are used in various applications, such as pumps, fans, compressors, and conveyors. These assets enable mechanical movement and process control within the project.



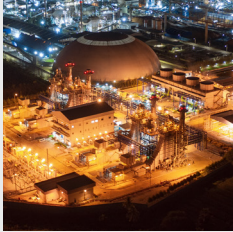
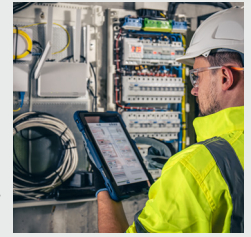


Instrumentation and Control Systems

This encompasses instruments, sensors, transmitters, and control systems that monitor and regulate parameters like temperature, pressure, flow, and level. These assets enable precise control and optimization of various processes.

Control Panels and PLCs

Control panels house electrical control components, such as programmable logic controllers (PLCs), human-machine interfaces (HMIs), and sensors. They provide control and monitoring capabilities for different systems and processes.



Lighting Systems

Proper lighting is essential for safety and productivity in EPC projects. Lighting assets include fixtures, lamps, ballasts, and control systems for indoor and outdoor areas.

Communication and Networking Infrastructure

Electrical assets also include communication and networking systems for data transmission and control interface, such as fiber optic cables, Ethernet switches, routers, and wireless communication devices.



Safety Systems

Safety systems are critical components in maintaining a safe working environment within various industries. These systems are designed to prevent or mitigate potential hazards and ensure the well-being of personnel. Some of the essential safety systems commonly implemented in workplaces include fire alarms, emergency lighting, smoke detectors, and safety interlocks.

Proper selection, installation, monitoring, and maintenance of these electrical assets are essential for ensuring reliable power supply, efficient operations, and compliance with safety standards in EPC projects.

**Stay on Top of EPC
Project Performance:
Electrical Asset Condition
Monitoring Made Easy!**

BENEFITS OF MONITORING

The monitoring of electrical assets in EPC (Engineering, Procurement, and Construction) projects brings a multitude of benefits, contributing to project success, efficiency, and safety.

Here are some key advantages of implementing electrical asset monitoring in EPC:

Early Fault Detection

Continuous monitoring enables the early detection of faults or abnormalities in electrical assets. By monitoring parameters such as voltage, current, temperature, and power quality, potential issues can be identified before they escalate into major problems. This allows for timely intervention, minimizing downtime and costly repairs.

Preventive Maintenance

Monitoring electrical assets provides valuable data for predictive and preventive maintenance planning. By tracking the health and performance of assets, such as insulation resistance, vibration, and temperature, maintenance activities can be scheduled proactively. This approach helps prevent unexpected failures, extends asset lifespan, and reduces maintenance costs.

Enhanced Safety

Monitoring electrical assets promotes a safe working environment. By monitoring parameters related to electrical grounding, insulation integrity, and safety interlocks, potential safety hazards can be identified. This ensures compliance with safety standards, reduces the risk of electrical accidents, and protects personnel and equipment.

Optimal Performance

Continuous monitoring allows for optimization of electrical asset performance. By tracking parameters like energy consumption, load balance, and efficiency, project managers can identify areas for improvement and implement energy-saving measures. This leads to enhanced project performance, reduced operational costs, and improved energy efficiency.

Data-Driven Decision Making

Monitoring electrical assets generates valuable data that can be analyzed to derive actionable insights. By leveraging data analytics and trending analysis, project managers can make informed decisions regarding asset performance optimization, energy management, and capacity planning. This data-driven approach enhances project efficiency and helps achieve project objectives.

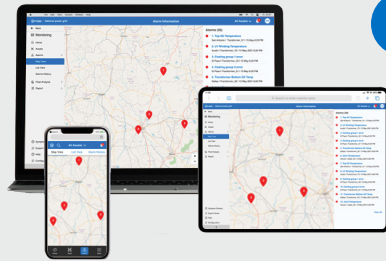
Documentation and Auditing

Monitoring electrical assets provides a documented record of asset performance and maintenance activities. This documentation is crucial for audits, compliance verification, warranty claims, and future reference. It facilitates knowledge transfer, ensuring that valuable insights and lessons learned are carried forward to future projects.

To summarize, the benefits of monitoring electrical assets in EPC projects include early fault detection, preventive maintenance, enhanced safety, optimal performance, data-driven decision making, and comprehensive documentation. By implementing effective monitoring practices, project teams can ensure reliable operation, reduce downtime, optimize asset performance, and enhance overall project success.

Asset Monitoring : Enterprise Architecture

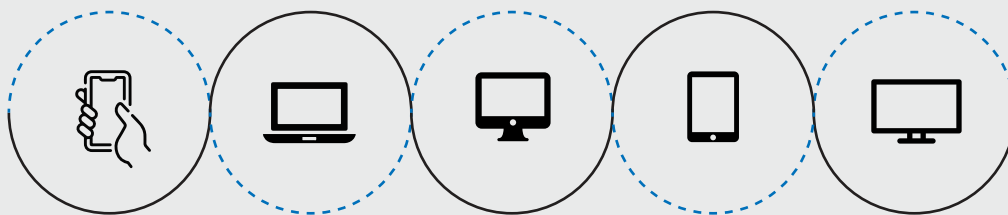
Compatible with Rugged Monitoring Enterprise Solution



UI UX

- Data Layer
- Analytics
- User Interface
- Custom Dashboards
- Reporting
- Email/SMS Notifications

RM EYE



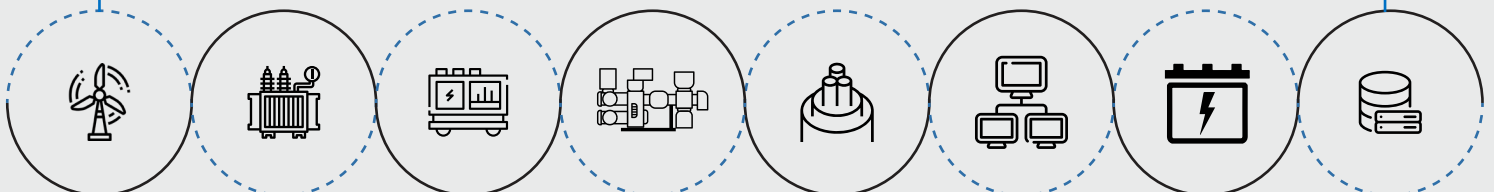
Private Cloud (Customer Cloud),
Rugged Monitoring Cloud



Monitoring System

T301, O201, H201, T501, R501,
HPM601, CPM601, PD201, PD211, BM201

Asset Data



Wind mills
Monitoring
System

Transformer
Monitoring
System

Switchgear
Monitoring
System

GIS
Monitoring
System

Power Cable
Monitoring
System

Offline Data/
Inspection
Test Results

Ess/ Battery

- Historian
- CMMS
- SCADA/ DCS

One Solution for Multi-Site Multi Asset Monitoring

Manage different industrial assets on one platform without human intervention

Features

- **Advanced and Exceptional Reporting**
Technology with automated alerts
- **Modern remote monitoring solutions**
provide valuable insights to Multiple Assets at Multiple Sites on real-time
- **Robust asset health monitoring**
with analysis and recommendations support asset effectiveness in addition to maximizing equipment uptime
- **Establish a real time and consistent monitoring** by getting the right information into right hands
- **An efficient, reliable partial discharge monitoring** for all the assets
- **A detailed comprehensive DGA Analysis**
- **Lifetime Consumption details.**
- **Built on well-established remote and cloud-based monitoring technology**
- **Simple user-friendly interface** providing fast access to all the features and commands
- **Quick and easy 1 step configuration setup**
- **Encompasses a secure access to data and configuration**
- **Advanced asset algorithms** based on standard ones with new ideas
- **Systematic fleet management and analysis**
- **Extended multilingual support** to handle product inquires or troubleshoot problems proactively
- **Up System Level Reporting**
- **Industrial IoT**

Our Clients

OEMs



Utility & Industries



EPCs



Why Customers Choose Us?

RM solution, the trusted monitoring solution for over 10000+ assets across 50+ countries. We are a leading High Value Electrical Asset Monitoring Company integrating fibre optic technology to the assets.



Attention to Details

It's our attention to the small stuff, scheduling of timelines and keen project management that makes us stand out from the rest.



A plan for Success

Our Customers are well satisfied with the advisory services that we offer to help them with best in class technological performance and a long durable life.



Experts only

We bring-in our diversified experienced team with over 100+ years of experience in Asset Monitoring



Meeting Deadlines

Work with us, and you'll work with seasoned professionals – vigilant of deadlines, and committed to exceeding client expectations.



Money Matters

We protect you against currency fluctuation with competitive and fair market prices



Rugged Monitoring Services

Rugged Monitoring provides customization of sensors, monitors & software. In addition we offer on-site commissioning services, maintenance contracts and technical support to all customers worldwide.

About Rugged Monitoring

Industry's leading team of asset condition monitoring experts with 100+ years of combined experience committed to delivering customizable solutions for challenging applications. We offer a range of reliable, high performance, customizable sensors and monitoring solutions that are immune to external influence.

Certification



ISO 9000



ISO 14000



ISO 45001/
OHSAS 18000



Lloyd's
Register



ATEX
Certification


Our Presence Across the Globe



Head Office

 **Canada**

1415 Frank-Carrel, Suite
230, Quebec, QC - G1N
4N7, CANADA

 +1-418-767-0111

Asia Pasific | India | Europe | Latin America | Middle East | North America



 ruggedmon

 info@ruggedmonitoring.com

 www.ruggedmonitoring.com

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