

TRACTION

ABB Ability™ Condition Monitoring for Energy Storage Systems



Condition Monitoring provides fact-based insight, enabling optimal utilization of Energy Storage Systems (ESS).



Condition monitoring remote services

ABB Ability™ Condition Monitoring consists of a suite of remote services which provide key operational information about the connected products.



Reduce unplanned downtime

Early detection of potential issues and assessment of their risks before they lead to a failure.



Energy Storage System monitoring

ABB Ability™ enables to review the condition of the ESS remotely, e.g. through a web browser or data interface.



Data-driven decisions

Leverage real-time and historical data with the condition monitoring capabilities to make informed decisions and ensure safe and optimal utilization of the equipment.



Receive valuable product insights

Analysis of aggregated field data provides valuable insights into the current health to identify and implement corrective actions and optimize its usage.



Fleet overview

Review and compare the information about the equipment in your fleet through one portal.



Speed up service response time

Remote access to data significantly reduces the time taken to analyze field data and plan corrective actions without physical presence on the vehicle.



Stay informed

Receive email notifications about important events and stay ahead with reports about the equipment in your fleet.

Online features and assisted services

Online features

Our standard online features offer industry leading monitoring capabilities to fit your needs — whether you want to view the ESS status through the ABB web portal or integrate this data with your existing monitoring systems.

| Feature | Description | Benefits |
|-------------------------------------|---|--|
| Condition monitoring | ABB portal <ul style="list-style-type: none">Secure and personal access to the portalTrack condition of ESS KPIs within vehicles and fleetsReview ESS performance historyView signal graphs for state of charge, temperature, power and moreView KPIs for energy usage, state of health and more | <ul style="list-style-type: none">Monitor the performance of your ESS remotely within a fleet and vehicle structureAll ESS operations data available through one portal — compare key performance indicators (KPIs) of different ESS and vehicles |
| | Data interface¹ <ul style="list-style-type: none">Interface for receiving Condition Monitoring data from ABB Ability™ cloud in your own monitoring systems | <ul style="list-style-type: none">Embedded ESS operational data in your own monitoring infrastructure and asset management system |
| Online storage for diagnostics data | Data storage <ul style="list-style-type: none">Automated data transfer to ABB Ability™ cloud | <ul style="list-style-type: none">No physical vehicle access necessary to retrieve diagnostics dataImproved service analysis process in the event of failure |
| Automated reporting ¹ | Create custom reports | <ul style="list-style-type: none">Automated summary report of operational data |
| Alarm management ¹ | Define alarms for the ESS based on events or conditions | <ul style="list-style-type: none">Immediate information when condition signals exceed the set limitsMaintenance and repair actions without delays |
| Event management ¹ | See events of the ESS in an event list view | <ul style="list-style-type: none">Fast and easy monitoring of ESS events |
| Direct links ¹ | Use a direct link to share insights/visualizations with colleagues or remote operator for further discussion or analysis | <ul style="list-style-type: none">Easily share filtered analysis view with working colleagues |

¹⁾ Planned features for future updates

On-demand assisted services

Include digitally enabled remote assistance by ABB technical support, advanced analytics expert reports, and a range of other features to make your maintenance operations more effective.

| Feature | Description | Benefits |
|--------------------------|---|---|
| Individual expert report | ABB generated reports, with comments and recommendations from an ESS expert, including notes based on the drive signal data | <ul style="list-style-type: none">Get expert information for maintenance and repair planning activitiesReceive advice and consultation regarding ESS usage |
| Remote assistance | Local ABB technical support, connected to ESS signal data and condition information | <ul style="list-style-type: none">Remote advice from ABB experts based on diagnosis or operational data |
| Training | Remote training to gain insights into the data provided by ESS Condition Monitoring. | <ul style="list-style-type: none">Improve your expertise and optimize analytical tools in ESS remote Condition Monitoring |

Service delivery process



ESS installation on vehicle(s)

The ESS is being installed and commissioned by the train manufacturer. No separate hardware inside the ESS is needed to provide data transfer to the vehicle communication unit.



Remote Condition Monitoring activation

Once the vehicles are set up, the data from the ESS can be transferred to the ABB Ability™ cloud.



Configure monitoring

After configuration in the ABB Ability™ cloud, the data is prepared and ready to be reviewed in the portal.



Using ABB Ability™ Condition Monitoring portal

Access the portal where all the service data is collected. Use a standard web browser to visualize the ESS data.

Using the cloud interface¹

Use the ABB Ability™ API (application programming interface) to access the Condition Monitoring data for your own monitoring system.



Receiving email alerts and expert reports

Email alert and reports¹

Receive instant email notifications.



Expert reports

Based on your chosen service, you can receive an expert report on the required information.

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