

ABB Ability™ Condition Monitoring for drives

Service description

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1 Scope of this service

This service description document sets forth the terms of the ABB Ability™ Service (Service), which includes ABB Ability™ Condition Monitoring for drives services (CMD), one valid subscription per asset and access to the ABB Ability™ Digital Powertrain web portal (Powertrain Portal).

Direct link to Powertrain Portal: <https://powertrain.abb.com/login>.

Data gathered by the Gateways from Customers assets is transferred to the Powertrain Portal, where it can be viewed remotely with an internet connection and a compatible web browser by users with valid authentication credentials. Registration is performed via the web portal.

Gateway is a device provided or otherwise made available or branded by ABB which generates or gathers data through embedded sensors or otherwise, where such data is accessed, stored, or processed by the Services.

Up-to-date documentation on the features and functionality of the products mentioned in this service description can be found at the following web address:

<https://new.abb.com/drives/services/advanced-services/condition-monitoring>.

2 Questions and queries

2.1 ABB Service Hotline

For questions and queries during the contract with ABB, please contact ABB support team:

support.powertrain@abb.com

3 Customer's obligations

If required for the specific service provided to the Customers, the Customers will be asked to provide the following, free of charge, to ABB and their sub-suppliers (where applicable) to enable performance of the Services:

- All necessary licenses and permits (except for permits required of ABB and/or its sub-suppliers in order to perform the Services, which are the responsibility of ABB and its sub-suppliers);
- Operating and maintenance manuals of the equipment together with updated copies of relevant process schematic diagrams, wiring diagrams, current cable schedules and the like;
- Access to operating and maintenance logs;
- Telephone, facsimile and internet connection facilities to enable communications at all times between ABB service personnel on site to/from head office and home base.

3.1 Exclusions

Any costs, time and risk arising out of or related to the maintenance, repair, restoration or re-starting of equipment attributable to any of the following causes is always excluded from the Services:

- Power outages or disruptions to the electrical supply to the equipment;
- Accumulation of dirt or ingress of foreign substances within the equipment;
- Corrosion of component parts;
- Upgrades, enhancements or modifications to the equipment or its use;
- Damage to software or hardware due to any IT security problem, such as but not limited to a virus breakout or malicious hacking of the system;
- Damage or failure of equipment caused by vermin, insect infestations or the like;
- Damage or failure resulting from faults in some other equipment connected to the Service;

- Damage or loss caused by hazards such as fire, flood, storm or the like or spillage or leakage of chemicals or harmful substances onto the equipment;
- Fault tracing caused by problems from a source external to the scope of work;
- Unprofessional or incorrect installation, installation not complying to standards, or installation not following the installation instructions contained in the product-specific manual;
- Improper operation (in breach of the technical requirements or specifications or manuals of the product), negligence or repairs carried out by the Customers (or any third party not authorized by ABB);
- Non-compliance with the applicable safety regulations or other legal standards by other parties than ABB;
- Insufficient ventilation of the equipment;
- Operation of the equipment outside of its design conditions; and
- Relocation of the equipment from the original installation location or alteration of the overall system design.

ABB is entitled to charge the Customers for any additional work, included, but not limited to work related to the exclusions mentioned above. In such circumstances, the price of labour will be in accordance with the current ABB Service rates valid at the time of performing such work. The price of any parts supplied will be in accordance with the current ABB list price for such parts plus the cost of freight, customs duties and the like valid at the time of delivery.

4 Activation, access, and usage

Usage of CMD and access to the operational data gathered by the Gateways are realized in four distinct phases:

1. Access rights to CMD data. The steps in this phase are listed below:
 - a. Purchase of subscriptions and the Gateways;
 - b. Creation of organizational structures, including definition of access rights for operational data gathered by the Gateways;
 - c. Inclusion of further users to any created organizational structures.
2. Registration of the drive, either by Customer or by somebody appointed by Customer;
3. Commissioning of each Gateway, which entails a trial phase, followed by a subscription period as defined in the order;
4. Data uploading.

The following sections indicate the roles and responsibilities between ABB and Customers regarding each of the four phases describe above, in the context of this Service Description.

4.1 Access rights to CMD data

Operational data gathered by each Gateway can only be accessed if the Gateway has been correctly commissioned; a valid subscription is acquired and if Customers have registered to use the Powertrain Portal.

Users who have registered will be given access by the ABB support team, in accordance with the contract signed with ABB.

4.2 Registration of the drive

In order to deliver the Services, the monitored drive has to be registered in the ABB installed base database. The registration can be done by the Customer, or by another party appointed by Customer and on behalf of the Customer.

4.3 Commissioning

The Gateways needed for the Service must be installed and commissioned correctly. In case the installation and commissioning are done by the users themselves, it must be done in accordance to the instructions that will be available at the following web address: <https://new.abb.com/drives/services/advanced-services/condition-monitoring>.

4.4 Data uploading

Operational data gathered by Gateways can be uploaded in the following ways:

1. With a Gateway, which automatically upload the data to the Powertrain Portal via the internet. This requires internet access or connection via mobile network.
2. User can collect the data package from the Gateway via an FPT-server or a memory card and upload it manually via the Powertrain Portal.

It is Customer responsibility to establish and maintain connection with appropriate connectivity.

5 Organization and user management

5.1 CMD user management

The user authorization for CMD is managed by ABB support team. Registered users who want access to certain data in the platform must send a written request to their ABB local representative, who will verify whether or not the user request can be approved as per the agreement signed with ABB.

5.2 User account creation

New users must register in the Powertrain Portal (link from the login page). This is a pre-requisite before the users can be given access to any data in CMD.

6 Cloud Interface for ABB Ability™ Condition Monitoring for drives

The Cloud Interface for CMD (Cloud Interface) allows external integration with CMD.

Through the Cloud Interface, the Customers have access to the data acquired by CMD from their equipment without having to access the Powertrain Portal through an internet browser.

This feature is using Web APIs (Application Programming Interfaces), which enable a secure and controlled remote access from the outside to the data in the ABB Ability™ Cloud.

In order to use the Cloud Interface users first need to request an API key from the ABB support team at support.powertrain@abb.com.

6.1 Customers responsibilities for Cloud Interface

Customers are responsible for the integration of the API Cloud Interface into their own systems such as, but not limited to, defined integration scope and validation and data visualization in MES or ERP systems. The ABB support team does not provide any support for the development of the Customer's API implementation.

To start creating the Cloud Interface integration project, Customers should follow the steps described in the Cloud Interface user guide:

<https://new.abb.com/drives/services/advanced-services/condition-monitoring/abb-ability-cloud-interface-for-drives>

or contact the ABB support team: support.powertrain@abb.com.

7 ABB Ability™ Condition Monitoring for drives reports

ABB may provide reports or access to data and reports as part of the ABB Ability™ Condition Monitoring for drives services. Reports are based on the data gathered by the Gateways. ABB offers several reports which help Customer to get a better understanding and use of the data.

All reports are based on the data gathered by the Gateways and provided to ABB. Such data is subject to tolerances and may not fully accurately reflect the status of the assets. Accordingly, the reports may not fully accurately describe the status of the equipment and the actual operational performance may differ from reports and the outcome of data analysis. The reports shall be used as a means of guidance, and any decision based on the information provided in a report is taken at Customer's own risk.

7.1 Instant Reports

Instant Reports are automatically generated from the data gathered by the Gateways.

Instant Reports may be available for an individual asset (Instant Asset Report) or for an entire fleet of assets (Instant Fleet Report). The Instant Asset Report and Instant Fleet Reports can be downloaded from the Powertrain Portal by eligible users.

Some types of Instant reports may not be part of the standard ABB Ability™ Condition Monitoring for drives services subscription and have to be ordered by Customers as an add-on service from a local ABB representative or from ABB Ability Marketplace™.

7.2 Expert Reports

ABB may offer Expert Reports to Customers who wish to gain a deeper understanding of their equipment's health and performance. The Experts Reports are based on data gathered by the Gateways. ABB experts will analyze the extracted data and summarize the findings in easy to read reports. Expert Reports may be available for an individual asset (Expert Asset Report) or for an entire fleet of assets (Expert Fleet Report).

Expert Asset Report and Expert Fleet Report are not part of the standard ABB Ability™ Condition Monitoring for drives services subscription and can be ordered as an add-on service from a local ABB representative.

8 Available Add-On services

CMD offers certain add-on services according to the price list.

8.1 Offline Data Collection service

The ABB Ability™ Condition Monitoring for drives offers Offline Data Collection service option, which helps users to benefit from the Services without the need for a continuous internet connection. The option allows users to collect data from the data collector on site and bulk upload them in the cloud manually. It gives users the possibility to backup data ad hoc or at regular intervals, whichever suits the customer's needs best.

Offline Data Collection service is not part of the standard ABB Ability™ Condition Monitoring for drives subscription and can be ordered as an add-on service from a local ABB representative or ABB Ability Marketplace™.

8.2 Condition-Based Maintenance service

The ABB Ability™ Condition Monitoring for drives service offers a Condition-Based Maintenance service option. This option allows users to see the lifetime condition of the main components in drives such as fans, semiconductors and capacitors. The service option is enabled by cloud-based algorithms which estimate the remaining lifetime of the components. This estimate is based on the stress information of the components. The estimation utilizes a statistical model based on L10 probability supplied by component manufacturers. L10 means that with the particular stress measured, 10% (ten percent) of the components are likely to fail before the indicated time.

Condition-Based Maintenance service is not part of the standard ABB Ability™ Condition Monitoring for drives services subscription and can be ordered as an add-on service from a local ABB representative or ABB Ability Marketplace™.

8.3 ABB Plug & Play Connectivity service

The ABB Ability™ Condition Monitoring for drives may offer the add-on ABB Plug & Play Connectivity service. Customer shall verify with ABB local representative whether or not the ABB Plug & Play Connectivity service is available.

With ABB Plug & Play Connectivity service ABB monitors the cellular connection of the Customer with dedicated Access Point Name (APN) which would transfer the data from the Gateways to CMD application with additional security. When there is a problem in the connectivity, ABB helps Customers to resolve such problem.

The SIM cards used for the ABB Plug & Play Connectivity service can be either pre-integrated ready to use or ordered as connectivity kit for the Gateway. The general annual connectivity package data plan supports different annual data usage per Gateway, depending on, but not limited to, the Gateway, the drive and the application. For more information, Customer shall contact local ABB representative.

ABB Plug & Play Connectivity services is not part of the standard ABB Ability™ Condition Monitoring for drives subscription and can be ordered as an add-on service from a local ABB representative.

9 Further obligations

Up-to-date technical specifications for the hardware, service descriptions and usage, as well as all necessary regulatory and safety certifications and disclaimers pertaining to this agreement are available on the following webpage:

<https://new.abb.com/drives/services/advanced-services/condition-monitoring>.