ABB Ability™ Condition Monitoring for drives
Keeping you one step ahead of process upsets

Condition Monitoring gives you fact-based insight into your drives, via KPIs and signal data, to keep your processes moving smoothly.

Remote monitoring of your drives lets you identify irregularities before they become problems. This helps you make proactive decisions, built on real-time information – and saves you money!

Step into the digital era with us
Would you like to have peace of mind, knowing that everything is working as it should? Would you like to be able to monitor the performance of all your drives whenever and wherever, even remotely?

Collecting and obtaining information from drives, and then analyzing it with digital algorithms, gives you valuable insight into your industrial equipment. This can raise your operating efficiency to higher levels than ever before.

ABB Ability™ Condition Monitoring for drives consists of a suite of services designed to provide key information about drive events and changes in behavior – ensuring your equipment is always available, reliable and well maintained.

Our standard package gives you industry leading monitoring capabilities to fit your needs – whether you want to view the drive status through ABB's internet portal or integrate this data with your existing monitoring systems.

Optional services include digitally enabled remote assistance by ABB technical support, advanced analytics and reporting, and a range of other features to make your maintenance operations more effective.

Solid fact-based decision making
Get the facts, and the history, to help run your operations better and more safely.

Always stay one step ahead of problems
Recognize early signs of possible failures and assess the risks, before they turn into serious operational issues.

Find the root cause of process issues
Remotely access data from ABB drives built-in sensors to track the cause of problems. Get back to smooth operation quickly with data back-ups.

Remotely analyze and optimize drives
Get critical drive information anywhere anytime – even in difficult to access sites, or when a site visit is impossible.

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Tailor your drive monitoring to perfectly fit your needs

Get these benefits from the standard package of ABB Ability™ Condition Monitoring for drives

- **Condition Monitoring** – Continuously monitor your drive performance remotely through ABB portal, without need for on-site presence, or through your own monitoring system using data transfer via **Cloud Interface**

- **Alarm Management** – Create flexible alerts and warning notifications, and have them sent to the right people for rapid action

- **Asset Health** – Generate professional maintenance reports, tailored to your needs, about the state of your drives

- **Team Support** – Wherever you are, you can access and analyze drive signal data and information, and then provide valuable support to your team

- **Backup Management** – Back up and safely protect your drive parameters

And select from these options, based on your situation

+ **Powertrain Monitoring** – Combine Condition Monitoring for drives with our Smart Sensors for motors and bearings, to monitor your complete powertrain

+ **Condition-Based Maintenance** – Assess the risk profiles of your drives to do efficient, proactive maintenance, based on condition rather than routines

+ **Offline Data Collection** – Upload and analyze data from your drives without using on-line connectivity to the internet

+ **Expert Reports** – Get our drive professionals to review your data and advise on maintenance planning, with our ABB Expert Report service option

+ **Remote Assistance** – Connect to ABB's helpdesk, to get expert support and problem solving, with full visibility of your drives online
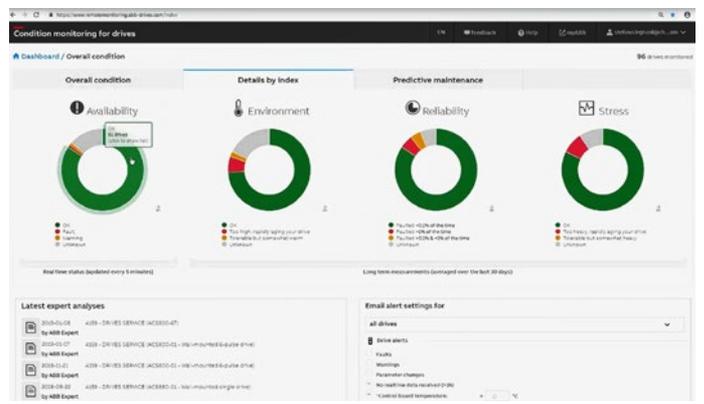
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01 Make decisions based on accurate, real-time information

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02 Access KPIs and signal data history to spot changes and anomalies in drives behavior over time

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03 Monitor your drives condition from anywhere at anytime and identify potential problems before they occur

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Options, features and benefits to keep your operations running smoothly

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ABB Ability™ Condition Monitoring for drives

Standard package includes	Main features	Benefits
Condition Monitoring *) ●	ABB portal • Track drive drive condition KPIs: availability, ambient environment, reliability and stress • View signal graphs for: speed, torque, current, power, temperature and energy consumption	• Monitor drive performance, without the need to send someone to the site • Access signal data history to spot changes and anomalies in drive behavior over time • Overlay data to spot cause-and-effect correlations between different parameters and measurements
	Cloud Interface • Programmable interface that allows you to transfer the Condition Monitoring data from the ABB Ability™ cloud to your own monitoring systems • Sample application kit (SDK) included, upon request	• Enable connectivity from ABB cloud to your cloud or internet enabled local applications, facilitating the integration in your monitoring systems
Alarm Management ●	• Configurable alert settings by signal threshold • Configurable alert delivery to defined addresses • Choose which alarms you want email alerts sent for	• Get immediate information when condition signals exceed the set limits • Launch your maintenance and repair actions without delays

Asset Health ●	• Configurable drive condition Word format reports and fleet comparisons	• Generate professional Word format reports to support:
		  - Your daily maintenance and repair activities
		  - Yearly maintenance planning and strategic decisions
		• Get background material to help support your investment decisions and planning

Team Support *) ●	• Remotely view drive signal data loggers, history loggers, error incidents • Add comments, notes and support logs • Support your team from a distance, to raise their skill levels	• Access history logs to all information and data collected from the drive, for expert level analysis and fault tracing • Write and view comment logs to keep notes about drive performance, to support given and successful solutions
Backup Management **) ●	• Alerts in case of parameter changes • Parameter back-up features that facilitate drive recovery • Parameter recovery features	• Minimize downtime when you have a drive exchange or breakage • Protect against misuse and accidental parameter changes • Eliminate the need for time-consuming fault tracing procedures

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ABB Ability™ Condition Monitoring for drives

Additional options	Main features	Benefits
Powertrain Monitoring ●	• This free option lets you combine key information from Condition Monitoring for drives with Smart Sensors for motors and mounted bearings, to get the complete ABB Ability™ Powertrain Monitoring • View aggregated KPI graphs and analytics for the complete powertrain	• Get aggregated information from a variety of sensors and drives, and gain visibility over the condition of your whole powertrain
Condition-Based Maintenance ***) ●	• Measures operational and environmental stress, to estimate the condition and lifetime of key electric components • Ageing status view indicator and clear maintenance timing suggestions • Measures condition of DC link capacitors, IGBT and fans	• Establish maintenance plan based on actual drive usage and conditions • Take proactive maintenance actions before failures occur • Optimize maintenance costs and scheduling • Identify problems in drive usage or changes in operational behavior
Offline Data Collection ●	• Manual bulk data upload to ABB Ability™ cloud services	• Move data from devices to cloud, without using online connectivity to the Internet, when strict cyber security criteria are required
Expert Reports ●	• ABB generated reports, with comments and recommendations from a Drive Expert, including notes based on the drive signal data	• Get expert information for maintenance and repair planning activities • Get professional advice for investment decisions and planning • Receive advice and consultation regarding drive use issues – which may be identified through the signal data
Remote Assistance ●	• Local ABB technical support, connected to drive signal data and condition information	• Solve your problems quickly – ABB experts can see your drive signal information, analyse it and provide advice for faster resolution • Obtain outsourced assistance to save on the need for highly skilled and costly resources on your own team and payroll

● Self-service, relying entirely on computer analyzed information and automated processes

● Assisted service, involving ABB experts to analyze information and provide assistance

*) Available also without cloud connection with ABB Ability™ Condition Monitoring for drives – On-Premises service. The service includes Team Support and access to parameter backup through the user interface. For more information, please contact your local ABB representative.

**) Available in your own monitoring system via Cloud Interface.

***) Please check Cloud Interface availability with your local ABB representative.

The connectivity devices that enable remote viewing and monitoring

NETA-21

NETA-21 connects the drive to the cloud via the Internet or local Ethernet network.

• The module comes with a built-in web server and requires no Flash/Java plugins

• In the absence of a customer local area network, it can be connected via a mobile network router (either Ethernet or USB network adapter)

• One module can be connected to several drives at the same time

RMDE reliability monitoring device

The RMDE reliability monitoring device facilitates the installation of the connectivity device (NETA-21) on drives that are already installed.

• The RMDE device can contain two or four NETA modules and can connect up to 18 or even 36 drives

• The cabinet consists of the NETA-21 connectivity devices, a modem and environmental sensors that enable the collection of measured ambient temperature and humidity values

• The cabinet includes a compact IP54 enclosure, making it suitable even for harsh environments

Service delivery process

On-site drive mapping and service scope planning
You and your local ABB experts will review the installed base on-site and decide what drives to include in the Condition Monitoring service. Your service scope will be customized to meet your precise needs.

Connection installation and activation
An ABB service engineer installs and activates the connection. You will be contacted to confirm the installation and activation date.

Start monitoring
Monitoring is ready for use. Data collection starts remotely at the portal or at your premises.

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Cloud

Using the Cloud Interface
You get access to all the Condition Monitoring data to be used in your own monitoring system.

Using ABB Ability™ Condition Monitoring portal
You get access to the portal where all the service data is collected.

Accessing live data
Now you can monitor drive performance data including availability, condition, operating parameters and fault events.

Accessing visual data
Create customized performance reports with visually clear performance charts and graphs.

Receiving email alerts and expert reports

Email alerts
You will receive immediate email notification of any drive fault, or limited availability status.

Expert reports
Based on your chosen service scope, you can get an expert annual analysis report on the drive's condition based on monitoring data. This report also includes an ABB specialist's maintenance recommendations.

Making the best decisions
Make proactive decisions – built on real-time information on drive events.

Optional service activities

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On-premises

Using desktop application
You get access to the collected service data.