ABB Remote Service for Medium Voltage Drives DriveMonitor™

Remote service for MV Drives combines remote services with the DriveMonitor™ diagnostic solution. This offering performs data acquisition and analysis of historic and real time information and allows ABB drives experts to collaborate with site engineers to achieve optimal availability and improved performance.

DriveMonitor hardware and optional touch screen display

DriveMonitor enables the retrieval of available drive data to identify root cause of operational issues. ABB experts, using DriveMonitor special purpose monitors and engineering and maintenance tools, can quickly diagnose and correct the source of drive disturbances and restore performance.

Remote Service with DriveMonitor has three components: remote connectivity, a diagnostic solution and 24x7 technical telephone support.

Levels of Support:

The following remote support options are offered with DriveMonitor:

– **Remote Troubleshooting** The on-demand remote, 24x7 technical support avails ABB specialists to respond to issues as they arise. Corrective action is identified and site personnel are guided through the corrective implementation.
– **Remote Periodic Maintenance** Scheduled quarterly analysis of archived data against established performance benchmarks identify potential performance improvement opportunities. Some corrective actions can be implemented utilizing the remote session. Associated reports are provided to summarize intervention and recommendations.
– **Remote Continuous Monitoring** Valuable 24/7 monitoring allows the detection of equipment issues before they affect the process. Real-time condition monitoring triggers messaging to ABB drive performance monitoring centers for automated response.

DriveMonitor

The diagnostic intelligent system, DriveMonitor, consists of a hardware module inside the drive, as well as a software layer that collects and analyzes selected drive signals and parameters automatically. In its basic functionality DriveMonitor "watches" the converter of a drive system.

It continuously monitors status and responds when changes occur. Analysis of error logs enables detection of drive mechanical or electrical problems, which can be managed and corrected.

Potential trigger events include unexpected drive stoppages, alarms (signals crossing threshold values) and user parameter changes. DriveMonitor also generates application-specific alarms and measurements. This data is extremely useful in determining the root cause of an event. The software also helps identify drive setup and running issues that lead to poor product quality.

With extra diagnostic packages, DriveMonitor can also monitor other drive system components such as the main circuit breaker, transformer and the driven machine. At the highest level, special packages related to the application including rolling mills, water pumps, and compressors, can be integrated into the system. This expansion can be done as required.

Features
– Scalable and flexible
– Strict security procedures
– Complex data encryption
– Data logging and event driven data capture
– Automated diagnostic tools
– Optional Touch Screen

Benefits
– ABB expert assistance
– Reduced maintenance cost
– Reduced MTTR (Mean Time To Repair)
– Improved drive access through user interface
– Aggregate long-term statistics

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Availability
Drive types: LCI, ACS1000, ACS5000, ACS6000, ACS6000c

Functions
Triggering
– Programmable event-driven analyses
– Initiate time-based predefined diagnostic actions such as data collection, processing and reporting

Fault treatment
Register fault history by:
– saving the content of data loggers
– executing preventive monitoring of predefined signals and parameters after the drive restart

Monitoring
– Continuously monitor pre-selected signals and parameters
– Calculate performance indicators and alarms according to customized rules
– Aggregation and use of other signals from external OPC sources to enhance the diagnostic capability.

Reporting
– Provide comprehensive customized status report on pre-defined time schedule

Security
– All actions using remote access are only done with the explicit agreement of the customer.
– Strict security procedures are followed and complex data encryption is used.
– Operation of the drive from the remote computer is not permitted (read-only access).
– DriveMonitor hardware is based on an industrial PC platform designed for a long lifetime and remote accessibility.
– To ensure a high security level the safest VPN solutions are used for remote access.

ABB Remote Services for Medium Voltage Drives
Considerations for DriveMonitor Solution

1. DriveMonitor allows interface with multiple MV Drives.
   Quantity/type of MV Drives on site:
   Quantity: _____ Model/s: _____

2. DriveMonitor is a computer hardware and software solution that requires a local power source, network connectivity, fiber optic interface to the MV Drives, and space for a keyboard, mouse and monitor.
   Is there a location at the site that will accommodate this solution?
   ☐ Yes   ☐ No

3. DriveMonitor has a high-speed fiber optic interface to the drive.
   Can fiber runs be installed to connect the MV Drives to the Drive Monitor solution?
   ☐ Yes   ☐ No

4. DriveMonitor is supported through remote service and support.
   Can the DriveMonitor computer be connected to the plant network in a way that it can be accessed remotely?
   ☐ Yes   ☐ No

   Is remote access technology available at site, or will ABB be providing remote access technology?
   ☐ Yes   ☐ No, ABB will provide
   (Consult the Remote Access Survey for more details)

5. DriveMonitor includes a preconfigured computer name and software solution that is dependent on the pre-installed Windows Account Username and Password.
   Does the site require any special nomenclature for the Computer Name or special password scheme?
   ☐ Yes   ☐ No

DriveMonitor

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