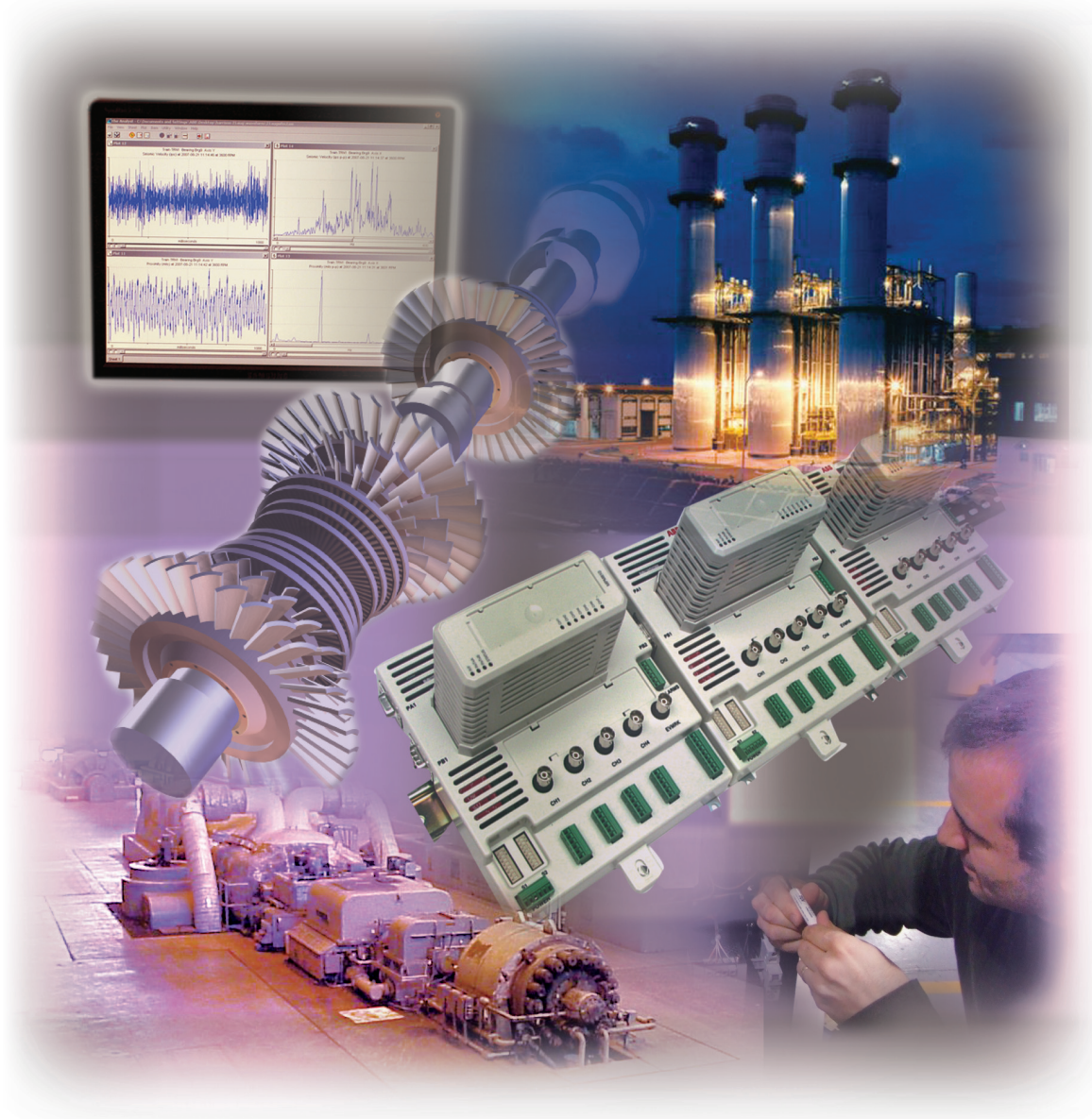


Machinery Condition Monitoring MCM800

Provides a Complete Set of Assessment Functionality
Designed to Address the Needs of Your Rotating Machinery



ABB

Machinery Condition Monitoring (MCM800)



ABB continues to draw on the benefits of a global R&D organization dedicated to developing best-in-class products. Our aim is to support all of our business segments with fresh, innovative product and technology portfolios, backed by our proven track record for success.

ABB's family of condition monitoring products leverages vibration engineering expertise developed in collaboration with DLI and their 35 years as a technology leader in the industry. As the technology continues to mature, new products emerge which extend its accuracy and your productivity. Our products and systems are created with one thing in mind: Engineering Excellence. ABB has just taken another "leap" with the introduction of our newest module. ABB's MCM800 solidly integrates with System 800xA, OPC compliant systems, and other controllers. In addition, the MCM800 can run as a stand-alone configuration. No longer must your plant utilize disparate analysis products. The MCM800 module's "all-in-one" design allows you to deliver power on time and to improve efficiency, which helps you to maximize company profits. With your new MCM800 Module report, your operators will immediately be aware of faults, long before Alarm Levels become critical.

The power generation industry is dependent upon reliable and predictable operation of rotating machinery for timely production of electricity to support its customer base. To reach this objective, nearly every plant monitors the main turbine generator (some also monitor the boiler feed pumps) with a continuous on-line protection system. In addition, there is a supporting cast of critical machines that, if they fail, can have a major impact on the plant's ability to produce power.

To meet the need for improved reliability, ABB offers solutions for condition assessment of rotating machinery. Analyst is user-driven graphical analysis software that creates specialized plots for assessing the condition of rotating machinery. MCM Expert is an automated diagnostic system that assesses the condition of rotating machinery, and recommends user actions.

All of ABB's condition monitoring modules have been developed to suit the power industry's needs and have been installed at numerous sites. They continuously monitor and protect rotating machinery by measuring relative, seismic and absolute vibration, along with specialized Turbine Supervisory measurements such as eccentricity, thrust, case expansion and differential expansion.

Machine Condition Monitoring (MCM800)

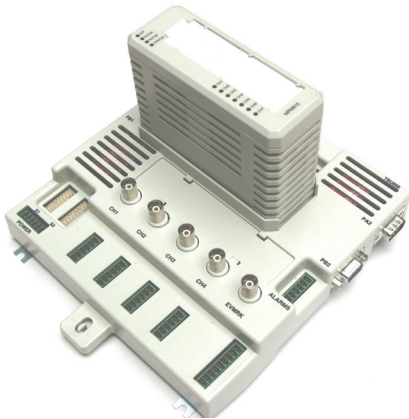
MCM800

Breakthrough in Condition Monitoring Technology

The MCM800 Condition Monitoring Module adds Condition Monitoring capability to System 800xA, OPC compliant systems, or other controllers. MCM800 provides a complete set of functions designed to address the needs of your rotating machinery.

- Vibration
- Eccentricity
- Thrust (Rotor) Position
- Differential (Relative) Expansion
- Case (Absolute) Expansion

ABB's new MCM800 allows for the implementation of all common monitoring and protection schemes.



Flexibility

Interfaces with Many Different Applications

- The MCM800 integrates into a DCS system or operates as a stand-alone system
- The module may be installed in a centralized or remote location
- The configuration is done through Profibus or Ethernet interfaces with provided tools

Scaleability

Interfaces with Any Size System

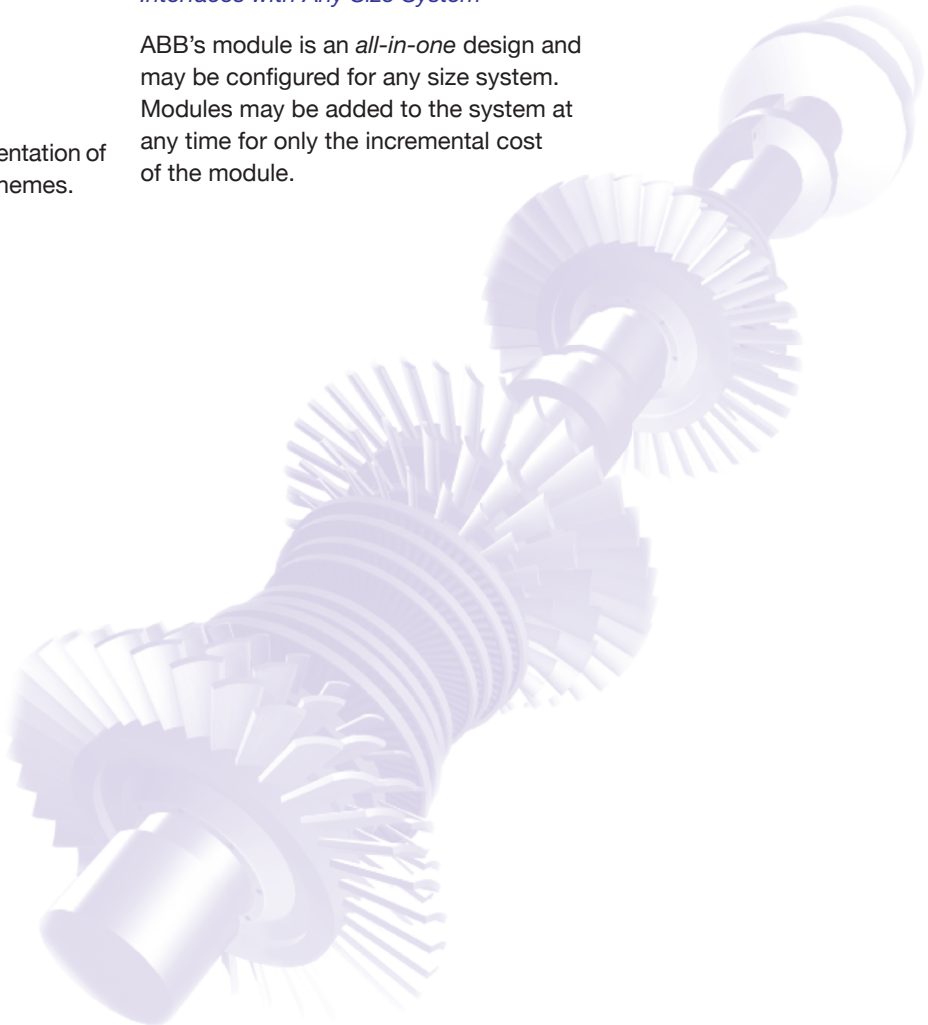
ABB's module is an *all-in-one* design and may be configured for any size system. Modules may be added to the system at any time for only the incremental cost of the module.

Universal Module

Cost Effective - Module Does it All

- Optimizes plant operation
- Provides on-line monitoring for critical equipment
- Reduces initial investment costs
- Provides continuous monitoring and protection
- Eliminates the need for separate communication hardware
- Simplifies the hardware learning curve
- Reduces hardware by combining functions
- Reduces the need for spare parts

ABB's new MCM800 protects your assets and ensures the safety of your personnel.





Open, High-Speed Communication

Fast, Standard, Reliable

ABB's MCM800 module includes redundant Profibus and Ethernet interfaces using TCP/IP protocol and Modbus.

Complete High-Level Machine Diagnostic Capability

More Than Just Monitoring and Protection

MCM800 provides automated reports to notify personnel of common faults

Unbalance • Coupling Misalignment • Radial Bearing Wear • Shaft Defects

ABB's MCM800 allows you to gather data valuable data from your system to ensure plant safety.

Information for condition assessment has two forms, waveform files and values. Waveform files are stored on a data server in a database and values are stored in a Historian. The Historian can be ABB's Power Generation Information Manager (PGIM) or an independent data archival system. If the plant doesn't have an existing, compatible Historian, the data server will be provided with a small Historian to store values for machinery assessment, along with some process variables. In addition, extensive machinery diagnostic tools are available and may be added at any time.

Analyst™ is a graphical analysis software that provides specialized plots for assessing the condition of rotating machinery. This product presents historical vibration data and selected unit parameters graphically to the vibration expert, so that significant patterns and trends can be quickly recognized. Analyst uses various plot types to help the human expert spot problems in the system.

MCM Expert is an automated diagnostic system that assesses the condition of rotating machinery. MCM Expert is installed on a data server that has the capacity to handle 2 to 4 main steam turbines, depending on the number of installed sensors, and a large number of Balance of Plant machines. MCM Expert can accept data from ABB's MCM800 module, from portable data collectors and from remote data acquisition equipment. MCM Expert results are viewed on the MCM Expert client, which is able to retrieve data from any MCM Expert server located anywhere on the network.

MCM800 provides waveform data and plots available using Analyst™

Waterfall Plots • Orbits • Shaft Centerline Plots • Bode Plots • X vs. Y
Polar • Spectrum • Cascade

Machine Condition Monitoring (MCM800)

Why Condition Monitoring?

Avoid costly, unplanned outages - know the condition of your equipment

- Continuous monitoring
- Protects Expensive Equipment
- Predictive Maintenance
- Maximizes Production
- Reduces Downtime
- Asset Management

Types of Machinery

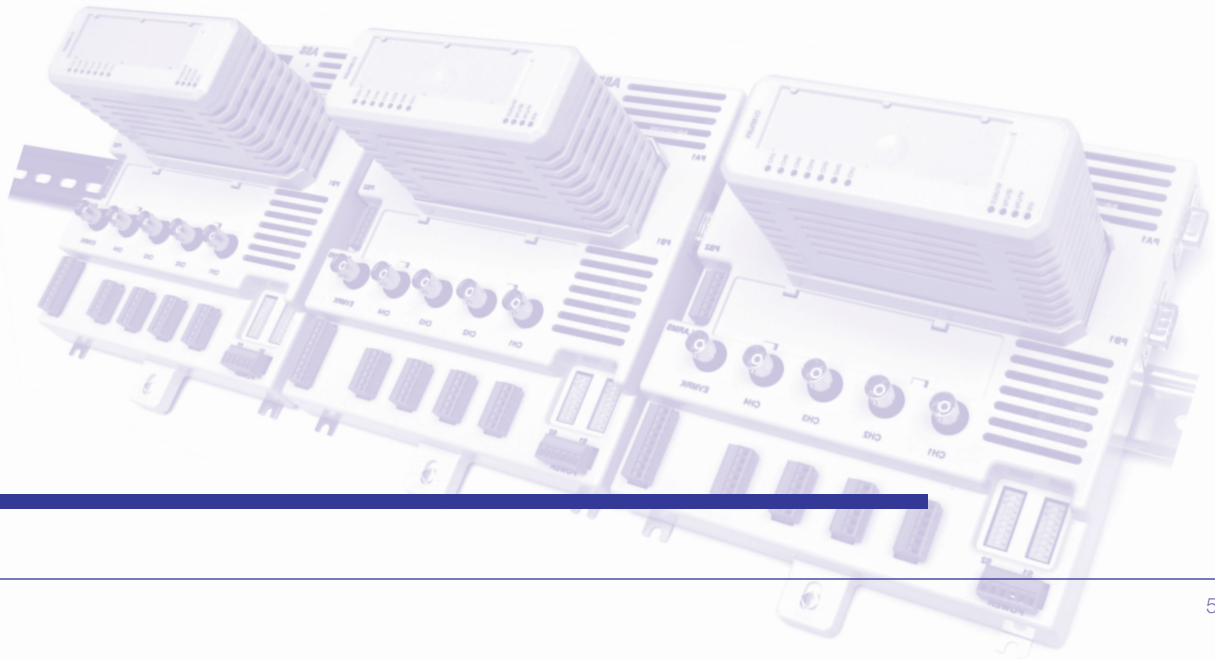
- Turbines
- Feedpumps
- Fans
- Pumps
- Motors
- Gearboxes
- Compressors

Why ABB's Engineering Excellence?

- Industry Experts
- Total Solution Company
- Worldwide Installations
- Reliable Service
- Technology Innovator
- Experienced People
- Extensive Knowledge Base

Industries

- Power Generation
- Oil & Gas
- Pulp & Paper
- Water



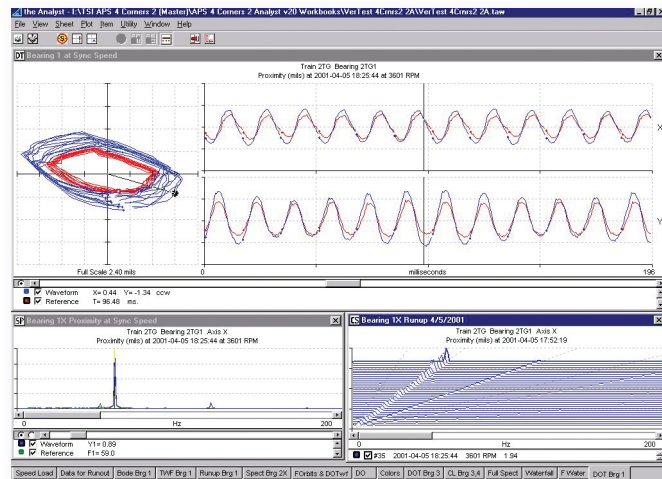
Machinery Condition Monitoring (MCM800)



ABB is a world-class supplier of plant automation products, providing the most advanced monitoring systems available today.

ABB's integrated solution, MCM800, adds Condition Monitoring to the System 800xA platform to enhance the ABB offering. MCM800 enables plant operators and managers to make the right decision, at the right time, to achieve highly cost-efficient operations.

Our many achievements and milestones have set the standard for others to follow. We are committed to helping you to succeed with solutions **"Made in ABB"**



Machine Condition Monitoring (MCM800)



*ABB Products and Systems are created with one thing in mind: **Engineering Excellence.***



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