MNS® Digital Motor Control Center
M10x motor control and protection

ABB’s MNS platform for low-voltage switchgear and motor control center has been evolving over the years. Since its inception and the launch of the first digital MCC over 30 years ago, the MNS design has focused on the fundamental principles of safety, reliability, modularity and scalability.

Offering
- Flexible MCC design using withdrawable, plug-in and fixed motor starter technologies makes it the right match to all motor control center applications
- Single front, back-to-back or duplex switchgear arrangement
- Smart motor control and protection device M10x covering motor starter and feeder solutions

M10x benefits
- Coverage of full load ranges from 0.24A to 63A, up to 6300A with secondary current transformer
- State of the art motor protection and control
- Motor and motor starter condition monitoring
- Temperature measurement and load monitoring
- Integrated into ABB Ability™ Condition Monitoring CMES on-premise
- Alternative direct communication flexibility with Profinet, Modbus RTU and TCP
- Local operator panel option

M10x-y product variants
- 1 — basic function (M101)
- 2 — advanced function (M102)
- M — Modbus RTU (M10x-M)
- P — Profinet (M10x-P)
- TCP — Modbus TCP (M10x-TCP)

ABB Ability™ CMES
MNS low-voltage motor control center with M10x is the solid foundation of the ABB Ability™ Condition Monitoring for electrical systems (CMES), to continuously monitor and assess the condition of the MCC and connected motors.
**Customize**
- Scalable, modular and flexible platform
  - Modular: Use of fixed, plug-in or withdrawable technology depending on your needs
  - Easily exchange and upgrade of the components and devices
  - Add new features to an existing installation with minimal effort
  - Flexible, configurable MNS platform
- Easy to connect
  - Connection to DCS, SCADA and ABB Ability platform, non-intrusive to each other

**Analyze**
- Data provided by M10x can be made available throughout lifetime in CMES
  - Data monitoring from commissioning throughout lifetime
  - Analysis improves over time with more details collected
- Availability of system and data
  - Availability of critical process data
  - Access your data even in the case of device failures

**Optimize**
- Efficient maintenance
  - Shift from planned to condition-based maintenance
  - Reduce reactive maintenance costs
  - Plan ahead with condition reports
- Energy management
  - Better energy management
  - Full transparency to prioritize investment and optimization steps
  - Optimize operating costs and achieve savings of up to 30%
- Continuous operation
  - Avoid unplanned outages conduct maintenance where and when necessary

**Economize**
- Lifecycle and performance management
  - Easy replacement
  - Upgrading equipment costs 30% less
- Reduced infrastructure investment
  - Ethernet infrastructure
  - PLC free design, reducing infrastructure investment by up to 20%

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Note: the graphic above shows logical connection only, actual network configuration based on selected protocol may differ.