



Intelligent E9000* Low-Voltage Motor Control Center Fact Sheet

GE's Intelligent Low-voltage Motor Control Center (MCC) is an extension of GE's Evolution E9000* MCC product which utilizes network devices to communicate the status of the system, to enable control of the system devices, or to facilitate advanced diagnostics.

A motor control center is responsible for controlling multiple motor loads throughout your facility. With GE's intelligent MCC offering, you can remotely monitor and control your system, helping to increase productivity and personnel safety.

Features & Benefits

- Remote operation—stay outside of arc flash zone
- Easy integration for control with your process system
- Help increase productivity and process efficiency
- Easy integration with your process system for control

Standard GE Network Devices

- Overload Relay with basic communications
- GE Multilin Advanced Smart Overload: MM200
- GE Multilin Premium Smart Overload: MM300
- AF-6 Series Variable Frequency Drives
- ASTAT-BP and ASTAT-XT Soft Starters
- GE Multilin Main Metering: PQMII and EPM Series
- GE Intelligent Platforms Programmable Logic Controller (PLC): VersaMax* and Series 90*-30
- GE Intelligent Platforms Programmable Automation Controllers (PAC): RXi and RX3i
- Molded Case Circuit Breakers with *micro*EntelliGuard* Trip Unit
- Power Break* II and HPC Next Generation with EntelliGuard* Trip Unit
- GE Multilin Motor Protection Relays



Communication Protocols Available

- ModBus RTU
- Profibus DP
- DeviceNet
- Modbus TCP/IP
- Ethernet IP

Solutions to Meet Your Needs

GE offers multi-level solutions to help meet the needs of your motor control center application. GE's Intelligent E9000 MCC configurations can provide local monitoring at or near the equipment, remote control of the network devices, dual protocol solutions, and complete system integration with existing equipment.

The following examples demonstrate some of the different intelligent MCC configurations GE can provide. For more details on how GE can help with your specific equipment, please contact your GE account manager.

Monitoring

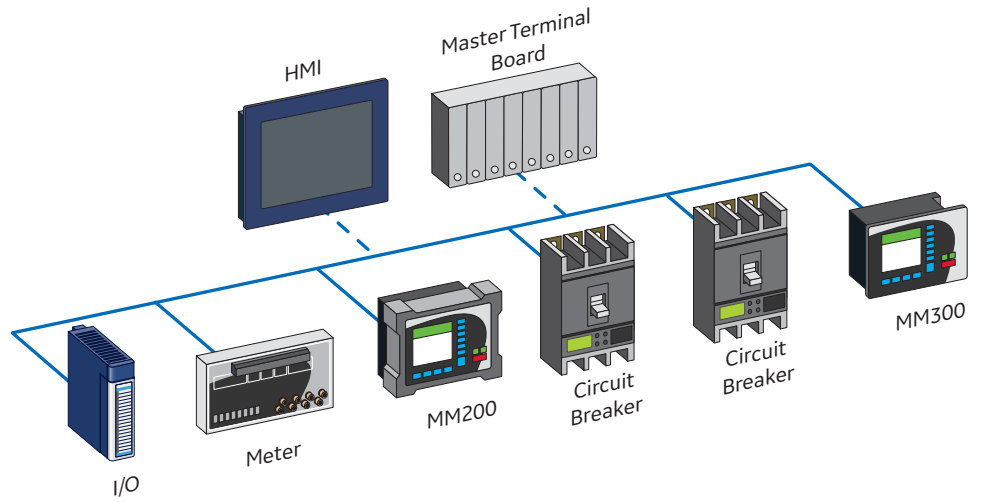
GE's solutions can provide monitoring capabilities at the equipment, near the equipment, or remotely using a Human Machine Interface (HMI) such as GE's QuickPanel+ or RXi panels.



QuickPanel+

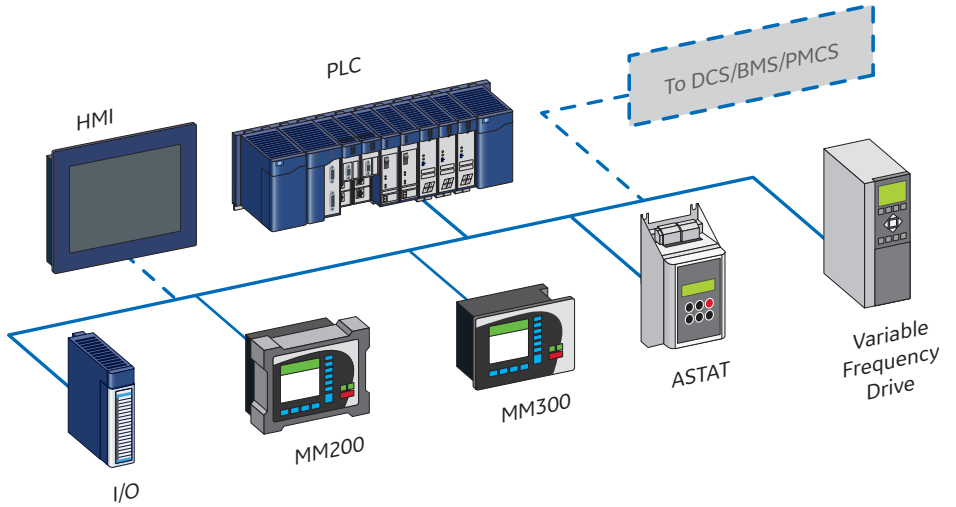


RXi Panel



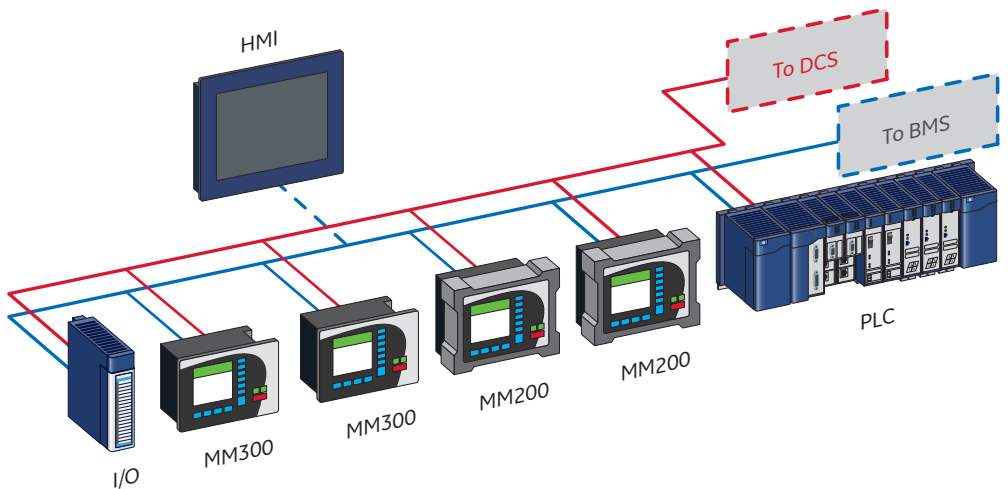
Monitoring & Control

GE's offering helps you monitor and control your system using an HMI panel and your building's management system software such as GE's envisage® package.



Dual Communication Bus

GE's dual communication bus offering helps enable you to interface easily with multiple communication systems. This capability helps you maximize system performance.



--- Optional

envisage* Energy Management Software (EMS)

envisage Energy Management System opens up a virtual window to analyze and control your facility's real-time energy usage – onsite, through a web browser or mobile device.

This fully integrated system provides an accurate and easy-to-understand graphical representation of the facility to help you make informed, timely decisions.

- The **envisage Monitoring** module displays real-time power and demand data from intelligent devices as well as facility-wide infrastructure systems.
- The **envisage Control & Automation** module executes energy management strategies by automating load shedding schemes to minimize energy charges.
- The **envisage Power Analytics** module remotely captures disturbances on the electrical network, such as total harmonic distortion, individual harmonic distortion, and sub-cycle transients.
- The **envisage Energy Tracker** module determines where power is consumed and generates reports.
- **envisage can communicate with a wide number of GE and non-GE devices**, including meters, trip units, generators, transformers, drives, and switches, as well networked systems such as HVAC and security.



Supplemental Service Offerings



Power System Studies (see Factsheet GEA-14148)

A well-designed power system is the backbone of all industrial and utility facilities. A GE power system study provides you with the information necessary to upgrade and maintain your power delivery infrastructure.

System Studies Offered:

- Short Circuit Study
- Load Flow and Power Factor Study
- Arc-Flash Hazard Analysis
- Protective Device Coordination Study
- Harmonic Analysis
- Conceptual Design Study
- Motor Starting Study
- Impact Load Study
- Power System Automation Study
- Diagnostic Study



Startup and Commissioning (see Factsheet GEA-14151)

Proper startup and commissioning of power distribution and control equipment is vital to the long-term health of an electrical system. GE's Startup and Commissioning Services provide the people and knowledge to help complete the job right and on schedule.

Startup and Commissioning Services include a series of checks and tests performed on new equipment to support proper installation and functionality. Optional services can include verifying interaction with auxiliary systems prior to energization.

MCC-Specific Offerings:

- Checking wiring
- Inputting protection settings
- Powering up
- Ensure system runs properly
- Comprehensive, accurate testing, analysis and troubleshooting via innovative test equipment



Comprehensive Project Management (see Factsheet GEA-14952)

GE's Power Delivery team has the resources, capabilities, and experience to provide complete power delivery systems for both upgrades and new infrastructure installations.

Offerings:

- Power Quality
- Infrastructure Upgrades
- Field Engineering and Repair Services
- Contractual Service Agreements

Customer Retrofit Services for Intelligent MCC

GE offers custom retrofit services to upgrade your existing MCC with services including:

- LM10 relay conversions using Multilin MM200 and MM300 relays
- MS2000 I/O conversion using Intelligent Platforms VersaMax, RSTi, or Genius* I/O
- Add communications to a standard MCC

All retrofit solutions must be factory quoted and include customer-provided original drawings, documents, and equipment nameplate information.



For more information, please visit
www.geindustrial.com/services/power-delivery
OR call us at 1-888-GE4-SERV (1-888-434-7378).