IntelliCENTER® Technology with EtherNet/IP

Networked CENTERLINE® Motor Control Centers Deliver Real Time Information
To remain competitive in today’s demanding business landscape, you need all parts of your operation working together at maximum efficiency – including your motor controls. CENTERLINE motor control centers provide a flexible solution not only for centralized motor control but when connected to your network, delivers real time information to keep your operations running.

**SMART MOTOR CONTROL**

The advantage of operating data and process status at your fingertips can be the difference between profit and loss. To help you keep production on track, CENTERLINE motor control centers (MCCs) with IntelliCENTER technology offer an integrated network and software combination to deliver operating data directly to you.

CENTERLINE MCCs with IntelliCENTER technology use intelligent motor controls, built-in networking and preconfigured and tested software to enhance performance through system-wide communications. This built-in networking captures information for predictive maintenance, process monitoring and advanced diagnostics so that you are fully aware of the condition of your motors, control devices and ultimately your application.

**IntelliCENTER TECHNOLOGY**

IntelliCENTER technology features built-in Ethernet, intelligent motor controls and advanced monitoring software all preconfigured and tested at the factory. With its integrated network infrastructure and preconfigured user interface software, you can monitor and diagnose your MCC from anywhere.

IntelliCENTER technology provides CENTERLINE MCC users with a preconfigured and integrated hardware, software and communication solution that:

- Reduces integration and setup time
- Improves process and diagnostic information
- Improves uptime advance warnings and troubleshooting tools
Built-in Network

Your startup is faster with built-in cabling. Complex inter-wiring is reduced to a single Ethernet cable and because the network is preconfigured and validated, device connections, IP addresses and subnet masks are set for you.

IntelliCENTER Software

IntelliCENTER software provides the ultimate window into your MCC. The software provides both realtime diagnostics and MCC documentation to maximize MCC and related equipment performance.

Intelligent Motor Controls

MCCs with IntelliCENTER technology combine intelligent motor control and protection devices with advanced networking and diagnostic capabilities to give you an inside look at your motor control application.

Reduce the time you need to setup your MCC

From installation to configuration to operation – IntelliCENTER technology saves time at every step.

• Save up to 90% on your wiring installation time with a pre-configured and pre-tested CENTERLINE MCC with IntelliCENTER technology
• With IP addresses and subnet masks pre-configured for your MCC, you are ready to immediately communicate with your intelligent motor control devices and configure device parameters over the network
• Use Studio 5000® software to leverage a single programming environment for Logix controllers, soft starters, variable speed drives, electronic overload relays, and low voltage motor control centers
• With one-time configuration for all of your devices, reduce programming with a single software package

Enhance integration with your facility’s corporate IT network

More information – where you need it, when you need it for superior plant asset management.

• Easily integrate your manufacturing operations network with the corporate network, helping reduce maintenance cost by reusing existing network resources and tools
• Seamlessly integrate production data and business systems by removing a network layer between devices and higher level networks without sacrificing network security

Increase your access to information without opening an MCC door

• Enhance the safety of your plant by remotely monitoring real-time data for your MCC with IntelliCENTER technology
• Reduce facility personnel’s exposure to hazardous energy levels and help minimize the need to “suit up” for routine maintenance by remotely monitoring, configuring and troubleshooting your MCC
• Receive alert notifications before a device fails, so you can act sooner – to help prevent unplanned downtime

Quickly monitor, troubleshoot and diagnosis your MCC from anywhere

Use IntelliCENTER technology to help keep your facilities up and running with electronic documentation, remote diagnostics, predictive maintenance and easy replacement of MCC units.

• With its built-in network, you can troubleshoot your MCC from anywhere on your enterprise’s network
• A replacement, plug-in IntelliCENTER unit can be installed quickly – without disrupting power or communication with adjacent units
• IntelliCENTER software includes electronic versions of your critical device manuals, customized wiring diagrams and spare parts lists, so troubleshooting information for your MCC is just a few clicks away
Built In Network

EtherNet/IP helps enhance integration, reduces your MCC setup time, increases the network speed and allows you to quickly monitor, troubleshoot and diagnose your MCC using a network that communicates with your entire enterprise. Each MCC is designed and tested for intelligent motor control to utilize the Stratix 5700™ industrial switch and 600V Ethernet cabling.

- CENTERLINE MCCs are designed to accommodate network and component installation that best suits your needs
- Stratix 5700 switches have flexible mounting locations to meet multiple customer specifications
- Ethernet switch quantity and port capacity is customized to meet specific node densities across your MCC
- Multiple Ethernet connection and cable routing options provide additional network flexibility
- Choose the EtherNet/IP topology that is right for you – IntelliCENTER MCCs allows for more flexibility with the option for linear, star and/or ring configurations

Special Ethernet documentation is available to improve MCC commissioning time and reduce network troubleshooting efforts. This can include Ethernet cable labels and advanced network diagrams detailing switch and end device connection information (port mapping, IP address, device locations, and more). When coupled with IntelliCENTER software, this documentation can be accessed and modified remotely to maintain your MCCs over time. Additional information can be found in the EtherNet/IP IntelliCENTER Reference Manual, publication MCC-RM001.

600V Ethernet Cable

Developed specifically for your demanding, high voltage environments, this exclusive Allen-Bradley® 600V cable is UL-listed and PLTC rated providing robust connections for intelligent motor control devices. With an operating range of -20°C to 80°C (-4°F to 176°F) and both foil and braided shielding, this cable provides reliable communication performance in the harshest industrial environments.

The cable is uniquely constructed to allow direct application in the same space as other high voltage cables – while still providing noise immunity and protection of communication cables.
Connect Your Entire Enterprise

EtherNet/IP is an established, broadly-adopted network that helps simplify and enhance machine design.

- Low cost, high performance and easy to use compared to a multi-network architecture
- Easily integrate any CENTERLINE MCC, PowerFlex drives, I/O, smart actuators and any other EtherNet/IP enabled device
- EtherNet/IP connectivity supports linear, star and ring topologies

Stratix 5700 Industrial Managed Ethernet Switch

The Stratix 5700 switch is specifically designed to perform in high noise industrial environments and provide advanced security, network management and diagnostics functionality. With the flexibility to be configured with either Studio 5000 software or through your web browser, this switch is easy to configure and maintain.

The Studio 5000 software add-on profiles, predefined Logix tags and pre-engineered FactoryTalk® View HMI diagnostic faceplates allow for access to network status. Integrated into your CENTERLINE MCC, the Stratix 5700 switch is preconfigured for simple setup and immediate machine commissioning.

These robust ethernet switches are secure, easy to use, and designed to help ease deployment of your ethernet networks on machines and the plant floor.
IntelliCENTER Software

IntelliCENTER software provides the ultimate window into your MCC. The software puts both real-time diagnostics and MCC documentation at your fingertips to maximize the performance of your MCC and related equipment.

• IntelliCENTER software offers a virtual representation of your MCC lineup
• Factory configured software specific to your MCC
• Simple user experience
• Monitor, diagnose and modify your MCC from anywhere
• Real-time energy consumption analysis
• Data trending information can be used for predictive maintenance
• Access electronic documentation
• Changes and additions (units, sections, etc.) to the MCC lineup can be easily reflected in the software to keep the lineup current throughout its time in service

Reduce Commissioning Time with Premier Integration

For even greater control over your operations, CENTERLINE MCCs networked with EtherNet/IP can be easily integrated into a Logix control system. IntelliCENTER software’s Integration Assistant allows you to quickly add your smart motor control devices into the Studio 5000 Automation Engineering & Design Environment™. This control system integration helps reduce programming time by automatically adding the CENTERLINE MCC devices to the Studio 5000 Logix Designer® I/O tree with the appropriate Ethernet network configuration. In addition, Integration Assistant uses existing add-on profiles to automatically create controller tags eliminating errors and reducing the time it takes to integrate the intelligent devices in Studio 5000 software.
The energy distributed by an MCC each year will typically cost 5x more than the original purchase price of the MCC. If energy monitoring allows just a 2% energy savings, this will result in an annual savings of >10% of the purchase price of the MCC.

IntelliCENTER Energy

The IntelliCENTER energy feature offers a pre-configured setup of FactoryTalk® EnergyMetrix™ software for intelligent motor control devices in the MCC, including variable speed drives, overload relays and SMCs. With IntelliCENTER energy, you can view energy consumption at the device level directly from IntelliCENTER software making it easier to monitor and manage energy usage in the industrial facility. IntelliCENTER energy provides the information necessary to make fact-based decisions to help you optimize energy usage, improve equipment performance, and realize substantial cost savings.

Powered by FactoryTalk EnergyMetrix software, IntelliCENTER energy builds on the monitoring and diagnostic functionality that is currently offered in IntelliCENTER software and allows you to remotely monitor energy at the load level – where the devices are consuming energy – rather than at the utility level. This device-level information helps you make the best energy decisions and can lead to significant energy savings.
HMI Support

All the IntelliCENTER software views are available as ActiveX objects for simple integration with on-machine HMI.

The software data CD includes network configuration files to generate descriptive tags in your Studio 5000 project.

- Reduce PLC development time with automatic tag generation from IntelliCENTER Integration Assistant
- Enable PLC programmer to complete network configuration before MCC is powered up
- Reduce HMI programming time needed to reproduce these views
- Get the functionality of all these views by simply configuring the ActiveX object
Asset Management

IntelliCENTER software includes a complete set of documentation of your MCC. Spare parts lists, wiring diagrams and device manuals are all available in electronic form to use with IntelliCENTER. This means your manuals are readily available when they are needed most.

- Manage documentation for your MCC
- Help reduce troubleshooting time by accessing the exact manuals that were shipped with your MCC
- Examine control circuits using your specific MCC wiring diagrams
- Update or add unit or lineup documentation
- Review event logs to view device status history
- Manage spare parts inventory for your MCC devices

System Level Dashboard

The system level dashboard is an easy-to-identify, graphical representation of your entire MCC lineup. The condition of each motor controller is quickly established with status light indicators that change color to indicate ready, running, warning, fault or off-line.

Customizable text on each MCC unit allows instant identification of the motor, machine or process. Take advantage of this exclusive functionality for Allen-Bradley CENTERLINE MCCs.

- View a virtual view of the MCC
- Quickly determine the condition of the motor controls in the MCC
- Easily navigate to units by simply selecting them
- Configure your view using simple drag-and-drop

Component Monitoring and Diagnostics

The monitor view displays an overview of the intelligent motor control devices being monitored.

- Trend real-time data and monitor MCC status to help reduce unplanned downtime
- Choose any device parameter to be displayed using the configurable analog gauges, trend graphs and I/O status fields
- Change device configuration and network parameters
Intelligent Motor Controls

A key part of InteliCENTER technology is the Allen-Bradley family of world class intelligent motor control devices. These devices provide you with both control and diagnostic information to make managing your system simple and efficient.

CENTERLINE Motor Control Centers

Allen-Bradley CENTERLINE low and medium voltage motor control centers offer optimal safety, performance and reliability to meet your global needs.

Select the right motor control center for your application from the portfolio of low and medium voltage CENTERLINE MCCs. Designed to meet your application requirements, this portfolio is available as standard, networked and with ArcShield™ technology – IEEE certified arc resistant enclosures.

CENTERLINE 2100 MCCs

Integrate control and power in one centralized package with a wide variety of motor control options.

Designed for NEMA requirements, CENTERLINE 2100 MCCs also offer options for SecureConnect™, a withdrawable unit designed to help protect personnel from electrical hazards.

CENTERLINE 2500 MCCs

Designed to address the wide range of application requirements found throughout the world, CENTERLINE 2500 MCCs offer fixed or withdrawable units, high density columns, and fully type tested standard designs.

CENTERLINE 1500 MCCs

Available in a wide range of configurations from across-the-line to solid-state SMC starters, medium voltage CENTERLINE MCCs provide the flexibility to select the best match for your application worldwide.
IntelliCENTER Software Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polling Rate</td>
<td>1.0 - 9.9 seconds</td>
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<tr>
<td>Data Capacity</td>
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<tr>
<td>Samples per trend graph</td>
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<tr>
<td>Events per lineup</td>
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<td>Documents per lineup</td>
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<tr>
<td>Maximum Views open at once</td>
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</tbody>
</table>

Licensing

- One IntelliCENTER Software license per machine
- ActiveX – Only licenses available for HMI applications

Minimum Computer Requirements

- Operating System: Windows XP SP1
- Video Resolution: 1024x768 with true color (24 bit or better)
- CD-ROM: 4X (16X Recommended)
- Hard Disk Space: 600MB free disk space

CENTERLINE 2100 & CENTERLINE 2500 MCC Components

<table>
<thead>
<tr>
<th>Unit</th>
<th>Communication Adapters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starters</td>
<td>E1 Plus overload relay</td>
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<tr>
<td></td>
<td>E300 electronic overload relay</td>
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<td>Distributed I/O</td>
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<td>Soft Starters</td>
<td>SMC Flex Soft Starter</td>
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<td>Variable Frequency Drives</td>
<td>PowerFlex® 753</td>
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<td>PowerFlex® 523</td>
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<tr>
<td>Power Supplies</td>
<td>User-supplied 115V</td>
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<tr>
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<td>Disconnect option</td>
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<tr>
<td></td>
<td>Circuit breaker option</td>
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</table>

Note: All power supply units include redundant options. For selection information refer to the CENTERLINE 2100 MCC selection guide (pub #2100-SG003) or CENTERLINE 2500 MCC selection guide (pub #2500-SG001)

Rockwell Automation, Inc. (NYSE:ROK), the world’s largest company dedicated to industrial automation, makes its customers more productive and the world more sustainable. Throughout the world, our flagship Allen-Bradley® and Rockwell Software® product brands are recognized for innovation and excellence.

Connect with us.

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