

# Model 6 *intelligent* Motor Control Centers

Smart solutions for your motor control, power quality,  
and energy management challenges



 **SQUARE D**™

by **Schneider Electric**

# An intelligent solution.

Intelligence. We're all striving for it. Achieving it requires information that answers the big questions and leads to smart choices.



The Square D™ Model 6 *intelligent* Motor Control Center (iMCC) offers solutions to address your most difficult motor control, energy management, communications, automation, and power quality questions.

- How can I remotely monitor and control my motor and non-motor loads?
- How can I improve my power factor and reduce harmonics?
- How can I better manage my energy?
- How can I reduce personnel exposure to the equipment?
- How do I eliminate the cost of field wiring hundreds of I/O points?
- Is there a way to streamline troubleshooting?
- How do I predict unscheduled downtime?
- Do procedures exist for proper wire labeling and documentation?
- Can I utilize an existing programmable logic controller (PLC) or factory network?

Factory wiring, popular network protocols, and extensive testing and documentation can make your MCC installation simple. Whether your application calls for hardwired I/O or a network solution, Square D Model 6 iMCCs can deliver the integrated package while reducing acquisition, installation, and commissioning costs.



## Industry-leading components

Active harmonic filters, 18-pulse drives, metering and surge protective devices, and high-resistance grounding units for the most comprehensive energy management and power quality capabilities the industry has to offer.



# Flexible communications.



## Using the most popular networks for control and automation

A key feature of our iMCC solution is the integration of intelligent devices and device-level networks for control and automation that delivers improved performance. Popular network protocols communicate with every iMCC unit, including:

- CANopen®
- DeviceNet™
- Ethernet (Modbus TCP)
- Modbus
- PROFIBUS

Networking allows for easy monitoring of critical data of each motor or load connected to the iMCC, enabling for precise process control and system awareness at all times. Real-time access to records of last faults allows for simplified diagnostics, faster troubleshooting, and reduced downtime. Remote monitoring and control capability increases safety by reducing the time required by personnel to be near the equipment.

Using network control to consolidate all I/O communications significantly reduces the amount of tedious wiring that would normally be required for a hardwired I/O MCC with similar functionality. The network cabling consists of a five-conductor cable and is constructed into the topology that is appropriate for your networked solution. The wireway separates network cabling from high-voltage cabling, and the standard wireway barrier isolates the communication cabling from the load cabling routed in the vertical wireway.

### Experience the benefits of an iMCC network:

- Remote monitoring and control to every unit.
- Reduced downtime and system interwiring.
- Lower commissioning costs.
- Flexible and expandable configuration.
- Cabling system compliant to applicable standards. DeviceNet solution is Open DeviceNet Vendor Association (ODVA) certified.

## Direct access to intelligent energy management

The Model 6 iMCC has evolved into a full-fledged energy management center. With its communications capabilities, you have the tools to better manage energy and power quality, improve system reliability and availability, and reduce power costs.

The Model 6 iMCC delivers the most comprehensive energy management and power quality capabilities the industry has to offer, including these industry-leading components:

- 18-pulse drives (50 – 400 horsepower VT, 40 – 350 horsepower CT)
- Schneider Electric™ AccuSine™ Active Harmonic Filters (AHF) (50 A and 100 A, full section)
- Metering Square D (PowerLogic™ Circuit Monitors, power meters, Square D ION™ Meters)
- Surge protective devices (120 kA up to 480 kA peak surge current per phase)
- High-resistance grounding (20" W section, 480 V, 1 A – 10 A, 600 V, 2 A – 7 A)
- Square D Micrologic™ Trip Units (Standard, Ammeter, Energy, Power, Harmonic)

# iMCC: delivering quality, innovation, and reliability.

## Advanced PowerLogic Metering



A full line of industry-leading power meters, circuit monitors, and ION Meters provides exceptional metering accuracy, communications options, analog/digital I/O, LCD remote displays, and more.

## Schneider Electric Surgeloc™ Surge Protective Devices



Enhances system protection and reduces equipment damage. The Model 6 offers 120 kA and 240 kA of protection in a six-inch space and up to 480 kA with multiple units.

## Schneider Electric AccuSine Power Corrective System (PCS) Active Harmonic Filters



Offers nearly complete cancellation of harmonic current to improve equipment operating life and system capacity. Available in 50 A and 100 A sizes.

## PowerPact™ Electronic Motor Circuit Protector



Offers a simple solution, reliable start-ups, improved protection, and a complete adjustment range for motor protection needs. Available from size 1 up through size 6.



## Closed Door Racking



Offers increased uptime and reliability by disengaging and isolating the MCC bucket from the power bus before opening the door.



## Schneider Electric Altivar™ AC Drives



Altivar 61/71 Drives — Offer highly expandable I/O, communications and programmable controller cards with more than 150 built-in functions. Altivar 61/71 premium featured drives are ideal for any application.

Altivar 312 Drives — For applications up to 20 horsepower with communications and expandable option cards at an economical price.

18-pulse drives — Utilizing the Altivar 61/71 Drives and a phase-shifting transformer, the 18-pulse drives offer harmonic mitigation and improved power quality in the smallest package in the industry.

## Schneider Electric Altistart™ Soft Starters



Altistart 48 Soft Start — Provides constant starting and stopping rates independent of motor loading and patented motor control algorithm Torque Control System (TCS).

Altistart 22 Soft Start — Compact-sized mid-range soft start with integrated shorting contactor and communications with advanced motor protection capabilities.

## Schneider Electric TeSys™ T Motor Management Controller



Offers flexibility for selecting the amount of motor protection, control, and automation required. Fully integrated in the Square D Model 6 iMCC, utilizing the latest protection technology compatible with all existing industrial communication protocols.



### Integrated communications and metering capabilities

Now available in the Model 6 iMCC, the PowerPact H-Frame (15 A – 150 A), J-Frame (70 A – 250 A), and L-Frame (70 A – 600 A) circuit breakers with Micrologic Electronic Trip Units feature integrated communications and metering capabilities. The Model 6 iMCC now offers a complete family of circuit breakers with electronic trip units from 15 A to 2,500 A (H-, J-, L-, P-, and R-Frame), allowing for a common trip unit for all Model 6 iMCC circuit breakers. With these new breakers, Model 6 iMCCs offer an industry-exclusive and comprehensive capability for direct access to energy management for all motor and non-motor loads.

*Schneider Electric is the first to offer integrated communications and energy metering capabilities in six-inch branch feeder units from 15 A to 250 A.*

# The right information. At the right time.

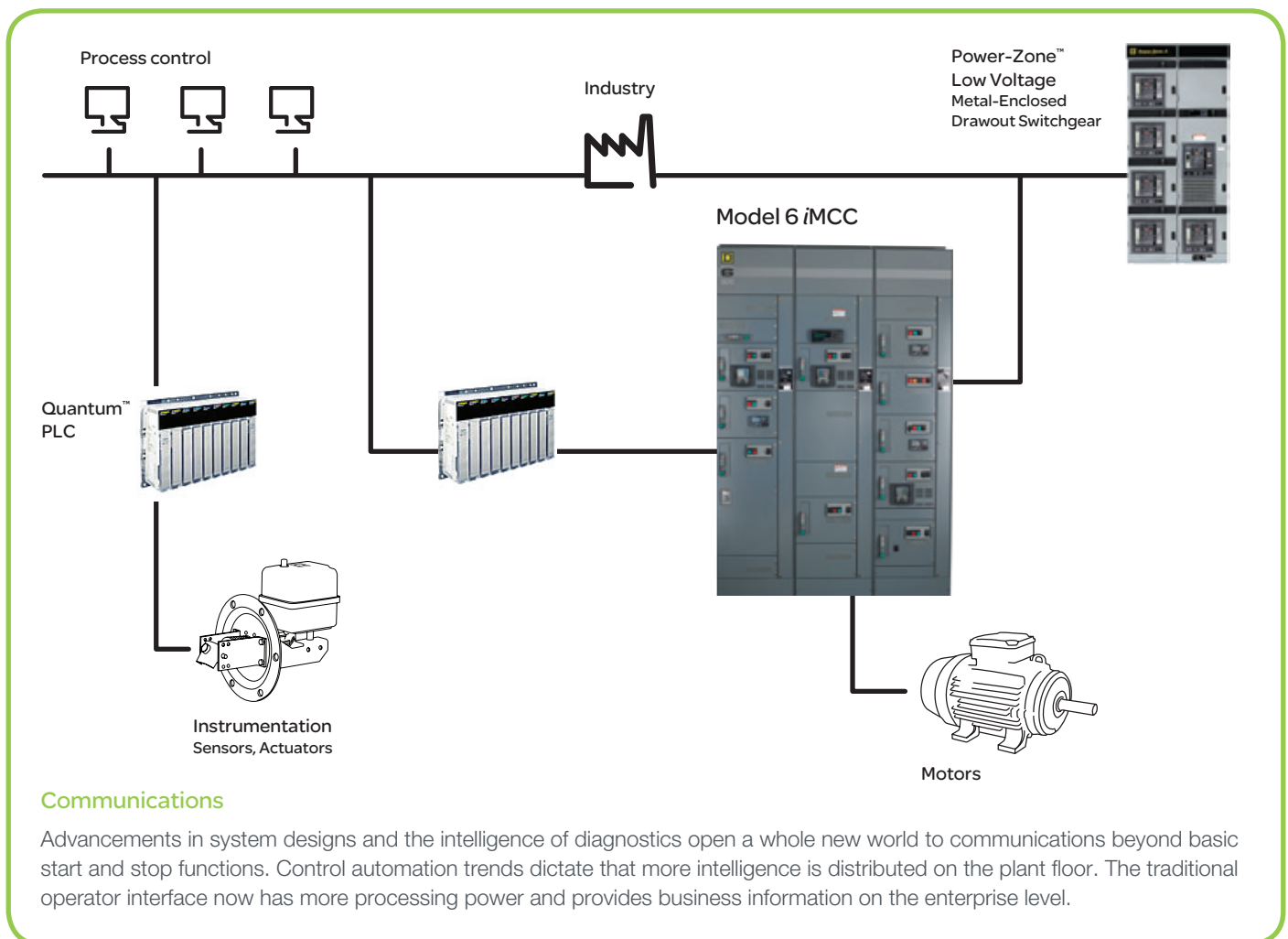
## Square D Model 6 iMCC

Streamline troubleshooting and maximize uptime by incorporating “intelligent” components and cabling solutions into your motor control center.

Armed with this information, your facility personnel will immediately experience these benefits:

- Increase system awareness and reduce operating and maintenance costs.
- Remotely monitor and control MCC loads, reducing the need for personnel to visit the MCC.
- View power quality and energy demand down to every MCC load.
- Improve predictive maintenance capabilities.
- Reduce troubleshooting and shutdown times through advanced diagnostics and data logging.

It is quick and easy to integrate into your local area network (LAN). Just obtain the IP address, subnet mask, and default gateway from your network administrator and connect with a standard 100BA SE-TX twisted pair. It's that simple. Authorized users who have access to your company intranet will have the freedom to check power system information whenever they need. And it does not stop within the walls of the facility. If external access is granted, you can check power system information as easily as you can check your email.





# Delivering a basic hardwired I/O solution.

Programmable logic controllers or distributed control systems (DCS) are often part of a networked process. With the basic hardwired I/O solution, the *i*MCC is factory wired and labeled, tested, and documented, eliminating the time and cost associated with routing, terminating, and labeling of hundreds of wires during installation. Whether a stand-alone processor or several remote I/O drops, you can integrate your hardwired control scheme into our *i*MCCs.

Basic hardwired I/O delivers a classic approach to troubleshooting during a production breakdown. Electricians and technicians are familiar with this construction and can easily pinpoint problems without additional training.



## Flexibility

Choose various distributed I/O configurations with unit mounting or full section mounting options.

## Efficiency

Basic solutions allow automation integration capabilities without complexity. Electricians and technicians can easily perform their functions without additional training due to the familiar construction and equipment.

## Accuracy

All connections and wire harnesses terminate to pull apart terminal blocks to reduce errors. Complete factory testing ensures meticulous quality control.

## Versatility

You select the choice of CPU and I/O styles for the system that meets your needs. Options range from the high-end, full-function PLC designed for high-performance industrial applications, to the more compact mid-range device. The choice is yours.





# Achieve a new level of *intelligence*.

For more information on how our intelligent motor control centers can integrate into your communication protocol of choice, visit [www.schneider-electric.com/us](http://www.schneider-electric.com/us) or call 1-888-SQUARED.

The Square D brand is an integral part of the Schneider Electric™ portfolio. As the global specialist in energy management, we deliver proven reliability, expertise, and comprehensive solutions.

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