

A motor control centre is good; a **smart** motor control centre is *even better!*

Why an MCC?

Ever since electric motors were invented, they have been used to operate various machines. In the beginning, each machine had its own motor that had to be started, stopped, monitored and repaired on site. As technology advanced, companies developed increasingly centralized control systems aimed at increasing productivity and safety. These developments gave rise to the motor control centre (MCC), which became widely used in the 1950s.

What is an MCC?

An MCC is an assembly, in one or several cabinet sections, of control equipment designed to ensure the safe operation of motor-driven machinery and distribution of power. This equipment is used to manually or automatically start and stop machines, select the direction and speed of operation, adjust the torque, and protect against overloads and breakdowns.

The MCC receives 600 V of three-phase power, which it distributes via buses to the equipment it contains, including starters, soft starters, disconnecting switches, variable speed drives, transformers, circuit breakers, programmable controllers, transfer switches, filters and electrical metering devices.

The smart MCC

The main difference between a regular MCC and a smart MCC is communication capacity. Connected to the building automation system, a smart MCC is not only used to measure various parameters and identify breakdowns for rapid repairs; it also provides detailed data over a long period, which it makes it possible to anticipate and even prevent potential problems. In addition, one of the main advantages of a smart MCC is that all of these actions can be carried out remotely, from a computer workstation or even a tablet such as an iPad or a smartphone—increasingly popular options.

Unlike the MCCs offered by the competition, which have vertical buses to which drawout units are attached, the MCCs manufactured by **Elkon** feature compartments that are connected by cables to a horizontal bus located at the top of the module. The absence of vertical buses makes **Elkon's** MCCs efficient and cost-effective. Moreover, this type of design greatly reduces the risk of an electric arc.

Elkon's MCC is compliant with CSA standards and is equipped with a touch screen, signal lamps, a native BACnet controller (Delta Controls) and a digital

multimeter/network analyzer, used to verify numerous electrical parameters such as current, tension and wattage. The controller controls the operation of starters and variable speed drives and also monitors elements such as malfunctioning power and control fuses; the state of contact switches, thermal overload protection relays, and selector and isolating switches; loss of load, current consumed, phase loss, energy consumption, the power factor and harmonics.

The MCC and its components are factory pre-assembled, wired, tested and configured, which ensures quality and allows for rapid, easy integration into building automation systems. The MCC simply requires the connection of a single cable to the 600 V power supply, a single network cable and motor loads: motors, pumps, fans, etc.

In short, smart MCCs are a key factor in improving energy efficiency and managing automated building systems. **For more information on the MCCs manufactured by Elkon, please contact company representative Richard Lequin at rlequin@elkon.ca.**

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Did you know?

Founded in 1961 and acquired by Regulvar in 1997, Elkon is a company specialized in the manufacture and distribution of control systems for electric equipment. Its offices, plant and warehouse are located in Lachine.



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