

C441 Motor Insight
Overload and monitoring relay

An intelligent power control solution



EATON

Powering Business Worldwide

Take back control of your process



C441 Motor Insight™ gives you the ability to better understand the dynamics of your system by providing the information you need to keep your motors running at their highest possible potential. It is important to keep your systems running at peak performance, while maintaining the integrity of your application—that is exactly what C441 Motor Insight is designed to do.

A motor or load failure can lead to excessive production downtime and safety concerns, making motor and load protection a key part of protecting your business. C441 Motor Insight advanced solid-state overload relay (SSOL) offers line, load and motor protection in a single compact device. It allows you to operate your process more efficiently by providing real-time power information, advanced monitoring capability, ground fault detection and various communication solutions for integration into a higher level control system or an operator interface. It is the flexible choice for any application requiring easy-to-use, reliable protection.

Now you have the insight to better manage your process.

In an effort to meet your most demanding application needs, Eaton continues to innovate and engineer the products you need to control and protect your systems. The complete breadth of feature-rich product solutions enables you to maximize the efficiency of your process, from protection and control, to wiring, termination and display.



Insightful design with a focus on usability

Unconditional protection and monitoring

C441 Motor Insight overload and monitoring relay was built with your specific needs in mind. One compact device gives you all the motor protection and diagnostic functions you need to efficiently and effectively manage your system—even if your application has high line conditions and poor power quality. With a focus on reliability and improved uptime, C441 Motor Insight provides leading surge and sag withstand, and will outlast the competition.

Designed for flexibility

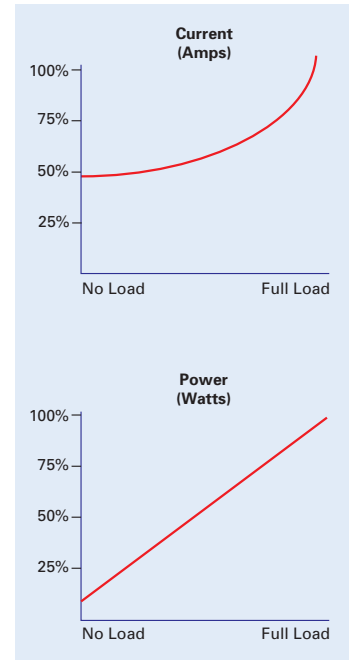
The robust design of C441 Motor Insight includes a bright LED display and intuitive user interface, making it easy to configure and troubleshoot your system when necessary. Instead of having to remember the menu for diagnostic and fault codes, or decipher submenus and cryptic descriptions, the easy-to-read display on the C441 Motor Insight spells it all out for you—right at the unit. And, to make it even easier to protect your system, no matter your specifications, the Type 1, 12 and 3R remote display uses the same user interface as the base unit device.

With options for line-powered or 120 Vac control-powered base devices and a remote display that is powered from the base unit, C441 Motor Insight offers configurable solutions for a variety of applications. Adjustments can be made directly from the display at any time without disconnecting power, keeping your process up and running as efficiently as possible.

Superior load protection

Unlike overloads that offer load protection strictly by monitoring current, C441 Motor Insight has the ability to calculate and monitor power running to a specific load. This offers customers superior protection that more reliably indicates the true behavior of the load due to the linear relationship between power and load.

This is especially important in applications where motors and pumps are lightly loaded. Due to the logarithmic relationship between current and load, current values do not change significantly until the pump exceeds approximately 40–50 percent capacity. C441 Motor Insight's power monitoring and protection capability provides the customer with a more reliable protection method across the entire load range, allowing for simple detection of dry running conditions like deadhead/starved pumps.



Enclosed assemblies can be configured with a Type 1 and 12 remote keypad (right), as well as a Type 3R remote display kit shown closed and open (below).



IP20 recessed terminals are a safeguard during installation.



LED display remains bright at low temperatures.



Ethernet communication module

- Combines Modbus® TCP and EtherNet/IP into a single module
- Built-in dual-port switch, allowing star, linear or ring network configurations
- Configuration possible with standard Web browser due to built-in Web pages; customers also have the option to use EDS files



Communication modules offered in a variety of configurations

- Communication protocols suit unique installations:
 - Modbus RTU
 - Modbus RTU with I/O
 - Modbus TCP with I/O
 - DeviceNet™ with I/O
 - PROFIBUS® with I/O
 - EtherNet/IP
 - HTTP
- Snap-on modules do not burden the base device with supporting multiple communication protocols
- Communication modules and remote display can be used simultaneously

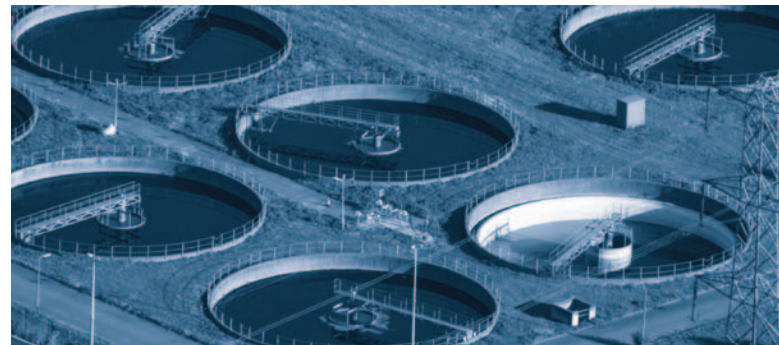


Maximize uptime and reduce maintenance expense and energy consumption

Regardless of the industry, or application, C441 Motor Insight will help you save time and money by knowing—in real time—what is happening at your load. This makes it an ideal solution for the demanding

requirements of continuous process applications, such as gas wells, petrochemical, metals and glass processing, and water and wastewater facilities. With knowledge in hand, you can conserve energy and optimize

preventive maintenance. And, with the ability to monitor in real time, you will be a step ahead of potential problems before they cause unplanned expenses or downtime.

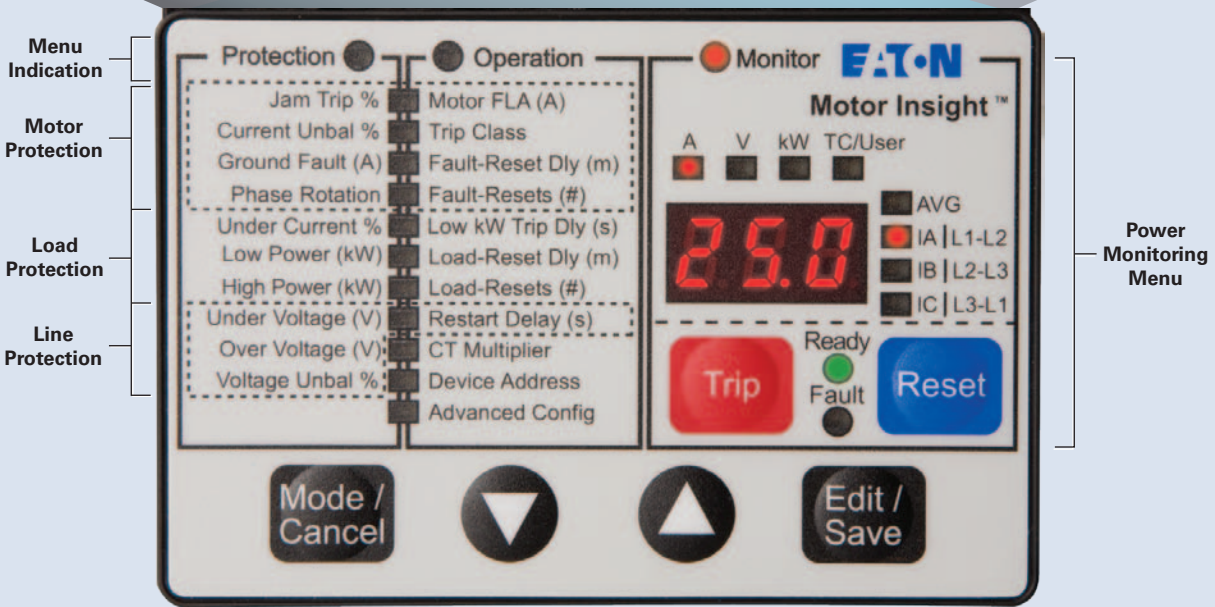
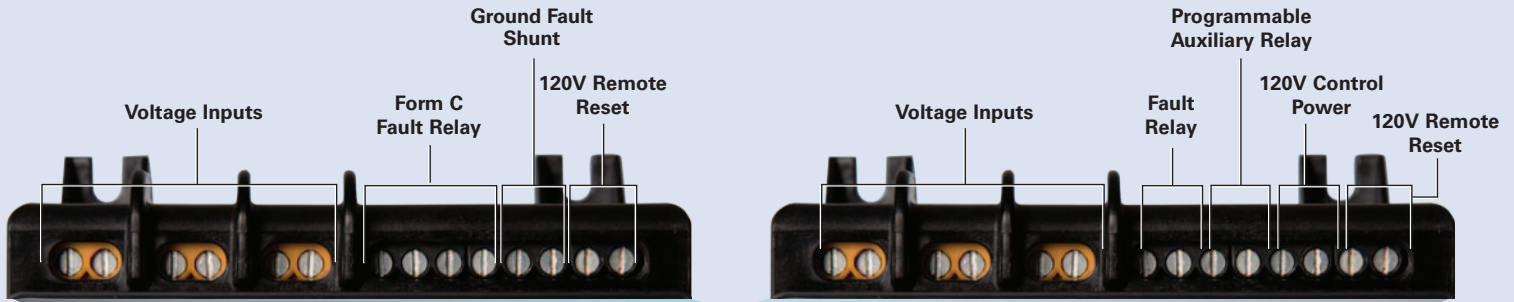


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An intelligent power control solution

Line-Powered

Control-Powered ^①



① Integral user interface is only available with the line-powered model. Control-powered models can use remote display when user interface is desired.

C441 Motor Insight is available in either a line-powered or a 120 Vac control-powered design, capable of monitoring voltages up to 660 Vac. Each of these units is available in a 1–9A or a 5–90A FLA model. With external CTs, C441 Motor Insight can protect motors up to 540A FLA.

For ease of use and operator safety, C441 Motor Insight offers a remote display that mounts easily with two 30 mm knockouts. The remote display is powered from the base unit, which means that it can be used with the line-powered or control-powered overload relay. Customers are provided with real-time system

health monitoring through the bright LED display with easy-to-understand full word descriptions and units on the user interface, eliminating the need for the customer to memorize parameters and fault codes.

C441 Motor Insight offers customers highly configurable motor, load and line protection with power monitoring and diagnostics, allowing the customer to save energy, optimize maintenance schedules and configure greater system protection.

Key protection features

Motor protection

- Thermal overload
- Jam protection
- Current imbalance
- Current phase loss
- Ground fault
- Phase reversal

Load protection

- Undercurrent
- Low power (kW)
- High power (kW)

Line protection

- Undercurrent
- Undervoltage
- Voltage imbalance

Eaton is dedicated to ensuring that reliable, efficient and safe power is available when it's needed most. With unparalleled knowledge of electrical power management across industries, experts at Eaton deliver customized, integrated solutions to solve our customers' most critical challenges.

Our focus is on delivering the right solution for the application. But, decision makers demand more than just innovative products. They turn to Eaton for an unwavering commitment to personal support that makes customer success a top priority. For more information, **visit www.eaton.com/electrical**.

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