GE GE □□□ Series Service Manual

IS215UCVEM06A

1. Description

SPECIFICATIONS:

2. Specifications

Specification	Value
Original	**Manufacturer General Electric**
Series	**Mark VI Speedtronic**
Functional	**Acronym UCVE**
Functional	**Part Number IS215UCVEM06A**
Revision	**Quantity 1 Revision**
Assembly	**Type IS215 Special Assembly**
Revision	**Type Functional Revision**
Frequently	**Asked Questions about IS215UCVEM06A**
Why	**exactly is this IS215UCVEM06A product's sole A-rated revision considered a functional style of Mark VI Series product revision?**

3. Product Information

SPECIFICATIONS:

Part Number: IS215UCVEM06A

Manufacturer: General Electric

Series: Mark VI

Product Type: Universal Controller Module

Processor: 300 MHz Intel Celeron

Analog output current: 0-20 mA

Temperature Operating: -30 to 65°C

Memory: 128 MB of flash memory

Ethernet: 10BaseT/100BaseTX (RJ-45)

Microprocessor: Intel Celeron 300 MHz

Size: 15.9 cm high x 17.8 cm wide

Operating System: QNX

Frequency: 50 or 60 Hz

Repair: 3-7 Days

Availability: In Stock

Weight: 2 lbs

Country of Origin: United States

Manual: GEH-6421M

FUNCTIONAL DESCRIPTION:

IS215UCVEM06A is a Universal Controller Module Manufactured and designed by General Electric as part of the Mark VI Series used in GE Speedtronic Turbine Control Systems. The Universal Controller Module (UCM) within the GE Mark VI control system performs several critical functions essential for industrial automation. It manages real-time data acquisition by interfacing with sensors and other system components to collect and process data from various sources. The UCM executes control commands, adjusting system parameters and processes to ensure optimal performance and stability. Additionally, it facilitates communication between different parts of the control system, enabling seamless integration and coordination across the system. By performing these functions, the UCM plays a vital role in ensuring efficient, reliable, and precise control of industrial operations.

OPERATION:

Data Acquisition: The UCM interfaces with various sensors and system components to gather real-time data. This includes monitoring parameters such as temperature, pressure, flow rates, and other critical variables. The data collected is essential for understanding the system's current state and making informed control decisions.

Control Execution: The UCM executes control commands to regulate system operations based on the real-time data it acquires. It adjusts valve positions, motor speeds, and other control elements to ensure the system operates within the desired performance and safety limits. This dynamic control helps maintain stability and efficiency in complex processes.

Communication: The UCM facilitates communication between different modules and components of the control system. It ensures that data and control signals are effectively transmitted across the system, enabling coordinated operation. This function is crucial for integrating various subsystems and ensuring that they work together harmoniously.

Monitoring and Diagnostics: The UCM continuously monitors the system’s performance, providing real-time feedback and diagnostic information. It helps in detecting anomalies, faults, or deviations from normal operating conditions. Through diagnostic capabilities, it assists in troubleshooting and maintaining system reliability by identifying issues before they escalate.

Configuration and Calibration: The UCM supports the configuration and calibration of system settings, allowing for customization based on specific operational needs. It enables engineers to adjust parameters, set thresholds, and calibrate sensors to ensure accurate and reliable operation. This flexibility is important for adapting the control system to different applications or changes in operational requirements.

IS215UCVEM06A Technical Specifications

Original Manufacturer General Electric

Series Mark VI Speedtronic

Functional Acronym UCVE

Functional Part Number IS215UCVEM06A

Revision Quantity 1 Revision

Assembly Type IS215 Special Assembly

Revision Type Functional Revision

Frequently Asked Questions about IS215UCVEM06A

Why exactly is this IS215UCVEM06A product's sole A-rated revision considered a functional style of Mark VI Series product revision?

The IS215UCVEM06A PCB's singular product revision can be considered a functional product revision as it alters the base performance specifications and overall functionality of the IS215UCVEM06A product, without making notable sacrifices for aesthetic or durability purposes.

Does this IS215UCVEM06A Board mount in General Electric's standard VME Rack Mounting Assembly?

Yes. This IS215UCVEM06A product does seem to mount in General Electric's VME Rack Mounting Assembly, given the fact that it makes use of the distincitive metal VME Rack mounting faceplate in its special Mark VI Series assembly.

About the IS215UCVEM06A

The IS215UCVEM06A is a circuit board that is used in General Electric’s Speedtronic Mark VI turbine control system series. The Mark VI Series that this IS215UCVEM06A printed circuit board product offering belongs to, as in some part is evidenced through its full extended series name, has set specific applications in the management or control systems of General Electric-compatilble gas, steam, and wind turbine automated assemblies. This represents a marked improvement upon earlier iterations of General Electric's Mark product series including the Mark V, as these product series only had possible specific applications in gas and steam turbine automated drive assemblies. With this being the case, the Mark VI Series is popular on the greater figurative automated industrial marketplace independent of that fact, given the truth that this IS215UCVEM06A product's Mark VI Series is one of the

last-developed General Electric Mark product series to infuse the patented Speedtronic control system technology into a range of its differing offerings.

Hardware Tips and Specifications

The IS215UCVEM06A is an Ethernet connection circuit board. Then IS215UCVEM06A uses multiple ports on the front of the device. These ports are different shapes and sizes. These ports are used to connect Ethernet cables along with COM ports. The IS215UCVEM06A uses various components such as condensers, diodes, resistors, an SD card, a battery, and integrated circuits to name a few. Each component works individually to help the circuit board function as a whole. The condensers save various amounts of the energy for the circuit board. The diodes direct energy in one direction but not the other. Resistors are a way for the circuit board to get rid of energy that the circuit board doesn't use. An SD card is used as information and data storage. The integrated circuits are used to control the circuit board. They hold all the data that tells the circuit board how to perform. The IS215UCVEM06A slides into place and has male terminals in the back that are used to attach this circuit board with your system. There are also other attachment places on the circuit board as well. The IS215UCVEM06A has a large cooling unit that takes up half of the circuit board. For more extensive details please refer to the manuals and informational data sheets produced by General Electric about this circuit board.