GE GE □□□ Series Service Manual

IS215UCVGM06A

1. Description

IS215UCVGM06A Technical Specifications

2. Specifications

Specification	Value
Manufacturer	**General Electric**
Series	**Mark VI Speedtronic**
Part	**Number IS215UCVGM06A**
Functional	**Acronym UCVG**
Product	**Type UCV Controller Board**
Revision	**Quantity 1 Revision**
Frequently	**Asked Questions about IS215UCVGM06A**
What	**is this IS215UCVGM06A product's specific PCB coating style?**

3. Product Information

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Manufacturer General Electric

Series Mark VI Speedtronic

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Functional Acronym UCVG

Product Type UCV Controller Board

Revision Quantity 1 Revision

Frequently Asked Questions about IS215UCVGM06A

What is this IS215UCVGM06A product's specific PCB coating style?

Given this IS215UCVGM06A device's uniquely-formulated IS215UCVGM06A functional product number, it is not considere to possess any identifiable sort of Mark VI Series PCB surface coating.

What is the cause of this IS215UCVGM06A device's special Mark VI Series assembly version?

This IS215UCVGM06A device's special assembly version is likley introduced through its base printed circuit board's motherboard product status; adopting another Mark VI Series board into its assembly.

About the IS215UCVGM06A

The IS215UCVGM06A is a PCB component for the Mark VI Turbine Control System Series. The MKVI is a gas/steam turbine management platform released by General Electric as part of their long-running Speedtronic line, which began in the 1960s and continued production through the end of the century. (as you may have been able to tell based off of its full extended series name alone. The IS215UCVGM06A printed circuit board product offering's greater Mark VI Series, while lauded for its potential alternative energy-based applications, is additionally seen as an attractive GE product series on the greater automated industrial marketplace solely given the fact that it exists as one of the lastly-developed GE Mark product series to make use of the patented Speedtronic control system technology first seen with the rollout of the initial Mark I Series in the mid to later 1960s.

Hardware Tips and Specifications

THe IS215UCVGM06A is a UCV controller. There are several versions of the UCV controller; the IS215UCVGM06A is a single-slot single board computer that operates the turbine application code. The PCB mounts in the control module. It communicates with the I/O boards via the VME bus. The IS215UCVGM06A runs on a QNX operating system, which is a real-time, multi-tasking OS. The IS215UCVGM06A has a front faceplate with many connectors, including a monitor and a keyboard/mouse port, Ethernet/LAN ports, and USB ports. The front panel also has a single reset switch, four LED components mounted directly to the panel, and LEDs that are connected to the Ethernet ports. The front panel has a PMC expansion slot. The IS215UCVGM06A has multiple switch components located on its surface. One of these enables the board’s type 1 Lithium battery. This battery should only be replaced by an equivalent battery type. This IS215UCVGM06A product is actually not rhe originally-produced device of its specific Mark VI Series functionality, as that would have to be considered the IS215UCVGM06 parent UCV Controller not utilizing this IS215UCVGM06A product's sole A-rated functional product revision.

Other components include a backplane connector and connectors for auxiliary boards, inductor coils, resistors, diodes, capacitors, and various integrated circuits. The IS215UCVGM06A uses an Intel Ultra Low Voltage Celeron processor (650 MHz.) The links on this page will help save you even more money above and beyond AX Control’s competitive prices. Click now to find out more about AX Control exchange credit, to fill out a surplus purchase quote, or to find out more about our warranty program. This IS215UCVGM06A device's IS215UCVGM06A functional product number itself can be identified as a decently-strong primary source of IS215UCVGM06A Board hardware details, as it codes for these in a series of functional naming components starting with the initial dual-functional IS215 series tag. The IS215 series tag at the start of the IS215UCVGM06A functional product number is responsible for delegating this IS215UCVGM06A device's special Mark VI Series assembly as well as its domestic location of GE manufacture. Some of the other relevant details revealed in this fashion includes this IS215UCVGM06A modular product's:

UCVG functional product acronym

A-rated functional product revision

SPECIFICATIONS:

Part Number: IS215UCVGM06A

Manufacturer: General Electric

Series: Mark VI

Product Type: Universal Control Variable Generator Module

Microprocessor: Intel Ultra Low Voltage Celeron 650 MHz

Memory: 128 MB SDRAM

Operating system: QNX

Programming: Boolean

Primary Ethernet Interface: Twisted pair 10BaseT/100BaseTX

Voltage Range: 14 to 32 V dc

Maximum Lead Resistance: 15 Ohm

Operating temperature: 0 to 70 Deg C

Technology: Surface mount

Size: 16.2 cm high x 8.6 cm

Repair: 3-7 Day

Availability: In Stock

Country of Origin: United States

Manual: GEH-6421J

FUNCTIONAL DESCRIPTION:

IS215UCVGM06A is a Universal Control Variable Generator Module manufactured and designed by General Electric as part of the Mark VI Series used in GE Speedtronic Control Systems. The UCVG is a single-slot board featuring an Intel Ultra Low Voltage Celeron 650 MHz processor, with 128 MB of flash memory and 128 MB of SDRAM. It includes two

10BaseT/100BaseTX Ethernet ports (RJ-45 connectors) for connectivity. The first Ethernet port enables communication with the UDH for configuration and peer-to-peer connections. The second Ethernet port is designed for a separate IP subnet and can be used for Modbus or private EGD networks. Configuration of this second port is done through the toolbox, which validates the settings against the hardware each time the rack is powered on.

OPERATION:

The controller is equipped with software tailored for applications in steam, gas, land-marine aero-derivative (LM), or balance of plant (BOP) products. It can process up to 100,000 rungs or blocks per second, based on average-sized blocks. An external clock interrupt allows synchronization with the VCMI communication board's clock to within ± 100 microseconds. External data is transferred to and from the control system database (CSDB) over the VME bus via the VCMI communication board. In a simplex system, this data includes process inputs and outputs from the I/O boards. In a TMR system, the data consists of voted inputs from input boards, singular inputs from simplex boards, computed outputs for voting by output hardware, and internal state values exchanged between controllers.

INSTALLATION:

A control module consists of at least the controller and a VCMI. Three rack types are available: the GE Fanuc integrator's rack, and two sizes of Mark VI racks, as detailed in the "VCMI - Bus Master Controller" section. The GE Fanuc rack, being shorter, is designed for stand-alone modules with remote I/O only. The longer Mark VI racks can support both local and remote I/O. Regardless of the rack type, a cooling fan is installed either above or below the controller. For a stand-alone control module using the GE Fanuc rack, a VDSK board is also required to power the fan and provide rack identification via an ID plug.