GE Service Manual

DS200IQXDG1AAA

1. Description

DS200IQXDG1AAA Technical Specifications

2. Specifications

Specification	Value
Part	**Number DS200IQXDG1AAA**
Series	**Mark V DS200**
Manufacturer	**General Electric Industrial Systems**
Functional	**Acronym/Abbreviation IQXD**
Functional	**Description Inverter Snubber Card**
Weight	**Less than 2 pounds**
Revision	**Quantity 1 Revision**
Assembly	**Type Normal Assembly**
About	**the DS200IQXDG1AAA**
The	**DS200IQXDG1AAA is a circuit board manufactured by General Electric for use within its Mark V Speedtronic system. The Mark V is a microprocessor-based gas and steam turbine-control system. It was specifically designed for use on medium to large turbines, single or two-shaft heavy-duty gas turbines, and aero-derivative gas turbines. The MKV is a triple redundant system that uses three redundant control processors; this allows any one of these processors or its components to be repaired without shutting down the turbine system.**

3. Product Information

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The DS200IQXDG1A is typically used within an EX2000 subset of the Mark V, and is edited from its original performance specifications and dimenstions through its assembly's inclusion of an A-rated functional product revision.

Hardware Tips and Specifications

The DS200IQXDG1A is a small board with drilled holes in corners to allow for mounting. The center of the board contains four components marked E1 through E4. These are connection terminals. The board also has two vertical pin header connectors and five stab-on connectors. Other components on the board include metal film resistors and a diode. The board has three heat sinks with transistors attached.

Most of the board space is taken up by two polypropylene capacitors (WIMA FKP 1.)

These are specifically designed for use in pulse applications.

The capacitors have metalized internal series connections and metal foil electrodes.

These capacitors are self-healing and have an extremely high pulse duty with a very low dissipation factor.

The DS200IQXDG1A board is marked with code 6BA01 and with the GE logo. More information regarding the operation or installation of the board can be found through GE publications like manuals or data sheets.

The previous information represents about the extent of original DS200IQXDG1A Snubber Card hardware specification information that can be retrieved from the product's original instructional manual materials and a visual inspection. Due to the low general availability of this DS200IQXDG1A device's original pertinent instructional manual materials, the DS200IQXDG1A functional product number itself can be considered a strong source of DS200IQXDG1A Inverter Snubber Card hardware information.

The DS200IQXDG1AAA functional product number begins with the DS200 Series tag detailing this DS200IQXDG1A product's normal Mark V Series assembly style and domestic location of original manufacturer. This tag is followed in the DS200IQXDG1A functional product number by an instance of the IQXD functional product abbreviation, which was created to exist as an accessible shorthand promotional and conversational alternative to the lengthy DS200IQXDG1A functional product number. This IQXD functional acronym is itself followed in the DS200IQXDG1A product number by another dual-functional naming component in the G1 series grouping tag exposing this DS200IQXDG1A Card's normal style of PCB coating and its group one Mark V Series grouping. The final A digit slapped on the tail end of the DS200IQXDG1A functional product number is reminiscent of this DS200IQXDG1A PCB's A-rated functional product revision.

Product Specifications

Part Number: DS200IQXDG1AAA

Manufacturer: General Electric

Series: Mark V

Product Function: Inverter Snubber Card

Power Requirements: +5 V dc, 6 A

Number of relay channels: 12

Power supply voltage: 28 V dc

Voltage Range: 18 - 32 VDC

Operating temperature: -30 to +65 degrees Celsius

Size: 15.9 cm high x 17.8 cm width

Repair: 3-7 Day

Availability: In Stock

Country of Manufacturer: United States (USA)

Manual: GEI-100220

Functional Description

The DS200IQXDG1AAA is an Inverter Snubber Card designed by General Electric for the Mark V Series within GE Speedtronic Control Systems. This card is used in power electronics and inverter systems to mitigate issues associated with voltage spikes and switching transients. When power semiconductors (such as IGBTs or MOSFETs) switch within an inverter, they generate high-frequency transients and voltage spikes. The snubber card contains passive components like resistors, capacitors, and sometimes inductors that are strategically connected to these switching devices to absorb and dissipate the energy generated during the switching process. This process reduces stress on semiconductors, minimizes electromagnetic interference (EMI), and enhances overall system reliability.

Features

Voltage Spike Suppression: The primary function is to suppress voltage spikes created during the switching of power semiconductors, preventing damage to the inverter system's components.

Transient Protection: Addresses high-frequency transients produced during switching events to ensure stable and reliable inverter operation.

Energy Absorption: Designed to absorb and dissipate excess energy released during the switching process, preventing stress on semiconductors and improving system robustness.

Reduced Electromagnetic Interference (EMI): By suppressing transients and voltage spikes, the card reduces electromagnetic interference, which can otherwise adversely affect communication systems and nearby electronic components.

Voltage Overshoot Reduction: Assists in minimizing voltage overshoots during switching transitions, ensuring the output voltage stays within acceptable limits.