GE GE □□□ Series Service Manual

IS200RCSAG1ABB

1. Description

IS200RCSAG1ABB Technical Specifications

2. Specifications

Specification	Value
Manufacturer	**GE Industrial Systems**
Series	**EX2100**
Part	**Number IS200RCSAG1ABB**
Functional	**Acronym RCSA**
Functional	**Description RC Snubber Board**
PCB	**Coating Normal Coating**
Functional	**Revision 1 A**
Functional	**Revision 2 B**
Artwork	**Revision B**
About	**the IS200RCSAG1ABB**
This	**IS200RCSAG1ABB RC snubber assembly was manufactured by the industrial giant retailer General Electric, more specifically by their GE Industrial Systems shell manufacturer that handles the creation of all EX2100 Excitation Control System Series products. This particular PCB or printed circuit board is a modified version of the original IS200RCSAG1 parent board; featuring three significant product revisions rated at A, B and B grades respectively. The IS200RCSAG1ABB PCB is better-definable as its manual-specified functional description as a RC Snubber Board, which happens to align exactly with the RCSA functional product acronym.**

3. Product Information

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Manufacturer GE Industrial Systems

Series EX2100

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Functional Acronym RCSA

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PCB Coating Normal Coating

Functional Revision 1 A

Functional Revision 2 B

Artwork Revision B

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Hardware Tips and Specifications

Before attempting to interpret or identify the various hardware components available affixed to the base board of this IS200RCSAG1ABB RC Snubber Board, it is important first to understand the full range of this board's intended functionalities and applications. The primary purpose of this IS200RCSAG1ABB board's creation was to provide snubber circuits for 1800 or 1000 Innovation Series nonregenerative sources' SCR or diode-type modules. An additional application of this RCSA-abbreviated board can be identified in its noise isolation for applicable gate drive circuits.

After a description of this Innovation Series Board's functionality, some of its hardware components should be well-contextualized. A primarily-highlightable hardware component employed by the IS200RCSAG1ABB RC Snubber Assembly is its two sets of SCR and diode connections, which are included in this board's assembly with the purpose of physical difference consideration between physical viable 1800 and 1000 frame units within the Innovation Series. As mentioned above, this IS200RCSAG1ABB RCSA board makes use of a series of snubber circuits; two identical circuits per board. One of these snubber circuits corresponds with this board's SCR connection, while the other corresponds to the previously-described diode connection. Each snubber circuit features different pulse width, frequency, and peak voltage values, depending on the circuit's status as measuring resistance of capacitance. It is important to note that this RCSA snubber assembly does not make use of any manually-moveable jumpers or customizable hardware components, although four factory-drilled holes are included in its assembly for installation purposes.

SPECIFICATIONS:

Part No:IS200RCSAG1ABB Manufacturer: General Electric

Function: 1800/1000Frame RC Snubber Board Series: Mark VI Speedtronic /EX2100 Operating temperature: -35to 65℃ Power Supply Voltage:25 V dc

Ethernet UDH: High-speed communication PCB Coating: Normal

Board Size:23.8 cmhighx8.6 cm Weight:0.45 kgs Availability:In Stock Country of Origin: USA Manual: GEI-100303

FUNCTIONAL DESCRIPTION:

IS200RCSAG1ABB is a 1800/1000 Frame RC Snubber Board manufactured and designed by General Electric as part of the EX2100 Series used in the GE Excitation Control System. Its primary function is to protect power semiconductors--typically silicon-controlled rectifiers(SCRs)--from high-voltage transients that occur during switching.When SCRs rapidly transition between on and off states, they can generate sharp voltage spikes due to the system's inductive load. The RCSAG1A board mitigates these spikes by absorbing and dissipating excess energy through a resistor-capacitor (RC) network. This helps prevent electrical overstress, minimizes electromagnetic interference (EMI).and reduces the likelihood of component failure or insulation damage. In high-power applications,such protection is critical for ensuring long-term reliability and maintaining the safe operation of the excitation bridge.

SNUBBER CIRCUIT:

Each board includes two identical resistor-capacitor(R/C) snubber circuits--one associated with theSCR and the other with the diode. These snubber circuits are designed to suppress voltage transients and limit the rate of voltage rise (dv/dt) across the power devices, which helps prevent unintentional triggering of the SCR and reduces electrical stress on both components. The power device is connected across its corresponding snubber network, with theR/C circuit bridging the anode and cathode terminals. This configuration ensures effective damping of switching transients and improved reliability and longevity of the power semiconductor devices during high-speed switching operations or in the presence of inductive loads. Proper snubber operation also contributes to enhanced electromagnetic compatibility (EMC) by minimizing voltage spikes that could otherwise propagate through the system.

APPLICATION DATA:

The RCSA board is a passive. support-oriented circuit board designed without any onboard active components or user-accessible features. It does not include fuses. test points. LED indicators, or any movable hardware, emphasizing its role as a dedicated snubber interface for power devices rather than a diagnostic or control module.Each board is mechanically and electrically supported by the corresponding SCR/diode module for each phase. These power modules not only serve as the functional components in the circuit but also act as the primary mounting structure for the RCSA board, ensuring a compact and efficient assembly.