GE GE □□□ Series Service Manual

IS200EXAMG1BAA

1. Description

SPECIFICATIONS

2. Specifications

Specification	Value
Part	**/ Model Number IS200EXAMG1BAA**
Revision	**BAA**
Manufacturer	**General Electric**
PCB	**Coating Type Normal Coating**
Mark	**VI Series Grouping Group 1**
Revision	**Total 3 Revisions**
Backwards-Compatibility	**1st two revisions**
About	**the IS200EXAMG1BAA**
The	**IS200EXAMG1BAA is used as an Exciter Attenuator Module. This module works together with the EGDM board as a field ground detector to protect the system's generator shaft. Together, these two boards can detect any ground paths from exciter components that may be present. The IS200EXAMG1BAA acts to drive the electrical center of the field winding with a low-frequency ac voltage relative to ground. The IS200EXAMG1BAA is built with two female connectors, including one female 3-position plug (J1) and a female nine-position cable connector (J2) that is also labeled "Ground Detector." The circuit card has:**

3. Product Information

SPECIFICATIONS

Part No.: IS200EXAMG1BAA

Manufacturer: General Electric

Country of Manufacture: United States of America (USA)

Temperature rating: 0 to 60 oC

Product Type: Exciter Attenuation Module

Availability: In Stock

Series: EX2100e

Functional Description

IS200EXAMG1BAA is an Exciter Attenuation Module developed by GE. It is a part of EX2100e excitation system. The Exciter Attenuation Module (EXAM) is an integral component of the ground detection system for the EX2100 Excitation Control system. The component offers robust connectivity and configuration options essential for its effective operation within the system, ensuring reliable performance and compatibility

Features

Ground Detection: Combined with the Exciter Ground Detector Module (EGDM), the EXAM detects ground faults within the system.

Attenuation: It attenuates signals between the field bus and the EGDM, scaling high voltage from the bridge to a usable level.

Mounting: The EXAM is installed within the High Voltage Interface (HVI) module situated in the auxiliary cabinet.

Location: Its placement in the HVI module ensures optimal functionality within the system.

Interconnection: The EXAM and EGDM(s) are linked via the Exciter Power Backplane (EPBP), facilitating seamless communication.

Cabling: A single 9-pin cable establishes the connection between the EXAM and the EPBP, ensuring efficient data transmission.

Simplicity and Redundancy: Regardless of the system configuration (simplex or triple modular redundant), only one EXAM is necessary, streamlining installation and maintenance.

Consistency in Interconnection: The interconnection remains consistent across different configurations, simplifying integration and troubleshooting processes.

Integration Options

Exciter/Regulator Interface: In certain EX2100 versions, the EXAM interfaces with the Exciter/Regulator Options Board (EROC) instead of the EGDM, providing equivalent ground detection functionality.

Exciter Ground Detector Module (EGDM): The Exciter Ground Detector Module (EGDM) collaborates with the EXAM to enhance ground detection capabilities within the EX2100 Excitation Control system.

Computational Power: The Digital Signal Processor Control Board (DSPX) furnishes computational capabilities for the ground detection system, ensuring robust performance.

PGDM: The EXAM is also utilized in a standalone simplex ground detector product known as PGDM.

Integration Components: Interface boards (BGTB and BFGD) and the processor board (BPPB) complement the EXAM in PGDM, offering similar functionality to EX2100-based boards.

Application Data

Connectors:

Connector J2: This is a 9-pin D connector used for test signal transmission, relay control, and monitoring leakage current.

Connector J1: This is a three-pin locking connector that connects to the cable leading to the field flashing relay auxiliary contact, enabling communication and coordination with external components.

Stab-on Connectors:

E1 and E2: These connectors establish the connection between the field bus voltages and the attenuator module, ensuring seamless transmission and regulation of voltage levels.

Terminal:

Terminal TB1: This terminal serves as the connection point for linking the EXAM board shield ground to the chassis ground in the cabinet, ensuring proper grounding and electrical safety.

Jumpers:

Jumpers JP1, JP2, and JP3: These adjustable jumpers configure the module for the various potential transformer (PPT) secondary voltages that may be applied, ensuring compatibility and optimized performance based on the specific voltage requirements of the application.

Other Features:

Omission of Testpoints, Fuses, and LED Indicators: The EXAM module does not incorporate testpoints, fuses, or LED indicators, focusing instead on essential connectivity and configuration elements.

Integration and Configuration:

Flexibility and Adaptability: The presence of diverse connectors, terminals, and jumpers enhances the module's flexibility, allowing for seamless integration into different system configurations and environments.

Application Flexibility:

Customization for PPT Secondary Voltages: The inclusion of adjustable jumpers enables the configuration of the module to accommodate various PPT secondary voltages, providing versatility and adaptability to different power supply setups.

IS200EXAMG1BAA Technical Specifications

Part / Model Number IS200EXAMG1BAA

Revision BAA

Manufacturer General Electric

PCB Coating Type Normal Coating

Mark VI Series Grouping Group 1

Revision Total 3 Revisions

Backwards-Compatibility 1st two revisions

About the IS200EXAMG1BAA

The IS200EXAMG1BAA is used as an Exciter Attenuator Module. This module works together with the EGDM board as a field ground detector to protect the system’s generator shaft. Together, these two boards can detect any ground paths from exciter components that may be present. The IS200EXAMG1BAA acts to drive the electrical center of the field winding with a low-frequency ac voltage relative to ground. The IS200EXAMG1BAA is built with two female connectors, including one female 3-position plug (J1) and a female nine-position cable connector (J2) that is also labeled “Ground Detector.” The circuit card has:

one screw connection for the use of surface wiring (TB1,)

three jumper switches

two stab-on connectors labeled E1 (Vbus-p) and E2 (Vbus-n.)

two metal oxide varistors

one relay

four large polyester-vinyl capacitors

twenty wire-wound resistors

IS200EXAMG1BAA Hardware in Number Form

The IS200EXAMG1BAA product number is started off through an instance of the dual-functional IS200 series tag indirectly asserting this IS200EXAMG1BAA device's normal Mark VI Series assembly type as well as its domestic original manufacture location. Some of the other relevant IS200EXAMG1BAA details revealed in this manner include its:

EXAM functional product abbreviation

Normal PCB coating style

Group one Mark VI Series grouping

Three-fold revision table