GE Service Manual

IS200EGDMH1AAB

1. Description

IS200EGDMH1AAB Technical Specifications

2. Specifications

Specification	Value
Manufacturer	**General Electric**
Series	**Mark VI Speedtronic**
Functional	**Part Number IS200EGDMH1AAB**
Product	**Description IS200EGDMH1AAB EXAM Ground Detector Module**
Revision	**Total 3 Revisions**
Backwards-Compatibility	**1st two revisions**
Assembly	**Type Normal Assembly**
About	**the IS200EGDMH1AAB**
The	**IS200EGDMH1AAB functions as an Exciter Ground Detector Module. This board works in conjunction with an EXAM board to detect field ground leakage current. It is worth noting a simplex system uses one of these boards, while a redundant system will use three. This module can detect field leakage from both the ac and the dc side of the field circuit. In redundant systems, these boards are configured as <C> Controller, <M1> Master 1, and <M2> Master 2. Each of these configurations is controlled by pins on the P2 connector. More information about the placement and wiring of these boards can be found in GEH-6632, EX2100 Excitation Control User's Guide. The IS200EGDMH1AAB is built with a front faceplate. This is**

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two backplane connectors (P1 and P2)

a single relay

seven high voltage capacitors

integrated circuits

metal film resistors

a CPU socket

Most components are marked with reference designators. AX Control offers multiple shipping options using a variety of carriers. Most in-stock products can ship same-day if ordered by 3 pm. Please let your sales representative know if you have any special shipping requirements.

IS200EGDMH1AAB Product Number Hardware

The specially-formatted IS200EGDMH1AAB EXAM Ground Detector Module functional product number begins with an iteration of the dual-functional IS200 series tag delegating this IS200EGDMH1AAB EXAM Ground Detector Module PCB's normal Mark VI Series assembly on top of its typical domestic original location of GE manufacture. Some of the other important IS200EGDMH1AAB EXAM Ground Detector Module qualities revealed through this medium include its:

EGDM functional product acronym

Group one Mark VI Series grouping

Three-fold revision total

Conformal PCB coating style

Specifications

* **Part No.:** IS200EGDMH1AAB
* **Manufacturer:** General Electric
* **Country of Manufacture:** United States of America (USA)
* **Size:** 15.9 cm high x 10.2 cm wide
* **Temperature:** -30 to +65°C
* **Technology:** Surface-mount
* **Product Type:** Exciter Ground Detector Module
* **Availability:** In Stock
* **Series:** EX2100

Functional Description

The IS200EGDMH1AAB is an Exciter Ground Detector Module developed by GE as part of the EX2100 excitation system. It is an integral component designed to ensure the reliability and safety of generator field circuits by detecting potential ground faults. The module uses a double-slot, double-height (6U) form factor and fits into the Exciter Power Backplane rack (EPBP). By integrating into the system architecture and collaborating with the EXAM module, it contributes to the prompt identification and resolution of ground fault issues, enhancing operational safety.

Features

* **Field Ground Detection:** The module's primary function is to detect field leakage resistance between any point in the generator field circuit and ground. This covers both alternating current (AC) and direct current (DC) sides of the circuit to identify abnormal leakage that could pose safety hazards.
* **System Configuration:** In a simplex system configuration, a single EGDM module is used. In a redundant system setup, three EGDM modules are employed to provide robust ground fault detection capabilities across the generator field circuit.
* **Module Location:** The module's placement within the system rack or chassis is optimized for functionality and accessibility during operation and maintenance.
* **EXAM Module Interaction:** The Ground Detection Module collaborates with the EXAM (Excitation AMPlifier) module, which acts as an attenuator sensing the voltage across the ground sense resistor. This voltage signal is transmitted via a specialized nine-conductor cable. The EXAM module is housed within the High Voltage Module in the Auxiliary Panel.

Fiber-optic Connectors

Two distinct fiber-optic connectors facilitate signal transmission between the EGDM module and the EISB (Excitation ISB) board:

* **Lower Fiber-Optic Connector (U201):** Carries the oscillator signal from the EISB board to the Ground Detection Module. It utilizes a Hewlett Packard HFBR2528 receive connector designed for reliable optical signal reception.
* **Upper Fiber-Optic Connector (U305):** Sends the sense resistor signal from the EGDM module to the EISB board. It employs a Hewlett Packard HFBR1528 transmit connector

designed for efficient optical signal transmission, completing bidirectional communication.

LED Indicators

* **Upper LED (Power Status Indicator):** When illuminated, this denotes that the board is receiving power from the backplane.

* **Middle LED (Master Selection Indicator):** When illuminated, this indicates that the specific board has been selected as the master within the system hierarchy.

* **Lower LED (Master Status and 50 Volt Signal Indicator):** This LED serves a dual purpose:

* It signifies that the board is currently functioning as the master within the system.

* It indicates that the master board is actively sending a 50-volt signal, related to its operational functionality or ground detection operations.