GE Service Manual

IS200EPDMG1ABA

1. Description

IS200EPDMG1ABA Technical Specifications

2. Specifications

Specification	Value
Board	**Description Exciter Power Distribution Module (EPDM)**
Board	**Type Power Supply Board**
DC	**Source Supply P125V and N125V**
Function	**Provide Power for Protection, I/O, and Control Boards**
Location	**Mounted on the side of the EPBP**
Nominal	**Voltages to the Ground +62.5 V and -62.5 V**
Power	**Supply from Station Battery 125 VDC**
About	**the IS200EPDMG1A**
The	**Exciter Power Distribution Module IS200EPDMG1ABA is used to distribute power for the input/output terminal, protection, and control boards within the EX2100 series. Typically the module is mounted on the side of the EPBP module.**

3. Product Information

IS200EPDMG1ABA Technical Specifications

Board Description Exciter Power Distribution Module (EPDM)

Board Type Power Supply Board

DC Source Supply P125V and N125V

Function Provide Power for Protection, I/O, and Control Boards

Location Mounted on the side of the EPBP

Nominal Voltages to the Ground +62.5 V and -62.5 V

Power Supply from Station Battery 125 VDC

About the IS200EPDMG1A

The Exciter Power Distribution Module IS200EPDMG1ABA is used to distribute power for the input/output terminal, protection, and control boards within the EX2100 series. Typically the module is mounted on the side of the EPBP module.

The power supply that comes through the IS200EPDMG1ABA must be filtered, and the VAC of 115 on the EPDM needs to filter to a VDC. To do so the IS200EPDMG1A module will be used in conjunction with a DACA module which will take the 115 VAC and filter it to 125 VDC. When the VAC has been converted to a VDC, the two or potentially three VDC will be conjoined to create the DC source supply that will be labeled as P125V and N125V. When the center has been grounded a nominal voltage of -62.5 V and +62.5 V will be apparent.

On one side of the IS200EPDMG1ABA board, there are seven toggle switches. There are also twelve female plug connectors, two of the connectors are twelve-position connectors. The outputs that occur on the EPDM module can be sent to three EPSM modules, an EXTB board, and up to three EGPA boards.

Specifications

* **Part Number:** IS200EPDMG1ABA
* **Manufacturer:** General Electric
* **Series:** EX2100
* **Product Type:** Exciter Power Distribution Module
* **Number of channels:** 12
* **Input span:** 4-20 mA
* **Technology:** Surface Mount
* **Common Mode Voltage Range:** ±5 V
* **Maximum Lead Resistance:** 15 Ω
* **Analog output current:** 0-20 mA
* **Operating temperature:** -30 to 65 °C
* **Size:** 8.26 cm high x 4.19 cm
* **Availability:** In Stock
* **Country of Origin:** United States
* **Manual:** GEI-100511

Functional Description

The IS200EPDMG1ABA is an Exciter Power Distribution Module (EPDM) used in the EX2100 Excitation Control system to provide power to the exciter's control, I/O, and protection boards. It is mounted on the side of the IS200EPBP Exciter Power Backplane. The module receives 125 V DC power from the station battery and accepts one or two 120 V AC power inputs for backup. These inputs are filtered and rectified via an external AC to DC Converter (DACA) to create the P125V and R125V DC source power, which are center grounded at nominally +62.5 V and -62.5 V. The EPDM powers three IS200EGPA boards, one IS200EXTB board, and three IS200EPSM modules.

Application Data

The EPDM module consists of a 24-point terminal block, ten plug connectors, seven switches, fourteen fuses, four grounded mounting holes, eight LED indicators, and one adjustable jumper. Connectors are rated for 600 V AC or DC, the terminal board is rated for 300 V (10 A per pin), and switches are rated for 125 V DC, 6 A.

Key features include:

* **Voltage Regulation:** Maintains consistent voltage levels for the generator's field winding.
* **Automatic Voltage Control:** Adjusts automatically to compensate for load variations.
* **Fault Detection and Protection:** Includes built-in mechanisms to protect against overvoltage, undervoltage, and short circuits.
* **Redundancy and Reliability:** Designed to ensure continuous operation during component failures.
* **Communication Interfaces:** Supports integration with SCADA systems via protocols like RS-232, RS-485, and Ethernet.
* **Scalability:** Allows for easy expansion to accommodate additional loads.
* **High Efficiency:** Operates with high efficiency to minimize energy losses.