GE GE □□□ Series Service Manual

IS200ERBPG1ACA

1. Description

IS200ERBPG1ACA Technical Specifications

2. Specifications

Specification	Value
Functional	**Part Number IS200ERBPG1ACA**
Revision	**ACA**
Series	**EX2100 Exciter Turbine Control**
Manufacturer	**GE Industrial Systems**
Country	**of Manufacture USA**
Assembly	**Type Normal Assembly**
Functional	**Abbreviation ERBP**
Frequently	**Asked Questions about IS200ERBPG1ACA**
Was	**this IS200ERBPG1ACA Exciter Backplane Board device manufactured domestically?**

3. Product Information

IS200ERBPG1ACA Technical Specifications

Functional Part Number IS200ERBPG1ACA

Revision ACA

Series EX2100 Exciter Turbine Control

Manufacturer GE Industrial Systems

Country of Manufacture USA

Assembly Type Normal Assembly

Functional Abbreviation ERBP

Frequently Asked Questions about IS200ERBPG1ACA

Was this IS200ERBPG1ACA Exciter Backplane Board device manufactured domestically?

Yes. This IS200ERBPG1ACA Exciter Backplane Board product was originally domestically-manufactured in General Electric's Salem, Virginia factory plant location.

What is the purpose of the ERBP functional product acronym?

The ERBP functional abbreviation was created to act as a shortened functional alternative to the lengthy IS200ERBPG1ACA Exciter Backplane Board product number itself.

About the IS200ERBPG1ACA

The IS200ERBPG1ACA was a product manufactured by GE distributed as a part of the Mark VI series. As a vital portion of the Speedtronic system, the Mark VI was developed throughout the 1990s as a regulator for gas and steam-powered turbines. The Mark VI Turbine Control System Series that this IS200ERBPG1ACA Exciter Backplane Board device belongs to, as should have been indicated above, is something of a self-described GE Mark product series, as it exists with a set of possible functional environments particularly in the control and management systems of popular and General Electric-compatible gas, steam, and wind turbine automated drive assemblies. This is actually a significant functional upgrade upon the previously-released industry standard of the Mark V Turbine Control System Series possessing more or less the same full extended product series title, as the Mark VI Series added the more alternative energy-friendly wind turbine possible functional application onto the earlier-established gas and steam turbine-based options.

Hardware Tips and Specifications

The IS200ERBPG1ACA was constructed to be part of a Central Control Module (13- or 21- slot VME card rack,) which connected on termination boards including a box-type or barrier terminal blocks. Users could access data drawn from the controlling module which made use of an interrelated operator junction (HMI) loaded with cohesive software intended for superior turbine supervision, such as GE’s CIMPLICITY graphics platform. The IS200ERBPG1ACA was an ERBP (Exciter Regulator Backplane.) It typically was used in GE’s EX2100 Control System, which was a third-generation digital excitation scheme. This system was intended to assimilate with the Mark VI and its HMI deprived of any issues. It could also fit in with a stand-alone retrofit application using an Ethernet Modbus or serial communication protocol. This IS200ERBPG1ACA Exciter Backplane Board printed circuit board product offering or just PCB for short is actually not General Electric's originally-developed device of its specific GE Mark VI Turbine Control System Series functionality; that would have to be deemed the IS200ERBPG1 parent Exciter Backplane Board notably not taking advantage of this IS200ERBPG1ACA Exciter Backplane Board device's three-fold extended revision table. The IS200ERBPG1ACS was created to have a large outward rectangular case. This was open on one side to allow for the insertion of various components and cards. Other areas on the card were perforated to allow for easy airflow. A few of the edges on the casing were fitted with flanges which had small industrial holes drilled through them allowing for easy mounting. The module had a small airflow fan installed toward the rear surface. The ERBP provided communication amongst all the boards mounted within it. These included boards such as IGBT, EPSM, ERDD, ERIO, ACLA, and DSPX. For a comprehensive list of circuit boards connected within the product including ones mounted by means of cable connectors, please look for GE manual GEI-100488a. This IS200ERBPG1ACA Exciter Backplane Board device's originally-printed instructional manual is unfortunately largely unavailable online, which means that this IS200ERBPG1ACA Exciter Backplane Board personalized product page here tends to the rely on the IS200ERBPG1ACA Exciter Backplane Board functional product number in large part. The IS200ERBPG1ACA Exciter Backplane Board functional product number codes for a number of critical IS200ERBPG1ACA Exciter Backplane Board details through a series of consecutive functional naming chunks.Some of these qualities include this IS200ERBPG1ACA Exciter Backplane Board's:

Normal PCB assembly version

Domestic manufacture location

Group one Mark VI Series product grouping

Three-fold product revision table

SPECIFICATIONS:

Part Number: IS200ERBPG1ACA

Manufacturer: General Electric

Series: EX2100

Product Type: Exciter Regulator Backplane

Number of channels: 12

Input span: 4-20 mA

Common Mode Voltage Range: ±5 V

Maximum Lead Resistance: 15Ω

Analog output current: 0-20 mA

Operating temperature: -30 to 65 °C

Size: 8.26 cm high x 4.19 cm

Repair: 3-7 Day

Availability: In Stock

Country of Origin: United States

Manual: GEI-100521A

FUNCTIONAL DESCRIPTION:

IS200ERBPG1ACA is an Exciter Regulator Backplane manufactured and designed by General Electric as part of the EX2100 Series used in GE Excitation Control Systems. The IS200ERBPG_A Exciter Regulator Backplane (ERBP) is used in EX2100 regulator control systems. The ERBP provides connectivity between all printed circuit boards mounted within it.

Power connectors are provided on the front for other external boards that it supports and for fan power output. Overall ERBP architecture is not VME compliant. It provides 3U or 6U versa module euro (VME) 96-pin or 128-pin DIN backplane connectors for boards mounted within it. Power is distributed to the mounted boards through these connectors. The ERBP includes a board identification (ID) serial bus for all installed boards. The boards mounted within the ERBP contain a board ID device that is programmed with the barcode serial number, board type, and hardware revision. The board ID device interfaces with the control associated with the specific backplane slot. It also provides master selection jumpers for simplex or redundant exciter regulator applications.

FEATURES:

Control Interfaces: The backplane often includes various control interfaces such as analog inputs, digital inputs, and outputs to interface with external control systems or sensors.

Communication Ports: Modern backplanes may include communication ports such as RS-485, Ethernet, or Modbus for communication with supervisory control and data acquisition (SCADA) systems or other monitoring devices.

Power Supply: It typically includes a power supply section to provide power to the exciter system components and possibly auxiliary systems.

Protection Circuits: Backplanes often incorporate protection circuits to safeguard the exciter system and the generator from overvoltage, overcurrent, and other faults.

Monitoring and Diagnostics: Some backplanes feature built-in monitoring and diagnostic capabilities to allow operators to track the performance of the excitation system and diagnose any issues that may arise.

Redundancy: In critical applications, redundancy features such as redundant power supplies or communication links may be included to ensure continuous operation even in the event of a component failure.

Modularity: Backplanes may be designed with modular components to facilitate easy maintenance and upgrades without requiring extensive system downtime.

Compatibility: They are often designed to be compatible with various exciter and generator models, allowing for flexibility in system integration and retrofitting.

Remote Control Capability: Some backplanes support remote control functionality, enabling operators to monitor and adjust the excitation system parameters from a remote location.

User Interface: Depending on the application, the backplane may include a user interface such as a touchscreen display or keypad for local configuration and monitoring.