GE GE □□□ Series Service Manual

IS200CABPG1BAA

1. Description

IS200CABPG1BAA Technical Specifications

2. Specifications

Specification	Value
Manufacturer	**General Electric**
Series	**Mark VI Speedtronic**
Functional	**Part Number IS200CABPG1BAA**
Functional	**Abbreviation CABP**
Revision	**Total 3 Revisions**
Backwards-Compatibility	**1st two revisions**
Assembly	**Type Normal Assembly**

3. Product Information

IS200CABPG1BAA Technical Specifications

Manufacturer General Electric

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Revision Total 3 Revisions

Backwards-Compatibility 1st two revisions

Assembly Type Normal Assembly

About the IS200CABPG1BAA

The IS200CABPG1BAA is a Control Assembly Backplane (CABP) made by General Electric for its Innovation Series. The Innovation Series that this IS200CABPG1BAA product offering belongs to is actually a component subseries of the greater Mark VI Turbine Control System Series that it is generally attributed to. This IS200CABPG1BAA printed circuit board product offering's greater Mark VI Turbine Control System Series has to be deemed as existing as a massive functional improvement upon the previous industry-standard Mark V Turbine Control System Series of a similar full extended series title, as the Mark V Series' established gas and steam-based environments were added on to by the alternative energy-based wind turbine possible environments established with the advent of this IS200CABPG1BAA device's Mark VI Series. The Mark VI Turbine Control System Series is also seen as an attractive prospect on relevant markets for its nature as one of the last-released GE Mark product series utilizing the patented Speedtronic control system technology from GE.

Hardware Tips and Specifications

The IS200CABPG1BAA is typically a replacement board for the backplane on an Innovation series rack assembly. The rack is not provided with this board and is sold separately. The rack provides additional installation points for the boards that are being installed. Other PCBs are plugged into the 5 slots on the IS200CABPG1BAA and are allowed to interact and interface with external signals. Connections to these external interfacing components are provided with this board. These connections include ISBus ports, power supply inputs, diagnostic tools, a front panel keypad, and front panel meters. According to the IS200CABPG1BAA Instructional Manual originally-printed by General Electric and included above in our manuals tab for your every convenience of research, this IS200CABPG1BAA device is but a component product of many that make up the crucial Innovation Series automated drive assembly. Many of these other Innovation Series products are available for purchase and repair here through AX, including the:

IS200BAIA Bridge Interface Board

IS215GBIA Auxiliary Genius Interface Module

IS215PBIA Auxiliary Profibus Interface Module

IS200ACL_ Application Control Layer Board

IS200DSPX Digital Signal Process Control Board

IS200RAPA Rack Power Supply Board

IS200BIC_ Bridge Interface Board

IS200BPI_ Drive Bridge Personality Interface Board

IS200FOSA Bridge Interface Board

The IS200CABPG1BAA has plugs that are designed to not allow non-board connections to accidentally be plugged into the wrong jack. The PCBs being plugged into the backplane should be installed carefully because while they do use different connections that are individually keyed, it is easy to damage the board by sliding it into the wrong slot. Slot 1 on the backplane is assigned to the BAIA board. Slot 2 is assigned to the DSPX board. Slot 3 is designated for the ACL_ board to the GBIA/PBIA modules. Slot 4 is for the BIC_ board. Slot 5 is meant to be for a BPI_ or FOSA board. There are two stab-on connectors that are labeled E1 and E2 that go to GND. There are two other stab-on connectors labeled E3 and E4 that go to CCOM. There are 21 jumpers on this board. J1-J12 jumpers are external interfaces. J13-J21 are the actual card slots on the backplane. Please refer to GEI-100268A for more information about this board.

SPECIFICATIONS

Part No.: IS200CABPG1BAA

Manufacturer: General Electric

Country of Manufacture: United States of America (USA)

Temperature: -30 to 65oC

Technology: Surface-mount

Product Type: Control Assembly Backplane

Availability: In Stock

Series: Drive Control

Functional Description

IS200CABPG1BAA is a control assembly backplane developed by GE. It is a part of the drive control series. The Control Assembly Backplane (CABP) board represents a pivotal component within the intricate architecture of the Innovation Series drive system. As a multi-layer printed wiring board, its primary function revolves around facilitating the seamless interconnections necessary for the various printed wiring boards inserted into it, while also serving as a conduit for crucial external signal interfaces.

Supported Boards

Bridge Interface Board (BAIA): This board facilitates essential bridge interface functionalities crucial for the system's operation.

Auxiliary Genius Interface Module (GBIA), Auxiliary Profibus Interface Module (PBIA), or Application Control Layer Board (ACL_): These boards augment the system's capabilities in auxiliary control and interface tasks, catering to various operational demands.

Digital Signal Process Control Board (DSPX) (Optional): This optional board provides advanced digital signal processing capabilities, enhancing the system's functionality.

Rack Power Supply Board (RAPA): Integral for managing power distribution within the system, ensuring efficient and reliable power delivery.

Bridge Interface Board (BIC_): Another variant of the bridge interface board, offering flexibility in system configuration.

Drive Bridge Personality Interface Board (BPI_) or Bridge Interface Board (FOSA): These boards facilitate seamless interaction between the drive and its associated bridge personalities, optimizing performance.

External Interface Connectors

User Control Inputs/Outputs (I/O): Enabling user interaction and control over the drive system's functionalities.

Front Panel Meters: Providing real-time monitoring of key system parameters for enhanced operational visibility.

Diagnostic/Configuration Tools: Essential for diagnosing issues and configuring the drive system to meet specific operational requirements.

Front Panel Keypad: Facilitating user-friendly input and control access directly from the drive system's front panel.

ISBus Ports: Enabling communication with other ISBus-compatible devices, fostering interoperability within broader control systems.

Power Supply Inputs: Ensuring reliable power input to sustain the system's operation under varying conditions.

Mounting and Integration

Securely mounted onto the Innovation Series board rack, leveraging its designated mounting points.

This integration within the rack structure not only ensures the secure housing of individual boards but also reinforces the structural integrity of the overall system, contributing to its robust and reliable performance across diverse operational scenarios.

Hardware Features

Terminal Board Placement: The terminal boards associated with the board for user Input/Output (I/O) functionalities are strategically positioned near the entry point of application cables into the cabinet. This placement ensures convenient access and efficient connectivity within the system setup.

Cable Connection: Connection to these terminal boards is facilitated through two distinct multi-conductor cables, meticulously segregated to cater to differing voltage requirements. One cable is dedicated to low-voltage applications (less than 50 volts), while the other is designated for high-voltage applications (greater than 50 volts). This meticulous separation mitigates potential risks and ensures safe operation within specified voltage parameters.

Connector Design: The design of the board incorporates meticulous measures to prevent erroneous connections and safeguard against operational mishaps. Non-board connectors are ingeniously engineered to be incapable of incorrect insertion, employing a variety of methods

Diverse Connector Types: Different connector types are utilized for each distinct function, ensuring compatibility while preventing misconnections.

Unique Keying Mechanisms: Each connector is uniquely keyed, thereby eliminating the possibility of incorrect insertion by ensuring that connectors only fit into their designated sockets.

Spatial Separation: Similar connectors are spaced apart with ample separation, rendering incorrect insertion physically impossible. This spatial arrangement enhances operational safety and reduces the likelihood of inadvertent errors.

Connector Integrity: The connectors employed on the board uphold stringent standards of integrity and compatibility, further enhancing the reliability and robustness of the system. These connectors adhere to one of the following principles

Individual Keying: Each connector is individually keyed to its corresponding socket, guaranteeing precise alignment and secure attachment.

Diverse Connector Sizes: Similar modules utilize different connector sizes, such as 96-pin versus 128-pin variants, ensuring clear differentiation and preventing interchangeability issues.

Common Pin Assignments: Modules feature common pin assignments across compatible connectors, facilitating seamless interchangeability without risk of damage or operational impairment.