GE GE □□□ Series Service Manual

IS210BAPAH1A

1. Description

SPECIFICATIONS:

2. Specifications

Specification	Value
Manufacturer	**GE Industrial Systems**
Series	**Mark VI Speedtronic**
Functional	**Acronym BAPA**
Part	**Number IS210BAPAH1A**
Functional	**Description Analog Processor Module**
PCB	**Coating Conformal Coating**
Functional	**Revision 1 A**
About	**the IS210BAPAH1A**
The	**IS210BAPAH1A functions as an Analog Processor module. It is a component for the Mark VI or the Mark VIe systems. Both of these systems are from GE and have been designed to manage steam or gas turbines. The Mark VI is designed with central control, with the heart of the system being a Central Control Module with 13- or 21-slot VME card racks. This platform can be used for the integration of power island and balance of plant controls. Conversely, the Mark VIe is a distributed control system with control processing spread throughout the system via nodes. These nodes are then kept under the control of a central scheduler.**

3. Product Information

SPECIFICATIONS:

Part Number: IS210BAPAH1A

Manufacturer: General Electric

Series: Mark VI

Function: Analog Processor Module

Input Voltage: 125 V dc

Output Voltage: 24 V dc

Operating temperature: -30 to +65oC

Mounting: DIN-rail

Board Size: 23.495 cm high x 10.795 cm

Model Type: Safety I/O Pack

Repair: 3-5 Days

Availability: In Stock

Country of Manufacture: United States (USA)

Manual: GEH-6721

FUNCTIONAL DESCRIPTION:

IS210BAPAH1A is an Analog Processor Module manufactured and designed by General Electric as part of the Mark VI Series used in GE Speedtronic Gas Turbine Control Systems. The Analog Processor Module plays a crucial role in managing and regulating the analog signals associated with the operation of the turbine. Gas turbine control systems require precise monitoring and adjustment of various parameters to ensure optimal performance, efficiency, and safety. The Analog Processor Module aids in processing the continuous analog signals generated by sensors and instruments throughout the turbine system. Here are some specific aspects of how an Analog Processor Module functions in a gas turbine control system:

Sensor Interface: Gas turbines have numerous sensors that measure parameters such as temperature, pressure, speed, and fuel flow. The Analog Processor Module interfaces with these sensors to receive the analog signals representing these physical quantities.

Signal Conditioning: Analog signals from sensors may need to be conditioned before they are used for control purposes. The Analog Processor Module includes components like amplifiers, filters, and converters to condition and scale these signals appropriately.

Control Signal Generation: The processed analog signals are then utilized to generate control signals that govern various aspects of the gas turbine's operation. This could involve adjusting fuel flow rates, controlling the combustion process, or managing the turbine speed.

Feedback Control: Gas turbine control systems often employ feedback loops to continuously monitor the turbine's performance and make real-time adjustments. The Analog Processor Module may play a role in processing feedback signals to maintain stable and efficient operation.

Fault Detection and Diagnostics: Analog processors can be programmed to analyze analog signals for anomalies that might indicate faults or irregularities in the system. Early detection of issues is crucial for preventing damage and ensuring the turbine's reliability.

Compatibility with Digital Systems: While analog processing is essential, modern gas turbine control systems often integrate analog and digital components. The Analog Processor Module may interface with digital controllers and communication systems to exchange information and execute coordinated control strategies.

IS210BAPAH1A Technical Specifications

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Series Mark VI Speedtronic

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PCB Coating Conformal Coating

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Along with a SAMB terminal board, the IS210BAPAH1A makes up an Acoustic Monitoring Input pack. This pack supports dynamics for frame 6/7/9 gas turbines. The IS210BAPAH1A is built into a narrow black housing with openings at both the top and bottom to allow for air flow. The rear surface includes top and bottom flanges with mounting holes cut in their surface. The front faceplate has a single jack connector and two sets of LED indicators.