GE Service Manual

IS200JPDSG1ACB

1. Description

Here is the information from the provided documents regarding the IS200JPDSG1ACB Power Distribution Board:

3. Product Information

Here is the information from the provided documents regarding the IS200JPDSG1ACB Power Distribution Board:

Specifications

* **Part Number:** IS200JPDSG1ACB
* **Manufacturer:** General Electric
* **Series:** Mark VIe
* **Product Type:** Power Distribution Board
* **Country of Manufacture:** United States of America (USA)
* **Operating Temperature:** -30 to +65°C (-22 to +149°F)
* **Agency Approval:** Class 1 Division 2 explosive atmosphere
* **Size:** 16.51 cm high x 17.8 cm wide
* **Availability:** In Stock

Functional Description

The IS200JPDSG1ACB is a GE-developed Power Distribution Board designed for the Mark VIe control system. Mounted on a sturdy sheet metal framework, it is specifically built to accommodate a PPDA I/O pack. The board incorporates three distinct 28 V DC power buses, each with its own dedicated bulk power supply input. While most output circuits lack fuses, three auxiliary circuits are exceptions. The design utilizes the current limit of connected power supplies to protect branch circuits. It communicates with the PPDA via ribbon cable to exchange system feedback, including DC bus voltage, power supply status contact feedback, and auxiliary circuit status.

Installation

* **Mounting Options:** Can be mounted using either a vertical DIN-rail holder or a direct mounting metal holder.
* **Wiring Guidance:** Refer to specific wiring diagrams for proper routing of power inputs and outputs.
* **Diagnostic Connectors:** A 50-pin diagnostic connector is located on both the top and bottom of the board.

Operation

The board serves as a critical component in the power distribution system by ensuring the uninterrupted operation of various subsystems. It receives 28 V DC power through three input connectors (JR, JS, and JT) and distributes it efficiently to boards, which in turn power the I/O packs. Proper functioning is essential to maintain system stability, and regular monitoring is recommended.

I/O Characteristics

* **Power Input Connectors:** Three connectors (JR, JS, and JT) for 28 V DC power input. Each includes two connections for positive and three for negative power. Additionally, each source offers three power supply health inputs with two dry contact inputs each for diagnostic signals.
* **DC Outputs for Rack Control:** Three DC outputs (JCR, JCS, and JCT) are provided to control rack CPCI power supplies.
* **Outputs to JPDP Cards:** Six outputs (J1 to J6) are allocated via 3x2 Mate-N-Lok connectors, allowing for direct connection of up to six JPDL boards to supply I/O packs.
* **Auxiliary Power Outputs:** Three outputs (JAR, JAS, and JAT) are dedicated to auxiliary power. Each features a positive temperature coefficient fuse for current limiting and a common-mode choke for noise suppression.
* **Internal 28 V Bus Access:** Screw terminals (TB1 and TB2) provide access to the internal 28 V bus at the top and bottom of the board. These can handle a maximum continuous current of 35 A (75 A for the ground screw terminal) and can be used for jumpering boards together.
* **Diagnostic Interface:** A DC-62 connector facilitates connectivity with the PPDA power diagnostic I/O pack, which monitors the JPDS and up to five additional power distribution boards via a 50-pin ribbon cable.
* **P28 Power Output:** The P4 output is diode-ORed for the PPDA power diagnostic pack.