GE Service Manual

DS200PCCAG8ACB

1. Description

DS200PCCAG8ACB Technical Specifications

2. Specifications

Specification	Value
Manufacturer	**GE General Electric**
Series	**Mark V**
Part	**Number DS200PCCAG8ACB**
Functional	**Description Power Connect Card**
Instruction	**Manual GEI-100161**
Functional	**Acronym PCCA**
PCB	**Coating Normal Coating**
Functional	**Revision 1 A**
Functional	**Revision 2 C**
Artwork	**Revision B**
About	**the DS200PCCAG8ACB**
This	**DS200PCCAG8ACB printed circuit board product offering from General Electric was designed and produced specifically for placement in their Mark V Turbine Control System Series. The rather self-explanatory Mark V Series that this DS200PCCAG8ACB product belongs to has specific applications in the management and control systems of popular and compatible wind, steam, and gas turbine automated drive assemblies.**

3. Product Information

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This DS200PCCAG8ACB PCB's Mark V Series still attracts something of a good demand on the figurative automated industrial marketplace, as it exists as one of the lastly-produced GE Mark product series to make use of the patented Speedtronic control system technology first seen with the manufacture of the Mark I Series in the late 1960s.

This DS200PCCAG8ACB PCB is not the originally-manufactured product of its specific Mark V Series functionality; that would be the DS200PCCAG8 parent Power Connect Board missing this DS200PCCAG8ACB option's three significant product revisions.

Hardware Tips and Specifications

The GE DC Power Connect Board DS200PCCAG8ACB serves as an interface between the drive and the SCR power bridge. As with any product offered through our extended new and reconditioned inventory here; this DS200PCCAG8ACB PCB's intended functionality is adopted by its normal Mark V Series assembly's acceptance of a specific series of hardware components and component specifications.

The DS200PCCAG8ACB is central to the operation of the drive and receives and transmits signals to the:

power supply board

the SCR bridge

components in the drive through multiple connectors

When you replace the DS200PCCAG8ACB board it is critical that you record where the wires and cables are connected on the defective board. You can label the wires and connectors and also photograph the board before you remove the cables. Generally, voltage suppression and limitation in the normal Mark V Series assembly of this DS200PCCAG8ACB product offering is handled by its standardized series of voltage-limiting hardware components including various styles of:

capacitors

resistors

transistors

specialized integrated circuits

Several large silver drum-style capacitors or diodes are the most obvious of these components, as they stack across the entire bottom of this DS200PCCAG8ACB PCB's base circuit board.

If the replacement board is a newer version of the same board you might find that the connectors are rearranged on the board and the board doesn’t appear the same. The components might be different colors or shapes. However, when the new board is installed, it will behave the same as the older board. This because the compatibility of the boards is verified before you receive it. Cables are fragile and you must follow some guidelines concerning the best method to disconnect them from the board and reconnect them. Never pull a ribbon cable out from the board by pulling on the ribbon cable. Use one hand to hold the connector on the board. Use the other hand to tightly hold the connector on the end of the ribbon cable. And separate them by pulling them apart. Unless all the signals that are carried by the ribbon cable are transmitted or received, the drive will not operate correctly and you will notice operational reliability issues.

This DS200PCCAG8ACB functional product number itself can be considered a primary source of DS200PCCAG8ACB board hardware information; as it codes for specific DS200PCCAG8ACB hardware information in a series of functional naming segments. For instance, the DS200PCCAG8ACB functional product number starts off with the dual-functional DS200 series tag delegating this DS200PCCAG8ACB PCB's normal Mark V Series assembly as well as its domestic original manufacture location. Some of the other information as revealed through this DS200PCCAG8ACB board's product number includes its:

PCCA functional acronym

Group 8 Mark V Series product grouping

Normal PCB coating style

A-rated primary functional revision

C-rated secondary functional revision

B-rated artwork configuration revision

Product Specifications

Part Number: DS200PCCAG8ACB

Manufacturer: General Electric

Series: EX2000

Product Type: PCCA Power Connect Card

Number of channels: 6

Input Span: 1-5 V dc

Outputs: 24 V dc

Technology: Surface Mount

Analog output current: 0-20 mA

Operating temperature: -30 to 65 °C

Size: 26.41 cm High x 21.33 cm

Repair: 3-7 Day

Availability: In Stock

Country of Origin: United States

Manual: GEI-100161B

Functional Description

The DS200PCCAG8ACB is a Power Connect Card manufactured by General Electric as part of the EX2000 Series used in GE Excitation Control Systems. The PCCA acts as an interface between the drive's control circuitry and the SCR power bridge. It utilizes pulse transformers to supply gate drives to the SCR bridge. For low-to-medium horsepower controllers, the PCCA includes snubber circuits to manage spikes across the AC lines, DC bus, and gate drivers. In higher horsepower controllers, these snubber circuits may be removed from the PCCA and placed elsewhere in the system.

Board Groups

The PCCA board has ten group numbers. The system voltage, frame size, and whether the system uses regenerative or non-regenerative power conversion determine the group number used. The armature voltage scaling depends on which PCCA board group number is used:

G1, G7, G9: Regenerative, 240 – 630 volts

G2, G8, G10: Non-regenerative, 240 – 700 volts

The PCCA board contains four wire jumpers (JP1, JP2, WP3, and WP4) that select system voltage and determine snubber capacitor connections.

Configurable Jumpers (JP and WP)

JP1 and JP2: These jumpers should be connected to the correct stab terminals (P3 through P10), based on the card group number and system voltage.

WP3 and WP4: These jumpers are used to link stab terminals P2A to P2B and P1A to P1B, respectively. These jumpers determine whether the PCCA snubber capacitors are connected to the same point on the power bridge as the voltage feedback channel.