GE GE □□□ Series Service Manual

DS200LDCCH1A

1. Description

DS200LDCCH1A Technical Specifications

2. Specifications

Specification	Value
Part	**Number DS200LDCCH1A**
Manufacturer	**GE General Electric**
Series	**Mark V, EX2000**
Product	**Type Drive Control/LAN Communications CD/CC Drive Board**
Instruction	**Manual GEI-100216**
Product	**Weight 1 lbs**
Shipping	**Dimensions 16 inches by 12 inches by 12 inches**
Country	**of Manufacture United States of America**
About	**the DS200LDCCH1A**
The	**DS200LDCCH1A is a Drive Control LAN (Local Area Network) Communications Board developed by General Electric for their Mark V series of drive and exciter boards. It is compatible with drives in the DIRECTO-MATIC 2000 Mark V Series subseries.**

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About the DS200LDCCH1A

The DS200LDCCH1A is a Drive Control LAN (Local Area Network) Communications Board developed by General Electric for their Mark V series of drive and exciter boards. It is compatible with drives in the DIRECTO-MATIC 2000 Mark V Series subseries.

Functions provided by the board include operator interface, LAN communications, drive and motor processing, and drive resets.

The DS200LDCCH1A has instructional manual materials that are available online.

The DS200LDCCH1A is a revised version; the original product for this functionality was the DS200LDCCH1 parent board, lacking the DS200LDCCH1A's A-rated functional product revision.

Hardware Tips and Specifications

The DS200LDCCH1A communications card includes four microprocessors:

LAN Control Processor (LCP): Accepts five bus systems.

Drive Control Processor (DCP): Controls integrated peripheral I/Os (timers, decoders).

Motor Control Processor (MCP): Controls motor control circuits and I/O communications.

Co-Motor Processor (CMP): Provides additional processing power for complex math when the MCP's power is insufficient.

SPECIFICATIONS:

Part No: DS200LDCCH1A

Manufacturer: General Electric

Function: Drive Control/LAN Communication Board

Series: EX2000

Number of Inputs: 12

Operating temperature: -30 to 65 ºC

Power Supply Voltage: 125 V dc

Technology: Surface Mount

Board Size: 33.0 cm high x 17.8 cm

Availability: In-Stock

Country of Origin: USA

Manual: GEI-100216

FUNCTIONAL DESCRIPTION:

DS200LDCCH1A is a Drive Control/LAN Communication Board manufactured and designed by General Electric as part of the EX2000 Series used in GE Excitation gas turbine control systems. The primary drive and I/O control capabilities for the DIRECTO-MATIC 2000 family of drives and exciters from GE are provided by the DS200LDCC Drive Control/LAN Communications board (LDCC). Features consist of:

Customer I/O, drive, and motor functions are processed and controlled by microprocessors.

Local area network (LAN) connectivity for drive I/O under microprocessor control.

Customer-specific drive configuration information and application software.

An onboard operator interface for software alterations and troubleshooting.

Drive reset capabilities in both hardware and software.

The contents, these features, and application specifics are described below. In some circumstances, the LDCC can take the place of the current LAN and drive control boards.

DRIVE AND MOTOR CONTROL:

To process control, application, and I/O functions, the LDCC has four microprocessors:

The Drive Control Processor (DCP) is situated at position U1.

The Motor Control Processor (MCP) at address U21

The Co-motor Processor (CMP) is located at position U35.

The LCP at position U18 or the LAN Control Processor.

These microprocessors and the circuitry they are connected to are tested during board self-testing to ensure proper operation.

DCP FUNCTION:

The DCP has integrated I/O peripherals like an interrupt controller, timer/counters, interrupt controllers, and a direct memory access (DMA) controller. The DCP and related circuitry include inputs for voltage-controlled oscillators (VCOs), as well as analog-to-digital (A/D) and digital-to-analog (D/A) signal conversion. User interfaces, regulating loops (such as speed and position), and system-level operations make up the DCP software.

MCP FUNCTION:

For usage in motor control, the MCP has a variety of I/O types, the majority of which are buffered and coupled to 1PL (see Table 3). Analog I/O, timer/counters, a "watchdog" timer, high speed and standard digital I/O, and analog I/O are all controlled by the MCP and related circuitry.

COMMUNICATIONS CONTROL:

The LDCC's LAN Control Processor regulates LAN communications (LCP). Both isolated and non-isolated input circuits are offered. Any one of the following five bus systems can be processed by the LDCC:

DLAN+, GE's drive LAN protocol built on ARCNET.

DLAN, GE's drive LAN system used for older, bigger drives as well as smaller drives.

Using a Genius® bus interface board, such as the DS200ADGI