GE GE □□□ Series Service Manual

IS200VCRCH1B

1. Description

Technical Specifications

2. Specifications

Specification	Value
Unit	**Name: IS200VCRCH1B**
Manufacturer:	**GE**
Model	**Series: Mark VI IS200**
Application	**Types: TMR, Simplex**
Mark	**VIe Compatible: No**
Referenced	**In: GEH-6721L**
Group:	**H**
Variation:	**1**
Revision:	**B**
Condition:	**New Surplus, Factory Package**

3. Product Information

Technical Specifications

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Manufacturer: GE

Model Series: Mark VI IS200

Application Types: TMR, Simplex

Mark VIe Compatible: No

Referenced In: GEH-6721L

Group: H

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CONTACT INPUTS

A contact input terminal board (TBCI) is wired for the first 24 dry contact inputs; a second terminal board is needed for inputs 25–48. The contacts are given dc power. The terminal board is linked to the VME rack housing the VCCC processor board by cables with molded plugs. For inputs monitoring crucial turbine variables, high-speed scanning and recording at 1 ms per second are available. Contact chatter and pulse widths down to 6 ms are reported by the sequence of events (SOE) recorder, together with all contact openings and closures with a temporal resolution of 1 ms.

RELAY OUTPUTS

Twelve plug-in magnetic relays are stored in TRLYH1B. Jumpers can be used to set up the first six relay circuits for either driving external solenoids or dry, Form-C contact outputs. For field solenoid power, a standard 125 V dc or 115 V ac source, as well as an optional 24 V dc source, can be offered with individual jumper selectable fuses and onboard suppression. The subsequent five relays (7–11) have separated Form-C contacts that are not powered. An isolated Form-C contact is used on output 12 for particular applications like ignition transformers.

VCRC OPTION

The VCRC board is functionally equivalent to the VCCC board, however, it only requires one VME slot because no daughter board is needed. The TBCI boards' contact inputs are received by two front panel connections, J33 and J44. Similar to VCCC, relay outputs on TRLY connect to the J3 and J4 ports on the VME rack. VCCC can be used in place of cable placement on the front panel if it is undesirable.

INSTALLATION OF IS200VCRCH1B BOARD

Turn off the processor rack for the VME I/O.

To seat the edge connectors, slide in the VCCC board and push the top and bottom levers in with your hands.

Tighten the captive screws on the front panel's top and bottom.

Switch on the VME rack and look at the front-panel diagnostic lights.

OPERATIONS OF IS200VCRCH1B BOARD

• The input voltages in the VCCC are sampled at the frame rate for control functions and at 1 ms for SOE reporting after passing through optical isolators. The signals are delivered to the VCMI via the VME backplane. The controller receives them next from the VCMI. The processing of contact input is depicted in the following figure. The dry-contact inputs are powered by a floating 125 V dc (100 - 145 V dc) supply.

• Filters on each input control surge and decrease high-frequency noise close to the signal exit. A 4 ms filter is used to filter out noise and contact bounce. With 125 V dc excitation, the ac voltage rejection (50/60 Hz) is 60 VRMS.

• For TMR applications, plugs JR1, JS1, and JT1 provide contact input voltages to the three VME board racks R, S, and T. Each controller rack's VCMI board votes on the outcomes once the three VCCCs have analyzed the signals. Relay control signals and monitor feedback voltages are transmitted between VCCC and TRLY through cables.

• The relay board is mounted with relay drivers, fuses, and jumpers. TRLY, DRLY, and SRLY are just a few of the different relay board kinds that can be driven. The failsafe features on the relay outputs allow the inputs to vote to de-energize the corresponding relays when a cable is unplugged. The relays de-energize likewise if communication with the connected VME board is lost.

SPECIFICATIONS

Part Number: IS200VCRCH1B

Manufacturer: General Electric

Series: Mark VI

Number of Channels: 48 Dry Contact Voltage Input Channels

Product Type: I/O Board

Input Isolation: 1500 V

Availability: In Stock

Country of Origin: USA

IS200VCRCH1B is a Contact Input/Relay Output Board manufactured by General Electric as part of the Mark VI series used in gas turbine control systems. The Contact Input/Relay Output Board accepts 48 discrete inputs and manages 24 relay outputs from a total of four terminal boards through its accompanying daughterboard. The double-width VCCC module fits in the VME I/O rack. Two sets of J3/J4 connections are provided in this rack for cabling to the TBCI and TRLY terminal boards. In place of the VCCC, the VCRC is a narrower board that can be used.