GE Service Manual

IS200DTCIH1ABB

1. Description

IS200DTCIH1ABB Technical Specifications

2. Specifications

Specification	Value
Functional	**Part Number IS200DTCIH1ABB**
Original	**GE Manufacturer General Electric Industrial Systems**
Product	**Series Mark VI**
Instruction	**Manual GEH-6421C Vol. II Mark VI System Guide**
Functional	**Acronym/Abbreviation DTCI**
Functional	**Description DIN-Rail Contact Input Terminal Board**
Application	**Type Simplex System**
Connections	**VCRC Processor Board**
Frequently	**Asked Questions about IS200DTCIH1ABB**
There	**are twenty-four contact inputs on the IS200DTCIH1ABB model; do the currents on the circuits differ at all?**

3. Product Information

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Instruction Manual GEH-6421C Vol. II Mark VI System Guide

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Frequently Asked Questions about IS200DTCIH1ABB

There are twenty-four contact inputs on the IS200DTCIH1ABB model; do the currents on the circuits differ at all?

The currents between the circuits do differ slightly. On the twenty-second through twenty-fourth circuits, they will operate on a nominal current of 10 milliamperes (10 mA). The remaining circuits, which are circuits one through twenty-one, will operate on a current rating of 2.5 mA.

There is a similar model to the IS200DTCIH1ABB model, the TBCI board; are there any differences in how the two model function?

The main difference between the IS200DTCIH1ABB model and the TBCI model is not only the application uses but the scaling as well. The IS200DTCIH1ABB model can only be used in simplex applications, while the TBCI model can be used in many different application types. There is a difference in scaling voltages between the DTCI and TBCI models both the models have the same on-board signaling, but the DTCI model is rated for scaling of 24 VDC. Another main difference between the two models is that the TBCI model is bigger than the DTCI unit. For more differences between the two models, refer to the GEH-6421C Mark VI Turbine Control Instruction Guide.

About the IS200DTCIH1ABB

The IS200DTCIH1ABB board is described as a Simplex DIN-Rail Mounted Contact Input Terminal Board. It was designed by General Electric and is one of the many models used in the Mark VI Turbine Control systems. The Mark VI Turbine Control System Series that this IS200DTCIH1ABB printed circuit board or PCB for short could be considered a component member of, as based off of its full extended General Electric Mark product series name, exists with a specific set of possible functional applications in the control systems and management systems of General Electric-compatible gas, wind, and steam turbine automated drive assemblies. Given the fact that this IS200DTCIH1ABB printed circuit board product offering's greater Mark VI Turbine Control System Series has access to alternative energy-based wind turbine control and management functional setting,

Hardware Tips and Specifications

One of the features of this model is that it will connect to a VCRC processor board for assistance with the twenty-four contact inputs. The connection will be made through a 37-pin cable. This model is considered the smaller and more compact version of the TBCI model. When using the VCRC models, two can be connected to maximize the inputs and make up a total of forty-eight contact inputs. Please note that another board can be used with the IS200DTCIH1ABB model, which is a VTCC model, but it is highly recommended that the VCRC be used with this DTCI model instead. The IS200DTCIH1ABB model is also considered a discrete Input/Output model. It is considered a box-type model and has several defining characteristics that make the model unique. The characteristics of the model are as follows:

2.5 mA/point

Three 10 mA/point inputs

18-32 VDC

Optical Isolation

1 ms SOE

These characteristics and how they operate with a VCRC card can be found in the GER-4193A Speedtronic Mark VI Turbine Control System Instruction Guide. As previously mentioned the IS200DTCIH1ABB model is virtually the same as the Mark VI TBCI model but is just more compact and will perform the same on-board signal conditioning functions, except for the fact that it is scaled for operation at 24 VDC. For more information refer to the GEH-6421C Speedtronic Mark VI Volume II Instruction Guide. Luckily enough for the sake of this IS200DTCIH1ABB personalized product page here, the Mark VI Series' instructional manual materials are still largely available online due to the Mark VI Series' status as one of the final-developed GE Mark product series to incorporate the patented Speedtronic control system technology into a number of its different product offerings. This IS200DTCIH1ABB PCB's above-attached instructional manual materials details a number of installation requirements and procedures meant for both normative and safe installation or replacement of this IS200DTCIH1ABB product. According to these pertinent instructional materials. this IS200DTCIH1ABB PCB mounts with the aid of a plastic holder that it is meant to slide into, most likely for DIN-rail installation. Given this truth, it has to be considered a bit of a surprise that this IS200DTCIH1ABB device is not considered to make use of any special assembly version, as its IS200DTCIH1ABB functional product number asserts a normal assembly and most plastic-backed products are labeled with the DS215 initial series tag.

Specifications

* **Part Number:** IS200DTCIH1ABB
* **Manufacturer:** General Electric
* **Series:** Mark VI
* **Product Type:** Group Isolation Terminal Board
* **Number of Channels:** 24
* **Analog Output Current:** 0-20 mA
* **Excitation Voltage:** 24 V DC
* **Maximum Lead Resistance:** 15 Ω
* **Operating Temperature:** 0 to 60 °C
* **Size:** 8.6 cm wide x 16.2 cm
* **Frequency:** 50 or 60 Hz
* **Availability:** In Stock
* **Weight:** 2 lbs
* **Country of Origin:** United States

* **Manual:** GEH-6421M

Functional Description

The IS200DTCIH1ABB is a Group Isolation Terminal Board, designed by General Electric for the Mark VI Series within GE Speedtronic Turbine Control Systems. As a Simplex Contact Input (DTCI) terminal board, it is designed for easy DIN-rail mounting. It features 24 contact inputs with a standard excitation of 24 V DC and integrates with VCCC or VCRC processor boards using a single cable. Users can expand capacity by connecting up to two boards for a maximum of 48 contact inputs, and the boards can be vertically stacked to save cabinet space.

Installation

To install, attach the plastic holder to the DIN rail and slide the DTCI board into position. Connect contact input wires to the Euro-Block type terminal block, which has 60 terminals; #18 AWG wires are typically used. For the SCOM (ground) connection, use screws 55 and 56, keeping the connection as short as possible. Use the provided six screws to secure the 24 V DC excitation power.

Operation

The DTCI is tailored for 24 V DC systems, with input excitation spanning from 18 to 32 V DC and a threshold voltage set at 50% of the excitation voltage. It features an AC voltage rejection capability of 12 V RMS. For contact inputs, the nominal current is 2.5 mA for the initial 21 circuits, while circuits 22 through 24 handle 10 mA. Each input includes filters for high-frequency noise and surge suppression near the entry point. Discrete input voltage signals are routed to the VCCC or VCRC board, undergo optical isolation, are transmitted across the VME backplane to the VCMI, and are finally forwarded by the VCMI to the controller.