GE GE □□□ Series Service Manual

IS200TDBTH6A

1. Description

SPECIFICATIONS:

2. Specifications

Specification	Value
Manufacturer	**General Electric**
Product	**Status Terminal Board (Mark VI)**
Series	**Mark VI Speedtronic**
Functional	**Acronym TDBT**
Part	**Number IS200TDBTH6A**
Assembly	**Type Normal Assembly**
Functional	**Revision 1 A**
PCB	**Coating Style Conformal Coating**
IS200TDBTH6A	**Base Mounting DIN Rail**
Grouping	**Group 6**
Frequently	**Asked Questions about IS200TDBTH6A**
Was	**this IS200TDBTH6A product actually domestically manufactured by GE?**

3. Product Information

SPECIFICATIONS:

Part Number: IS200TDBTH6A

Manufacturer: General Electric

Series: Mark VIe

Number of channels: 24

Input current: 24 V dc

Input filter: Hardware filter

Ac voltage rejection: 12 V RMS

Number of relay channels: 12

Power Requirements: +5 V dc

Operating temperature: -30 to + 65oC

Technology: Surface Mount

Size: 17.8 cm wide x 33.02 cm

Repair: 3-7 Day

Availability: In Stock

Country of Origin: United States

Manual: GEH-6721L

FUNCTIONAL DESCRIPTION:

IS200TDBTH6A is a Discrete Input/Output Terminal Board manufactured and designed by General Electric as part of the Mark VIe Series used in Distributed Control Systems. The Discrete Input/Output (TDBT) terminal board is a flat or DIN-rail mounted TMR contact input/output terminal board. A nominal 24, 48, or 125 V dc wetting voltage can be provided to the TDBT board's 24 group isolated contact inputs from an external source. The noise suppression on the contact inputs guards against surges and high-frequency noise. In order to increase relay functionality, TDBT offers 12 form-C relay outputs and accepts an option card.

The PDIO I/O pack and the TDBT are compatible with Mark* VIe systems. Three I/O packs connect to D-type connectors and communicate via Ethernet with the controllers. There are three PDIO connection points available. The PDIO on TDBT connection JR1 would be networked to the R controller, JS1 to the S controller, and JT1 to both the R and S controllers if there were two controllers. Each PDIO connected to a TMR controller receives a single network connection to the corresponding controller. A single PDIO I/O pack cannot be used to properly operate TDBT.

INSTALLATION:

A sheet metal carrier with the TDBT and a plastic insulator mounted on it installed on a DIN rail. Alternately, the TDBT + insulator attaches to a sheet metal assembly that is subsequently fastened within a cabinet. In general, #18 AWG wires are used to directly wire the connections to two sets of 48 terminal blocks. Input contact circuits are connected to the lower set of terminals, TB2, while the relay section of the board is connected to the upper set of terminals, TB1. Both the SRLY relay board and the STCI contact input terminal board's screw assignments apply to the two sets of terminals. A separate bracket should be used to end shields.

RELAY OUTPUTS:

When a relay option board is utilized, it is plugged into the TDBT connections JW1 and JW2 and secured there by the connectors' grip. The role of each relay terminal point designated as TB1 in relation to the existence of an option board is detailed in the following table. If additional power needs to be delivered from an external source, it is wired to a connector on the option board.

OPERATION:

The onboard signal conditioning and contact input function are identical to those on STCI and are scaled for 24, 48, and 125 V dc wetting voltage. 16 to 32 V dc, 32 to 64 V dc, and 100 to 145 V dc, respectively, make up the input wetting voltage range. The wetting voltage is half of the threshold voltage. The description of the I/O pack includes a diagram of the touch-sensing circuitry. On the first 21 circuits and on circuits 22 through 24, contact input currents are resistance limited to 2.5 mA and 10 mA, respectively. Using resettable polymer positive temperature coefficient fuses, the 24 V dc supply of TDBTH2 is currently limited to 0.5 A.

CONFIGURATION:

The TDBT has no hardware configurations or jumpers. Six jumpers are present on the option board WROBH1 and are used to turn on or off a relay. All six jumpers are assembled while producing boards. When a relay will have dry contacts and power distribution is not needed, the jumper is taken off of the circuit board.

IS200TDBTH6A Technical Specifications

Manufacturer General Electric

Product Status Terminal Board (Mark VI)

Series Mark VI Speedtronic

Functional Acronym TDBT

Part Number IS200TDBTH6A

Assembly Type Normal Assembly

Functional Revision 1 A

PCB Coating Style Conformal Coating

IS200TDBTH6A Base Mounting DIN Rail

Grouping Group 6

Frequently Asked Questions about IS200TDBTH6A

Was this IS200TDBTH6A product actually domestically manufactured by GE?

Yes. This IS200TDBTH6A PCB was domestically manufactured in General Electiric's Salem, Virginia factory plant location.

What in specific does this IS200TDBTH6A PCB's conformal PCB coating style exist as?

This IS200TDBTH6A product's conformal PCB coating is a thin layer of chemically-applied PCB coating applied to this IS200TDBTH6A product's entire base PCB.

About the IS200TDBTH6A

Hardware Tips and Specifications

The IS200TDBTH6A prominently features a collection of:

twelve large black potentiometers, alternately known as variable resistors

arranged into three (3) horizontal rows of four components each

a long grey component shaped like a rectangle

several rows of very small components

two (2) long rows of round red components called MOVs or metal oxide varistors are lined up on the left of the IS200TDBTH6A

a small white connector with three (3) ports

several small integrated circuits

one (1) small yellow capacitor

two (2) small resistors that are yellow with one (1) black stripe in the middle

IS200TDBTH6A Functional Product Number

This IS200TDBTH6A functional product number is started off through an instance of the dual-functional IS200 series naming tag that is considered indirectly responsible for asserting this IS200TDBTH6A product's normal Mark VI Series assembly version on top of its arguably even more standardized domestic location of original General Electric manufacture. Some of the other relevant hardware specifications indicated through this medium include the IS200TDBTH6A PCB's:

TDBT functional product abbreviation

Conformal style of PCB surface coating

Group 6 Mark VI Series product grouping

A-rated functional product revision