GE GE □□□ Series Service Manual

IS200TRLYH1BFD

1. Description

SPECIFICATIONS:

3. Product Information

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Part Number: IS200TRLYH1BFD

Manufacturer: General Electric

Series: Mark VIe

Product Type: Relay Output Terminal Board

Number of channels: 16

Relay Contact Rating: 10A

Input Voltage Range: 12V, 24V

Number of Relay Channels: 4, 8

Relay Switching Current: Max 10A

Mounting Type: DIN rail

Output Resolution: 12-bit

Output Impedance: 10 Ohm

Analog outputs: 0-20 mA

Size: 17.8 cm wide x 33.02 cm

Operating Temperature: -30 to 65ºC

Technology: Surface Mount

Repair: 3-7 Day

Availability: In Stock

Country of Origin: United States

Manual: GEH-6721D

FUNCTIONAL DESCRIPTION:

IS200TRLYH1BFD is a Relay Output Terminal Board manufactured and designed by General Electric as part of the Mark VIe Series used in the GE Distributed Turbine Control Systems. TRLYH1B holds 12 plug-in magnetic relays. The first six relay circuits can be jumpers configured for either dry, Form-C contact outputs, or to drive external solenoids. A standard 125 V dc or 115/230 V ac source, or an optional 24 V dc source, with individual jumper selectable fuses and onboard suppression, can be provided for field solenoid power. The next five relays (7-11) are unpowered isolated Form-C contacts. Output 12 is an isolated Form-C contact, used for special applications such as for ignition transformers. In the Mark VIe system, the PDOA I/O packs work with the TRLY board. The PDOA packs plug into the DC-37 pin connectors on the terminal board. A single PDOA on JA1 or three PDOAs on JR1, JS1, and JT1 are supported.

INSTALLATION:

The 12 relay outputs are wired directly to two I/O terminal blocks mounted on the terminal board as shown in the following figure. Each block is held down with two screws and has 24 terminals accepting up to #12 AWG wires. A shield terminal strip attached to the chassis ground is located on the left side of each terminal block. Solenoid power for outputs 1-6 is normally plugged into JF1. JF2 can be used to daisy chain power to other TRLYs. Alternatively, customer power may be wired directly into TB3 when power is not plugged into JF1/JF2. Jumpers JP1-JP6 are removed in the factory and shipped in a plastic bag. Re-install the appropriate jumper if power to a field solenoid is required. Conduct individual loop energization checks as per standard practices, and install the jumpers as required. The fuses should be removed for isolated contact applications to ensure that suppression leakage is removed from the power bus.

OPERATION:

Relay drivers, fuses, and jumpers are mounted on the relay terminal board. For simplex operation, D-type connectors carry control signals plus monitor feedback voltages between the I/O processors and TRLY through JA1. Relays are driven at the frame rate and have a 3.0 A rating. The rated contact-to-contact voltage is 500 V ac for one minute and the rated coil-to-contact voltage is 1,500 V ac for one minute. The typical time to operate is 10 ms. Relays 1-6 have a 250 V MOV for transient suppression between normally open and the power return terminals. The relay outputs have failsafe features when a cable is unplugged, or communication with the associated I/O processor is lost. The inputs vote to de-energize the corresponding relays.