GE GE □□□ Series Service Manual

IS220PAICH2B

1. Description

About the IS220PAICH2B

2. Specifications

Specification	Value
Functional	**Part Number IS220PAICH2B**
Manufacturer	**General Electric**
Series	**Mark VIe**
Functional	**Description IS220PAICH2B Analog I/O Pack**
Input	**and Output Signal Type Analog I/O**
Mark	**VIe/S Revisions Applied B-Rated Functional Revision**
mA	**Out 200 mA Out**

3. Product Information

About the IS220PAICH2B

The IS220PAICH2B is an Analog I/O Pack from the Mark VIe series for turbine control. The IS220PAICH2B was manufactured by GE Energy. The IS220PAICH2B is designed to act as an interface between one or two I/O Ethernet networks and an analog input terminal board, the TBAI board.

IS220PAICH2B I/O Specifications

The IS220PAICH2B is designed to be used with a processor board and an acquisition board. The acquisition board is the BPAI board, and the processor board is the BPPB board.

The IS220PAICH2B can handle up to 10 analog inputs, with the first 8 inputs able to be configured in multiple ways. These configurations are:

+/- 5V input

+/- 10V input

0-20 mA current loop input

The final 2 inputs can be configured to +/- 1 mA or 0-20 mA current inputs.

This pack also has 2 outputs, the first of which can have a current rating of 0-200 mA.

IS220PAICH2B Technical Specifications

Functional Part Number IS220PAICH2B

Manufacturer General Electric

Series Mark VIe

Functional Description IS220PAICH2B Analog I/O Pack

Input and Output Signal Type Analog I/O

Mark VIe/S Revisions Applied B-Rated Functional Revision

mA Out 200 mA Out

SPECIFICATIONS:

Part Number: IS220PAICH2B

Manufacturer: General ElectricSeries: MarkVI

Product Type: Thermocouple Analog I/O Terminal Board

Operating System: QNX

Power Requirements: +5 V dc, 6A

Number of input channels: 12

Number of outputs: 125 VdcTrip Solenoid Rating: 125 Vdc

Power supply voltage: 28 V dcVoltage Range: 18 - 32 VDC

Mounting: DIN-rail mounting

Technology: Surface mount

Operating temperature: 40 to 70°CSize: 33.0 cm highx 17.8 cm

Country of Origin: United States

Manual: GEH-6721_Vol_II

IS220PAICH2B, REV B is a Thermocouple Analog I/O Terminal Board manufactured and designed by General Electric as part of the Mark VI Series used in GE Speedtronic Gas Turbine Control Systems. The Analog I/O pack (PAIC) provides the electrical interface between one or two I/O Ethernet networks and an analog input terminal board. The PAIC contains a BPPX processor board and an acquisition board specific to the analog input function. The I/O pack is capable of handling up to 10 analog inputs, the first eight of which can be configured as ±5 V or ±10 V inputs, or 4-20 mA current loop inputs. The last two inputs may be configured as ±1 mA or 4-20 mA current inputs.

The load terminal resistors for current loop inputs are located on the terminal board and voltage is sensed across these resistors by the PAIC. The PAICH2 also includes support for two 0-20 mA current loop outputs. The PAICH2 includes extra hardware to support 0-200 mA current on the first output. Input to the I/O pack is through dual RJ-45 Ethernet connectors and a three-pin power input. Output is through a DC-37 pin connector that connects directly with the associated terminal board connector. Visual diagnostics are provided through indicator LEDs.

COMPATIBILITY:

• The PAIC I/O pack includes one of the following compatible BPPx processor boards. The PAICHIA and H2A contain a BPBP processor board.

• The PAICHIB and H2B contain a functionally compatible BPPC that is supported in the ControlST software suite V04.03 and later.

• PAICH2A and H2B also include extra hardware to support 0-200 mA current on the first output.

• The PAIC is compatible with the analog input terminal board (TBAIHIC), and the STAI board, but not the DIN rail-mounted DTAI board. The PAIC is only compatible with the HIC version of TBAI and will report compatibility problems with any of the earlier revisions. No physical damage will result if a PAIC is powered up on an older board in error.

CONNECTORS:

A DC-37 pin connector on the underside of the I/O pack connects directly to the discrete input terminal board. The connector contains the 24 input signals, ID signal, relay coil power, and feedback multiplex command.

• An RJ-45 Ethernet connector named ENET1 on the side of the pack is the primary system interface.

• A second RJ-45 Ethernet connector named ENET2 on the side of the pack is the redundant or secondary system interface.

• A 3-pin power connector on the side of the I/O pack is for 28 V dc power for the I/O pack and terminal board.