GE GE □□□ Series Service Manual

IS220PIACH2A

1. Description

About the IS220PAICH2A

2. Specifications

Specification	Value
Functional	**Part Number IS220PAICH2A**
Manufacturer	**GE Energy**
Series	**Mark VIe**
Functional	**Description IS220PAICH2A Analog I/O Pack**
mA	**Out Rating 200 mA Out**
Input	**or Output I/O; Analog**
Mark	**Series Individual Grouping Group 2 Device**
Base	**Circuitry Protection Conformal Coat (Sprayed)**

3. Product Information

About the IS220PAICH2A

The IS220PAICH2A was manufactured by GE Energy for the Mark VIe Turbine Control System Series. The IS220PAICH2A is an Analog I/O Pack that works with a variety of different boards from the Mark VIe series.

Contextualized IS220PAICH2A Hardware

The IS220PAICH2A acts as an electrical interface between one or two I/O Ethernet networks and an analog input terminal board. The IS220PAICH2A features a processor board and an acquisition board. The acquisition board is specific to the analog input function, whereas the processor board is standard for all Mark VIe distributed I/O packs.

The IS220PAICH2A can handle up to 10 analog inputs, with the first 8 able to be configured to +/- 5V or 10V inputs, or 0-20 mA current loop inputs. The final two inputs can be configured to +/- 1 mA or 0-20 mA current inputs.

Input is received through the RJ45 Ethernet connectors and a three pin power input. Output is through a DC 37 pin connector that is connected to the terminal board connector.

The IS220PAICH2A is equipped with several visual diagnostic LEDs. Some of these LEDs are:

PWR

ATTN

LINK

There is also an infrared port that allows for local diagnostic serial communications.

IS220PAICH2A Technical Specifications

Functional Part Number IS220PAICH2A

Manufacturer GE Energy

Series Mark VIe

Functional Description IS220PAICH2A Analog I/O Pack

mA Out Rating 200 mA Out

Input or Output I/O; Analog

Mark Series Individual Grouping Group 2 Device

Base Circuitry Protection Conformal Coat (Sprayed)

SPECIFICATIONS

Part No: IS220PAICH2A

Manufacturer: General Electric

Product Type: Analog I/O Module

Series: Mark VIe

Availability: In Stock

Country of Origin: Unites States (USA)

IS220PAICH2A is an analog I/O module developed by General Electric. It is a part of the Mark VIe Speedtronic control system. This I/O pack is directly attached to the terminal board. The I/O pack is connected to the simplex terminal board via a single DC-37 pin connector. If only one I/O pack is installed, the TMR-capable terminal board has three DC-37 pin connectors and can be used in simplex mode. All of these connections are directly supported by the I/O pack.

Functional Description

The Analog I/O pack (PAIC) is an electrical interface that connects one or two I/O Ethernet networks to an analog input terminal board. The PAIC includes a BPPx processor board as well as an acquisition board dedicated to the analog I/O function.

The module has ten analog inputs. The first eight inputs can be set to 5 V or 10 V or 4-20 mA current loop inputs. The final two inputs can be set to 1 mA or 4-20 mA current inputs. The load terminal resistors for current loop inputs are located on the terminal board, and the PAIC senses voltage across these resistors. PAICH2 has two current loop outputs ranging from 0 to 20 mA. It also includes additional hardware that allows for 0-200 mA current on the first output only.

The I/O pack receives and sends data to the controller via dual RJ-45 Ethernet connectors and is powered by a three-pin connector. Field devices are communicated with via a DC-37 pin connector that connects directly to the associated terminal board. LED indicator lights provide visual diagnostics.

IS220PAICH2A Installation

Securely mount the terminal board of choice.

Insert the PAIC I/O pack directly into the terminal board connectors.

Use the threaded studs adjacent to the Ethernet ports to mechanically secure the I/O pack(s). The studs fit into a terminal board-specific mounting bracket. The bracket should be positioned so that no right-angle force is applied to the DC-37 pin connector between the I/O pack and the terminal board. The adjustment should only be needed once during the product's service life.

Depending on the system configuration, connect one or two Ethernet cables. The I/O pack will function on either port. When using dual connections, it is common practice to connect ENET1 to the network associated with the R controller.

Connect the I/O pack to power by plugging in the connector on the side of the pack. Because the I/O pack has inherent soft-start capability that controls current inrush on power application, it is not necessary to disconnect power from the cable before plugging it in.

Configure the I/O pack as needed using the ToolboxST application.