GE GE □□□ Series Service Manual

IS220YDIAS1A

1. Description

SPECIFICATIONS:

2. Specifications

Specification	Value
Instruction	**Manual GEH-6725**
Part/Model	**Number IS220YDIAS1A**
Functional	**Description Discrete Input Module**
Original	**Manufacturer GE Energy**
Power	**Supply 28VDC**
Functional	**Revision 1 A**
Mark	**VI Series Grouping Group 1**

3. Product Information

SPECIFICATIONS:

Part Number: IS220YDIAS1A

Manufacturer: General Electric

Series: Mark VIe

Product Type: Discrete Contact Input I/O Module

Software: ControlST V04.03.18C

Relative humidity: 5% to 95%, no-condensing

Power Requirements +32 V dc to 18 V dc

Memory: 256 MB DDR SDRAM

Operating System: QNX Neutrino

Weight: 2 lbs

Dimensions: 138 x 86 x 56 mm

Availability: In Stock

Country of Manufacturer: United States (USA)

FUNCTIONAL DESCRIPTION:

IS220YDIAS1A is a Discrete Contact Input I/O Module manufactured and designed by General Electric as part of the Mark VIe Series used in GE Distributed Gas Turbine Control Systems. A discrete contact input I/O module is a hardware component used in industrial automation and control systems. Its primary function is to interface with external devices or sensors that provide discrete signals, also known as digital signals or binary signals. These signals are typically in the form of on/off or high/low states, representing the presence or absence of a certain condition. Discrete contact input I/O modules typically come with various features designed to enhance their functionality and adaptability in industrial automation settings. Some common features include:

Input Channels: These modules come with a specific number of input channels, each capable of handling a discrete signal. The number of channels varies depending on the module's specifications and the application requirements.

Voltage and Current Compatibility: Modules are designed to work within specified voltage and current ranges to accommodate the requirements of different sensors and devices connected to the input channels.

Isolation: Many modules provide electrical isolation between the input channels and the module's internal circuitry. Isolation helps protect the control system from potential electrical noise or interference originating from the connected devices.

Fast Response Time: A quick response time is essential for real-time monitoring and control applications. These modules are designed to provide fast response times to ensure accurate and timely data acquisition.

Status Indicators: LED indicators or other status indicators are often included to provide visual feedback on the status of each input channel. This feature aids in troubleshooting and diagnosing issues in the system.

Scalability: Some modules offer scalability options, allowing users to expand the number of input channels by adding additional modules as needed. This feature provides flexibility for system expansion and customization.

Compatibility with Fieldbuses: To facilitate communication with a broader control network, many discrete input modules support industry-standard fieldbuses protocols. This enables seamless integration into larger automation systems.

Diagnostic Features: Advanced modules may include diagnostic capabilities, such as the ability to detect faults in the input signals or identify issues with the module itself. Diagnostic information can be valuable for maintenance and troubleshooting.

Wide Operating Temperature Range: Industrial environments can have varying temperature conditions. Discrete input modules often feature a wide operating temperature range to ensure reliable performance in diverse settings.

DIN Rail Mounting: For easy integration into control panels, these modules are often designed for DIN rail mounting, providing a standardized and convenient method for installation.

Software Configuration: Many modules allow for configuration through software tools, enabling users to customize settings, set thresholds, or define alarm conditions based on the specific requirements of the application.

IS220YDIAS1A Technical Specifications

Instruction Manual GEH-6725

Part/Model Number IS220YDIAS1A

Functional Description Discrete Input Module

Original Manufacturer GE Energy

Power Supply 28VDC

Functional Revision 1 A

Mark VI Series Grouping Group 1

About the IS220YDIAS1A

The IS220YDIAS1A is a Discrete Contact Input I/O module from General Electric. This module is designed for use within the Mark VIe Speedtronic control system for gas and steam industrial control. While applicable to both gas and steam settings, the Mark VIe Series that this IS220YDIAS1A device belongs to the Mark VIe is one of the last Speedtronic systems designed by GE in a long line of industrial control systems marketed under the Speedtronic name. This means that this IS220YDIAS1A device's greater Mark VIe Turbine Control System Series is one of the more acclaimed General Electric Mark product series on the greater automated industrial marketplace. This IS220YDIAS1A device's Mark VIe Turbine Control System Series additionally is a noticeable step up from the previous Mark V Series as its potential applications are expanded from solely gas and steam turbine automated drive assemblies to wind turbine automated drive assemblies as well.

Hardware Tips and Specifications

The IS220YDIAS1A is part of the Mark IVe control system or part of the Mark VIeS functional safety system. As an I/O pack, it is designed to plug into and be used with specific terminal boards like the IS200STCIS1A and 2A, IS400STCIS1A or 2A, or the IS400TBCIS2C. The IS220YDIAS1A has an on-board power supply with a nominal voltage of 28.0 VDC. Both contact

inputs and contact wetting outputs have a max voltage rating of 32 VDC. The IS220YDIAS1A is both UL listed and CE marked. It can be used in both hazardous and non-hazardous locations. Ratings for hazardous location use can be found within documents like GE's GEH-6725. This I/O module is designed for use in ambient conditions between -35 and +65 degrees Celsius. Before making any purchase decision here on this IS220YDIAS1A Mark VIe Turbine Control System Series product offering, it is critical to realize that the IS220YDIAS1A Board here is not the original device of its intended Mark VIe Series functional role, given, as explained by GE, the IS220YDIAS1A PCB is edited from its originally-introduced performance specifications and dimensions through the standard A-rated functional product revision.

For a more detailed look at the IS220YDIAS1A, including specifics regarding handling, use, installation, and maintenance, please refer to documentation from the OEM like GE manuals, GE user guides, and data sheets specific to this I/O module. Our company maintains a full warehouse of industrial automation replacement parts to more quickly provide you with what you need. Most in-stock products will ship the same day your order is received. Orders placed after 3 pm will typically ship the next day. Given the fact that this IS220YDIAS1A product is not attributable to any continuously-produced General Electric product series, it originally-printed instructional manual materials are generally largely unavailable online. With this being the case, the IS220YDIAS1A functional product number itself can be considered a primary source of IS220YDIAS1A board hardware component and component specification information; coding for these specific details in a series of functional naming segments. To start off, the IS220YDIAS1A functional product number begins with the dual-functional IS220 series tag responsible for indirectly delegating this IS220YDIAS1A PCB's special Mark VIe Series assembly version as well as its domestic original manufacture location.