GE RX3i PacSystem Series Service Manual

IC695ALG616

1. Description

The IC695ALG616 is a PACSystem RX3i Programmable Automation Controller (PAC) non-isolated analog Input module formerly manufactured by GE Intelligent Platforms (GE IP) now under Emerson Automation. This module has Sixteen (16) single ended inputs or Eight (8) Differential input channels compatible for 0 to 20mA, 4 to 20mA, ± 20mA current signals and ±10V, 0 to 10V,

2. Specifications

Specification	Value
Brand	**GE Fanuc**
Series	**PACSystem RX3i**
Manufacturer	**Emerson Automation**
Part	**Number IC695ALG616**
Product	**Description Non-isolated analog input module**
Module	**Type Analog Input**
No	**of Channels Sixteen (16) single-ended; Eight (8) differential inputs**
Number	**of Inputs 16 single-ended or 8 differential Inputs Channels**
Input	**signals, Current 0-20 mA; 4-20 mA; +/-20 mA;**
Internal	**Power 3.3V at 450mA, 5V at 600mA**
Input	**signals, Voltage +/- 50 mV; +/- 150 mV; +/-10VDC; 0-10 VDC; +/-5VDC; 0-5 VDC and 1 - 5 VDC**
Voltage	**Range +/-10V DC, 0 to 10V DC, +/-5V DC, 0 to 5V DC, 1 to 5V DC**
Configurable	**Input Filter 8 Hz, 12 Hz, 16 Hz, 40 Hz, 200 Hz, 500 Hz**
Current	**Range 0 to 20mA, 4 to 20mA, +/-20mA**
Module	**resolution 24-bit ADC converted to Floating Point or Integer**
Operating	**Temperature 32 to 140 degrees Fahrenheit**
Input	**Data Format Configurable as floating point IEEE 32-bit or 16-bit integer in a 32-bit field**
Storage	**Temperature -40 to 185 degrees Fahrenheit**
Overvoltage	**±60 VDC continuous, maximum**
Humidity	**5**

3. Product Information

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Technical specifications for IC695ALG616

Brand GE Fanuc

Series PACSystem RX3i

Manufacturer Emerson Automation

Part Number IC695ALG616

Product Description Non-isolated analog input module

Module Type Analog Input

No of Channels Sixteen (16) single-ended; Eight (8) differential inputs

Number of Inputs 16 single-ended or 8 differential Inputs Channels

Input signals, Current 0-20 mA; 4-20 mA; +/-20 mA;

Internal Power 3.3V at 450mA, 5V at 600mA

Input signals, Voltage +/- 50 mV; +/- 150 mV; +/-10VDC; 0-10 VDC; +/-5VDC; 0-5 VDC and 1 - 5 VDC

Voltage Range +/-10V DC, 0 to 10V DC, +/-5V DC, 0 to 5V DC, 1 to 5V DC

Configurable Input Filter 8 Hz, 12 Hz, 16 Hz, 40 Hz, 200 Hz, 500 Hz

Current Range 0 to 20mA, 4 to 20mA, +/-20mA

Module resolution 24-bit ADC converted to Floating Point or Integer

Operating Temperature 32 to 140 degrees Fahrenheit

Input Data Format Configurable as floating point IEEE 32-bit or 16-bit integer in a 32-bit field

Storage Temperature -40 to 185 degrees Fahrenheit

Overvoltage ±60 VDC continuous, maximum

Humidity 5 to 95%, non-condensing

Overcurrent ±28mA continuous, maximum

Open Circuit Detection time 1 second maximum

Input Impedance >100 k? voltage inputs

Current Input Resistance 249 ? ±1%

Autocalibration Performed during power-up

The IC695ALG616 is an analog input module that is manufactured by Emerson Automation, formerly by GE Intelligent Platforms (GE IP). This module features may provide Sixteen (16) analog input channels if configured as single-ended inputs or Eight (8) analog inputs for differential wiring. It comes with a built-in Analog to Digital Converter (ADC) with output conversion resolution of 24-bits. The IC695ALG616 input channels is compatible of being wires with analog current and voltage signals. Accepter Current signals by this module include 0 to 20mA, 4 to 20mA, ± 20mA current signals and ±10V, 0 to 10V, ±5V, 0 to 5V, 1 to 5V voltage signals. The converted analog data is saved as floating point 32-bit IEEE data or 16-bit integer using a 32-bit register. Each channel of this module has configurable channel filters to stabilize and minimize fluctuation to become useful to the process. Configurable input filters include 8Hz, 12Hz, 16Hz, 40Hz, 200Hz and 500Hz. Parameters of this module are configured using the Proficy Machine Edition (PME) programming software. No jumpers and DIP switches are needed to dictate the operation of this module. Additionally, this module is capable of performing autocalibration during every start-up. Embedded module protections include Open circuit detection, Overvoltage and Overcurrent protection. Aside from these protection settings, each channels can be individually configured with alarm settings, specifically, Very Low, Low, High and Very High alarms. Positive and Negative rate of change may also be included into the alarm features of this module while Module fault may also be configured to be reported to the host CPU.

The GE Fanuc RX3i PacSystems IC695ALG616 non-isolated differential analog input module has a current range between -20 and 20 milliamps, 4 and 20 milliamps or 0 and 20 milliamps, and voltage range of 5 Volts DC, 0 to 5 Volts DC, 1 to 5 Volts DC, 0 to 10 Volts DC, or -10 to 10 Volts DC. The module has a Module OK LED to display the operating status of the unit. The Field Status LED shows if there are faults on at least one of the terminal blocks or channel errors, while the Terminal Block or TB LED displays whether the terminal block for the system is present or absent. All the LEDs on the IC695ALG616 non-isolated differential analog input module obtain their power supply from the backplane power bus. The GE Fanuc IC695ALG616 analog input module has features such as rate of change alarms, onboard error verification, channel fault alarms, fault reporting, auto-calibration, a flash memory slot, configurable offsets and scaling for each channel, and detection of whether terminal blocks have been inserted or removed. The GE Fanuc IC695ALG616 analog input module has a storage temperature range -40 to 185 degrees Fahrenheit and operating temperature range of 32 to 140 degrees Fahrenheit. This module requires a non-condensing and relative humidity level ranging from 5 percent to 95 percent. It has a vibration rating of 10 to 57 Hertz, 0.0524 millimeters (0.006 inches) displacement peak as per the JISC0911 and IEC60068-2-6 international standards and a vibration resistance rating of 15 G at 11 milliseconds as per the JISC0912 and IEC60068-2-27 international standards