GE RX3i PacSystem Series Service Manual

IC695ALG608

1. Description

The IC695ALG608 is an analog input module that is part of the PACSystem RX3i platform, currently under Emerson Automation, formerly produced by GE Intelligent Platforms (GE IP). This module has Eight (8) non-isolated single-ended input channels or Four (4) differential input channels supporting +/-10 VDC, 0-10 VDC, +/- 5VDC, 0-5 VDC, 1-5 VDC and 0-20 mA, 4-20 mA and +/- 20mA input

2. Specifications

Specification	Value
Brand	**GE Fanuc**
Series	**PACSystem RX3i**
Manufacturer	**Emerson Automation**
Manufacturer	**GE Intelligent Platforms (Former); Emerson Automation (Current)**
Part	**Number IC695ALG608**
Product	**Description Non-isolated analog input module**
Series	**PACSystem RX7i**
Module	**Type Analog Input**
No	**of Channels Eight (8) non-isolated, single-ended; Four (4) non-isolated, differential**
Part	**Number IC695ALG608**
Number	**of Inputs 8 single-ended or 4 differential input channels**
Input	**signals, Current 0-20 mA; 4-20 mA; +/-20 mA;**
Product	**Description Analog input module**
Current	**Range 0-20 mA, 4-20 mA, +/-20 mA**
Input	**signals, Voltage +/- 50 mV; +/- 150 mV; +/-10VDC; 0-10 VDC; +/-5VDC; 0-5 VDC and 1 - 5 VDC**
Input	**signals: 10 VDC, 0-10 VDC, +/- 5VDC, 0-5 VDC, 1-5 VDC; 0-20 mA, 4-20 mA, +/- 20 mA**
Voltage	**Range +/-10V, 0-10V, +/-5V, 0-5V, 1-5V**
Configurable	**Input Filter 8 Hz, 12 Hz, 16 Hz, 40 Hz, 200 Hz, 500 Hz**
Resolution:	**24 bit**
Internal	**Power 3.3V: 450mA, 5V: 600 mA**
Module	**resolution 24-bit ADC converted to Floating Point or I**

3. Product Information

The IC695ALG608 is an analog input module that is part of the PACSystem RX3i platform, currently under Emerson Automation, formerly produced by GE Intelligent Platforms (GE IP). This module has Eight (8) non-isolated single-ended input channels or Four (4) differential input channels supporting +/-10 VDC, 0-10 VDC, +/- 5VDC, 0-5 VDC, 1-5 VDC and 0-20 mA, 4-20 mA and +/- 20mA input

Technical specifications for IC695ALG608

Brand GE Fanuc

Series PACSystem RX3i

Manufacturer Emerson Automation

Manufacturer GE Intelligent Platforms (Former); Emerson Automation (Current)

Part Number IC695ALG608

Product Description Non-isolated analog input module

Series PACSystem RX7i

Module Type Analog Input

No of Channels Eight (8) non-isolated, single-ended; Four (4) non-isolated, differential

Part Number IC695ALG608

Number of Inputs 8 single-ended or 4 differential input channels

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

Product Description Analog input module

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

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

Input signals: 10 VDC, 0-10 VDC, +/- 5VDC, 0-5 VDC, 1-5 VDC; 0-20 mA, 4-20 mA, +/- 20 mA

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

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

Resolution: 24 bit

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

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

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

Operating Temperature 0 to 60 degrees Celsius (32 to 140 degrees Fahrenheit)

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

Filter Options 8Hz, 12Hz, 16Hz, 40Hz, 200Hz, 500Hz

Storage Temperature -40 to 85 degrees Celsius (-40 to 185 degrees Fahrenheit)

Overvoltage ±60 VDC continuous, maximum

Humidity 5 to 95%, non-condensing

Overcurrent ±28mA continuous, maximum

Programmer Version Machine Edition version 5.0 SP3 and later

Open Circuit Detection time 1 second maximum

Backplane Power consumption 330 mA maximum @ 5.0V +5% / -2.5%, 600 mA maximum @ 3.3V +5% / -3%

Input Impedance >100 k? voltage inputs

Power Dissipation 4.83 watts maximum

Current Input Resistance 249 ? ±1%

Terminal Blocks Box-style (IC694TBB032), Extended Box-style (IC694TBB132), Spring-style (IC694TBS032), or Extended Spring-style (IC694TBS132) terminal Block.

Autocalibration Performed during power-up

The IC695ALG608 is an analog input module from the PACsystem RX3i platform. This module is able to provide up to Eight (8) input channels when configured for single-ended wiring and Four (4) input channels for differential input wiring. It supports a variety of input signals such as +/-10 VDC, 0-10 VDC, +/- 5VDC, 0-5 VDC, 1-5 VDC and 0-20 mA, 4-20 mA and +/- 20mA input signals with built-in 24-bit Analog to Digital Converter (ADC) that translates received analog data to either integer or floating point data. The IC695ALG608 is installed to an RX3i universal backplane. It occupies a single slot of the rack with current draw 330 mA maximum @ 5.0V +5% / -2.5% and 600 mA maximum @ 3.3V +5% / -3%. This module is used with an RX3i Central Processing Unit (CPU) firmware version 3.0 or later and configured using Machine Edition version 5.0 SP3 and later. Available filter options for each input channel includes 8Hz, 12Hz, 16Hz, 40Hz, 200Hz, 500Hz which are mainly used to normalize analog readings and eliminate rapid fluctuations. The IC695ALG608 is compatible for use with a variety of terminal blocks such as Box-style (IC694TBB032), Extended Box-style (IC694TBB132), Spring-style (IC694TBS032), or Extended Spring-style (IC694TBS132) terminal Block. This module does not have external jumpers for setting module operation instead, parameters are defined via software configurable parameters. In addition, this module features full-autocalibration, on-board error checking, open circuit detection, alarm settings, module fault reporting, interrupts for channel alarm and fault and other equally important features.

The GE Fanuc IC695ALG608 module is a non-isolated analog current or voltage input module that supports single-ended and differential wiring configuration. This module is from the RX3i PacSystem series. This module has a current range between 0 and 20 milliamps, 4 and 20 milliamps, and -20 and +20 milliamps. The module's voltage rate ranges between -10 and +10 Volts DC, 0 and 10 Volts DC, 0 and 5 Volts DC and 1 and 5 Volts DC. It has 4 differential input channels or 8 single-ended input channels and an internal current rating of 450 milliamps at 3.3 Volts and 600 milliamps at 5 Volts. The GE Fanuc IC695ALG608 analog input module can be used with terminal blocks such as the extended spring-style IC694TBS132 terminal block, the extended box style IC694TBB132 terminal block, the spring-style IC694TBS032 terminal block, and the box-style IC694TBB032 terminal block. The extended terminal blocks offer the additional shroud depth required for shield wiring. The GE Fanuc IC695ALG608 analog input module is installed in the universal backplane of the RX3i PacSystem. It has features such as on-board error monitoring, reporting of the module faults, complete auto-calibration, startup auto-calibration, rate of alarm changes that are both negative and positive, terminal block detection for either terminal block removal or insertion, and flash memory for upgrades. When testing the GE Fanuc IC695ALG608 module's input

channels, it is necessary to confirm 3 things: a stable channel, an accurate channel, and an active channel. The users need to use a high-density terminal strip like the IC694TBB032 strip to test this module. Ensure that the strip’s lever is in an upright position by confirming that the green LED is turned on to ensure that the strip is connected.