GE RX3i PacSystem Series Service Manual

IC695ALG628

1. Description

The IC695ALG628 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 IC695ALG628**
Product	**Description Non-isolated analog input module**
Series	**PACSystem RX7i**
Module	**Type Analog Input with HART Communication**
No	**of Channels Eight (8) non-isolated, single-ended; Four (4) non-isolated, differential**
Part	**Number IC695ALG628**
Number	**of Inputs 8 single-ended or 4 differential inputs channels**
HART	**Protocol Supported; HART Version 5.0**
Product	**Description Analog input module**
Voltage	**Range +/-10V DC, 0 to 10V DC, +/-5V DC, 0 to 5V DC, 1 to 5V DC**
Input	**signals, Current 0-20 mA; 4-20 mA; +/-20 mA;**
Input	**signals: 10 VDC, 0-10 VDC, +/- 5VDC, 0-5 VDC, 1-5 VDC; 0-20 mA, 4-20 mA, +/- 20 mA**
Current	**Range 0 to 20mA, 4 to 20mA, +/-20mA**
Input	**signals, Voltage +/- 50 mV; +/- 150 mV; +/-10VDC; 0-10 VDC; +/-5VDC; 0-5 VDC and 1 - 5 VDC**
Resolution:	**24 bit**
Internal	**Power 3.3V at 600mA, 5V at 450mA**
Configurable	**Input Filter 8 Hz,**

3. Product Information

The IC695ALG628 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 IC695ALG628

Brand GE Fanuc

Series PACSystem RX3i

Manufacturer Emerson Automation

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

Part Number IC695ALG628

Product Description Non-isolated analog input module

Series PACSystem RX7i

Module Type Analog Input with HART Communication

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

Part Number IC695ALG628

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

HART Protocol Supported; HART Version 5.0

Product Description Analog input module

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

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

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

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

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

Resolution: 24 bit

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

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

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

Internal HART Modems 4

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

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

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

Operating Temperature 32 to 140 degrees Fahrenheit

Overvoltage ±60 VDC continuous, maximum

Programmer Version Machine Edition version 5.0 SP3 and later

Storage Temperature -40 to 185 degrees Fahrenheit

Overcurrent ±28mA continuous, maximum

HART Protocol supported Version 5.0

Humidity 5 to 95%, non-condensing

Open Circuit Detection time 1 second maximum

No. of HART Modems Two (2) internal HART modems

Input Impedance >100 k? voltage inputs

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

Current Input Resistance 249 ? ±1%

Power Dissipation 4.83 watts maximum

Autocalibration Performed during power-up

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

The IC695ALG628 is an analog input module with Highway Addressable Remote Transducer (HART) 5.0 capability. This module is part of the mid-range controller series, PACSystem Rx3i series featuring Eight (8) analog input channels when configured for single-ended and Four (4) input channels if used for differential wiring configuration. It comes with Two (2) internal HART modems. The module’s parameters and configuration are fully software configurable and each channel may are indepently assignable with High alarm, low alarm, high-high alarm, low-low alarm detection and reporting to the CPU. In addition, Positive and negative Rate of Change Alarms as well as Configurable interrupts for channel alarms and faults may be set accordingly. This module also comes with an upgradable firmware and performs autocalibration every module startup. The module’s analog input channels are designed to accept +/-10 VDC, 0-10 VDC, +/- 5VDC, 0-5 VDC, 1-5 VDC and 0-20 mA, 4-20 mA and +/- 20mA input signals. It has bult-in Analog to Digital (ADC) converter circuitry which converts the received analog data to a 24-bit Integer in 32-bit register or floating point number. Each module channel comes with a variety of filter options, typically used for eliminating signal fluctuation for a more stable reading. This module has power consumption 450 mA maximum @ 5.0V +5% / - 2.5% and 625 mA maximum @ 3.3V +5% / - 3%. It has integrated overcurrent protection rated +/-28mA continuous, maximum and Overvoltage protection of +/-60 VDC continuous, maximum. The module’s open circuit detection time is maximum of 1 second.

The GE Fanuc IC695ALG628 non-isolated differential analog input module with HART (Highway Addressable Remote Transducer) communications for the RX3i PacSystem PLCs offers 4 differential and 8 single-ended input channels. It has 2 internal HART modems and it is characterized by its HART communications capability with HART version 5.0 on every channel. It has a voltage range of 1 to 5 Volts DC, 0 to 5 Volts DC, +/-5 Volts DC, 0 to 10 Volts DC, or +/-10 Volts DC. The current configuration range for the input channels can be either +/-20

milliamps, 0 to 20 milliamps, or 4 to 20 milliamps. The GE Fanuc IC695ALG628 analog input module should be configured for a current range between 4 and 20 milliamps when the channels are connected to the Highway Addressable Remote Transducer communications system. The GE Fanuc IC695ALG628 analog input module supports the use of terminal blocks such as the extended box-style IC694TBB132 block, the box-style IC694TBB032 block, the extended spring-style IC694TBS132 block and the spring-style IC694TBS032 block. The extended terminal blocks are installed to offer the additional shroud depth necessary for shielded wiring. The terminal blocks are normally purchased separately. The analog input module has an internal power of 3.3 Volts at 600 milliamps and 5 Volts at 450 milliamps. It features a flash memory to enable future upgrades, error reporting, rate of change alarms, software that is configurable without setting jumpers, detection for the insertion or removal of terminal, and complete auto-calibration. The module requires a non-condensing ambient humidity range from 5 to 95 percent. The GE Fanuc IC695ALG628 module is installed in the universal backplane of the RX3i PacSystem PLC.