GE RX3i PacSystem Series Service Manual

IC695ALG626

1. Description

The IC695ALG626 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 IC695ALG626
Product	Description Non-isolated analog input module
Module	Type Analog Input w/HART comms
No	of Channels Sixteen (16) single-ended; Eight (8) differential inputs
Voltage	Range +/-10 V DC, 0 to 10 V DC, +/-5 V DC, 0 to 5 V DC, 1 V DC to 5V DC
HART	Protocol Supported; HART Version 5.0
Current	Range 0 to 20mA, 4 to 20mA, Ã±20mA
Input	signals, Current 0-20 mA; 4-20 mA; +/-20 mA;
Number	of inputs 16 single-ended or 8 differential input channels
Input	signals, Voltage +/- 50 mV; +/- 150 mV; +/-10VDC; 0-10 VDC; +/-5VDC; 0-5 VDC and 1 - 5 VDC
Internal	Power 3.3V: 600mA, 5V: 450 mA
Configurable	Input Filter 8 Hz, 12 Hz, 16 Hz, 40 Hz, 200 Hz, 500 Hz
Storage	Temperature -40 to +185 degrees Fahrenheit
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-b

3. Product Information

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Technical specifications for IC695ALG626

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Product Description Non-isolated analog input module

Module Type Analog Input w/HART comms

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

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

HART Protocol Supported; HART Version 5.0

Current Range 0 to 20mA, 4 to 20mA, Â±20mA

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

Number of inputs 16 single-ended or 8 differential input channels

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

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

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

Storage Temperature -40 to +185 degrees Fahrenheit

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

Humidity 5 to 95%, non-condensing

Overvoltage ±60 VDC continuous, maximum

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 IC695ALG626 is a Highway Addressable Remote Transducer (HART) 5.0 capable analog input module from the PACSystem RX3i platform. This module is previously manufactured by GE Intelligent Platform (GE IP) which was recently acquired by Emerson Automation. This module is mainly used to interface with analog field instruments that measures process variables and transmit the measurement to the receiving element such as the IC695ALG626 for processing. With this, the IC695ALG626 may be used with field instruments that provide 0 to 20mA, 4 to 20mA, ± 20mA current signals and ±10V, 0 to 10V, ±5V, 0 to 5V, 1 to 5V voltage signals. The IC695ALG626 is capable of providing Sixteen (16) input channels if configured for single-ended inputs and Eight (8) inputs for differential wiring. With support for HART protocol, each channel can be communicated with an external HART communicator to access not only the reading but other HART parameters as well. The IC695ALG626 comes with LED status indicator such as Module OK, Field Status and TB LED. The Module OK LED is used to indicates a properly configured module when LED is lit solid Green; with error if slowly blinking Green or Amber; Module not properly configured when blinking rapidly; defective or no power present when the module LED is Off. The Field status LED is lit solid Green indicating no fault on enabled channels and when terminal block is present; Yellow light depicts a channel of the module is in faulted state and an Off LED depicts a disconnected or improperly installed terminal block. The TB LED is lit Red when the terminal block is not connected; Lit Green when the terminal block is connected and Off if no backplane power is present.

The GE Fanuc IC695ALG626 module is an analog Input module with the HART or Highway Addressable Remote Transducer version 5.0 communication capabilities on every channel and 4 internal HART modems. This module offers 8 differential and 16 single-ended input channels. The GE Fanuc IC695ALG626 analog input module has a voltage range of +/-10 Volts DC, 0 to 10 Volts DC, +/-5 Volts DC, 0 to 5 Volts DC, or 1 to 5 Volts DC. The current configuration range for the input channels can be either 0 to 20 milliamps, 4 to 20 milliamps, or +/-20 milliamps. The GE Fanuc IC695ALG626 analog input module should be configured for a current range between 4 to 20 milliamps if the channels are using HART communications. The GE Fanuc IC695ALG626 analog input module with HART communication is installed in the universal backplane of the RX3i PacSystem PLC. The unit allows for the insertion or removal of the module from a universal backplane in the RX3i PacSystem when it is still connected to power. The module is fully software-configurable without using module jumpers. It has flash memory to support upgrades, a detector for the removal and insertion of terminal blocks, open circuit detection for a current range between 4 and 20 milliamps at all voltage levels, and startup auto-calibration. It also supports onboard error monitoring, negative and positive rate of change alarms, configurable offsets, and scaling for every channel, and low alarm, high alarm, low-low alarm, high-high alarm detection and recording that is selectable on each channel. The module requires a temperature range of -40 to 185 degrees Fahrenheit for storage and a temperature range of 32 to 140 degrees Fahrenheit for operation.