GE RX3i PacSystem Series Service Manual

IC695HSC308

1. Description

The IC695HSC308 is a High- Speed Counter Module. It is part of the PACSystem RX3i platform, currently under Emerson Automation, formerly produced by GE Intelligent Platforms (GE IP). This module is mainly used in Turbine Flowmeter, meter proving, velocity measurement, material handling, Motion control and Process Control. It accepts input signals with maximum switching frequency of 1.5 Mhz via the embedded Eight (8) counters to the module which is comprised of 16 inputs and 14 outputs. This modu

2. Specifications

Specification	Value
Brand	**GE Fanuc**
Series	**PACSystem RX3i**
Manufacturer	**Emerson Automation**
Manufacturer	**GE Intelligent Platforms (Former); Emerson Automation (Current)**
Part	**Number IC695HSC308**
Product	**Description High-speed counter module**
Series	**PACSystem RX3i**
Product	**Type High-speed counter module**
Compatibility	**PACSystems RX3i**
Part	**Number IC695HSC308**
Compatibility	**PACSystems RX3i**
Counter	**types Type A, Type B, Type C, Type D, Type E, Type Z, and User defined counters**
Product	**Description High Speed Counter Module**
Counters	**8**
Inputs	**16**
Number	**of Counter Channels 8 counters**
Inputs	**16**
Output	**Voltage Range 4.7 to 40 Volts DC**
No.	**of I/Os 16 inputs and 14 outputs**
Outputs	**14**
Power	**Requirements 561 milliamps at 3.3 Volts DC, 94 milliamps at 5 Volts DC**
High	**Speed Counter Type A, Type B, Type C, Type D, Type E, Type Z, and User Defined**
Output	**Voltage Range 4.7 to 40 Volts DC**
Compatible	**applications Turbine flowmeter, Meter proving, Velocity measurement, Material handling, Motion control, Process control**
Maximum	**Count Ra**

3. Product Information

The IC695HSC308 is a High- Speed Counter Module. It is part of the PACSystem RX3i platform, currently under Emerson Automation, formerly produced by GE Intelligent Platforms (GE IP). This module is mainly used in Turbine Flowmeter, meter proving, velocity measurement, material handling, Motion control and Process Control. It accepts input signals with maximum switching frequency of 1.5 Mhz via the embedded Eight (8) counters to the module which is comprised of 16 inputs and 14 outputs. This module has a counting range of -2147483648 to 2147483647.

Technical specifications for IC695HSC308

Brand GE Fanuc

Series PACSystem RX3i

Manufacturer Emerson Automation

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

Part Number IC695HSC308

Product Description High-speed counter module

Series PACSystem RX3i

Product Type High-speed counter module

Compatibility PACSystems RX3i

Part Number IC695HSC308

Compatibility PACSystems RX3i

Counter types Type A, Type B, Type C, Type D, Type E, Type Z, and User defined counters

Product Description High Speed Counter Module

Counters 8

Inputs 16

Number of Counter Channels 8 counters

Inputs 16

Output Voltage Range 4.7 to 40 Volts DC

No. of I/Os 16 inputs and 14 outputs

Outputs 14

Power Requirements 561 milliamps at 3.3 Volts DC, 94 milliamps at 5 Volts DC

High Speed Counter Type A, Type B, Type C, Type D, Type E, Type Z, and User Defined

Output Voltage Range 4.7 to 40 Volts DC

Compatible applications Turbine flowmeter, Meter proving, Velocity measurement, Material handling, Motion control, Process control

Maximum Count Rates 1.5 MHz

Counting Range -214 7483648 to +2147483547

Hot insertion/extraction Supported

Counting Range -2147483648 to 2147483647

Power Requirements 561 milliamps at 3.3 Volts DC, 94 milliamps at 5 Volts DC

I/O Interrupts Supported

Oscillator Accuracy over Operating Temperature Range ±100 PPM

Module Fault Reporting Supported

Oscillator Drift Over Time ±5 PPM/year maximum

Backplane Current draw 94mA maximum @ 5V; 561mA maximum @ 3.3V

Input Voltages 5VDC nominal: 4.7VDC to 5.5VDC; 12 to 24VDC nominal: 10VDC to 26.4VDC

Output Voltage Range 4.7 to 40VDC

Output Current Rating 1.5A maximum per channel; 10.5A maximum per module

Output Delay time Off to On: 125uS @ 1.5A; On to Off: 85uS @ 1.5A

Compatible Applications: Turbine Flowmeter, meter proving, velocity measurement, material handling, Motion control and Process Control.

The IC695HSC308 is a High-speed counter module that is part of the I/O components of the PACSystem RX3i mid-range Programmabel Automation Controller (PAC) series. This module is essentially a Discrete I/O module however, it comes with input channels that accept input signals with rapid switching frequency of 1.5 MHz. This module is ideally used for high-speed counting, totalizing and motion control specifically, it can be used in Turbine Flowmetering, Meter proving, encoder integration and process control. The IC695HSC308 comes with Eight (8) counters that is comprised of Sixteen (16) high-speed inputs and Fourteen (14) output channels. The module's counters are configurable as A, B, C, D, E , Z, and a user defined type. It has a counting range of -2147483648 to 2147483647 with oscillator accuracy of +/- 100 parts per million (ppm) with oscillator drift overtime of +/- 5 PP/year, maximum. The input channels of the IC695HSC308 are designed to receive 4.7VDC to 5.5VDC with 5 VDC nominal voltage and 10VDC to 26.4VDC with nominal input voltage of 12 to 24 VDC. Conversely, the output voltage of this high speed counter module is 4.7 to 40 VDC while the output current rating is 1.5 Amperes, maximum, per channel and maximum of 10.5 Amperes per module. The IC695HSC308 supports Removal and Insertion Under Power (RIUP), removal and insertion detection of the terminal block, upgradable flash memory, module fault reporting and configurable I/O interrupts. This module is compatible with several terminal blocks such as Box-style (IC694TBB032), Extended Box-style (IC694TBB132), Spring-style (IC694TBS032), or Extended Spring-style (IC694TBS132)) Terminal Block.

The GE Fanuc IC695HSC308 module is a high-speed counter module with 8 counters, 16 inputs, and 14 outputs. The configurable high-speed counter types are Types A, B, C, D, E, and Z or user-defined. The maximum counter rates are 1.5 megahertz with configurable input filtering. The counting range is from -214 7483648 to +2147483547. The backplane power requirements are a maximum of 561 milliamps at 3.3 Volts DC and a maximum of 94 milliamps at 5 Volts DC. The LEDs are provided on the IC695HSC308 module for module status updates, field status updates, and terminal block updates. Additionally, LEDs are provided for displaying the state of each input and output. The peak input voltage is 35 Volts DC. The input impedance is greater than 5 kiloohms. The output voltage range is from 4.7 to 40 Volts DC. Each output on the IC695HSC308 module can be mapped to any number of counter

setpoint outputs. Each counter on the module can control a maximum of 4 setpoints with turn off and turn on values. The maximum on-state voltage drop/output is 0.35 Volts at 1.5 Amps. The output time delay is 125 microseconds at 1.5 Amps for off to on and it is 85 microseconds at 1.5 Amps for on to off. The module supports reverse polarity protection and the outputs are protected from reverse wiring. The IC695HSC308 module is ideally suited to industrial applications including material handling, velocity measurement, turbine flowmeter, and process control. The IC695HSC308 module can sense inputs, process input count information, and control outputs without requiring CPU intervention. The IC695HSC308 module meets the ATEX, CE, 1604, and UL/CUL 508 requirements.

Revisions