GE RX3i PacSystem Series Service Manual

IC695PMM335

1. Description

The IC695PMM335 is a multi-axis motion controller from the PACSysystem RX3i by Emerson Automation, formerly by GE Intelligent Platforms (GE IP). This module mounts to an RX3i rack which enables control of up to Four (4) servo axes and additional virtual or time based axes. This motion controller supports Position, Velocity and Torque loop with built-in I/O including Four (4) 24VDC, Optically isolated, General Purpose Inputs configurable for source/sink wiring; Two (2) 24VDC, High-speed Inputs co

2. Specifications

Specification	Value
Brand	GE Intelligent Platforms/GE Fanuc
Series	RX3i PacSystem
Manufacturer	GE Intelligent Platforms (Former); Emerson Automation (Current)
Part	Number IC695PMM335
Series	PACSystem RX3i
Part	Number IC695PMM335
Product	Line RX3i
Product	Description Motion Controller Module
Catalog	IC695
No.	of Axes 4
Product	Type Multi-Axis Motion Controller module
No	of Master axes 1
Backplane	Support Universal Support
Motion	Path Planning 1ms
Number	of Slots 1 (single slot)
Position	Loop Update Rate 500µs
Controlled	Axes/Module 4
FSSB	Velocity Loop Update Rate 125µs
Motion	Path Planning 1 ms
FSSB	Torque Loop Update Rate 62.5µs
Power	Consumption at 5 V 0.45 A
Servo	Command Interface Fiber Optic
Power	Consumption at 3.3 V 1.1 A
Servo	Command Interface speed 50Mb/s via FANUC Serial Servo Bus (FSSB)
High	Speed Position Capture 2 Inputs/Axis
Maximum	FSSB Cable Length 100 meters between nodes; 400 meters per module
Floating	Point Yes
Compatible	encoder type Incremental/Absolute Serial Encoder
General	purpose

3. Product Information

The IC695PMM335 is a multi-axis motion controller from the PACSysystem RX3i by Emerson Automation, formerly by GE Intelligent Platforms (GE IP). This module mounts to an RX3i rack which enables control of up to Four (4) servo axes and additional virtual or time based axes. This motion controller supports Position, Velocity and Torque loop with built-in I/O including Four (4) 24VDC, Optically isolated, General Purpose Inputs configurable for source/sink wiring; Two (2) 24VDC, High-speed Inputs configurable for source/sink wiring and Two (2) 24VDC, Optically isolated, General Purpose Inputs / Outputs configurable for source/sink wiring.

Technical specifications for IC695PMM335

Brand GE Intelligent Platforms/GE Fanuc

Series RX3i PacSystem

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

Part Number IC695PMM335

Series PACSystem RX3i

Part Number IC695PMM335

Product Line RX3i

Product Description Motion Controller Module

Catalog IC695

No. of Axes 4

Product Type Multi-Axis Motion Controller module

No of Master axes 1

Backplane Support Universal Support

Motion Path Planning 1ms

Number of Slots 1 (single slot)

Position Loop Update Rate 500µs

Controlled Axes/Module 4

FSSB Velocity Loop Update Rate 125µs

Motion Path Planning 1 ms

FSSB Torque Loop Update Rate 62.5µs

Power Consumption at 5 V 0.45 A

Servo Command Interface Fiber Optic

Power Consumption at 3.3 V 1.1 A

Servo Command Interface speed 50Mb/s via FANUC Serial Servo Bus (FSSB)

High Speed Position Capture 2 Inputs/Axis

Maximum FSSB Cable Length 100 meters between nodes; 400 meters per module

Floating Point Yes

Compatible encoder type Incremental/Absolute Serial Encoder

General purpose inputs Four (4) 24VDC, Optically isolated, configurable for source/sink wiring

High-speed inputs Two (2) 24VDC, High-speed Inputs configurable for source/sink wiring

General purpose I/O Two (2) 24VDC, Optically isolated, General Purpose Inputs / Outputs configurable for source/sink wiring.

The IC695PMM335 is an intelligent module that is part of the PACSystem RX3i Automation platform of Emerson Automation formerly by GE Intelligent Platforms (GE IP). This module is specifically a motion controller module, capable of controlling up to 4 motion axes and virtual or time-based axes. This module is used to interface with servo motors via the position feedback provided by their individual encoders installed. This module is capable of controlling a variety of control loops such as Position Loop with update rate of 500µs; Fanuc Serial Servo Bus (FSSB) Velocity Loop at update rate of 125µs and FSSB Torque Loop at an update rate of 62.5µs. Up to 8 modules can be attached to a single RX3i rack where up to 40 motion axes can be controlled. The IC695PMM335 has Fiber Optic FSSB port and Fiber Optic I/O communication installed to the module's front panel. It also has Faceplate I/O terminals which accommodates Four (4) 24VDC, Optically isolated, General Purpose Inputs configurable for source/sink wiring; Two (2) 24VDC, High-speed Inputs configurable for source/sink wiring and Two (2) 24VDC, Optically isolated, General Purpose Inputs / Outputs configurable for source/sink wiring. The motion controller module's compatible encoder feedback devices are Incremental or Absolute Serial Encoder. In addition, the IC695PMM335 supports configuration of electronic CAM profiles, up to 3 interrupt routines per module, diagnostic logic block, Data logging during runtime and complies to the PLCopen specification. Furthermore, using the Proficy Machine Edition software package, the IC695PMM335 data logging can uploaded and displayed.

The GE Fanuc IC695PMM335 multi-axis motion controller module is manufactured as part of the RX3i PACSystems product line. It is intended to provide a high level of performance, and it is also an easy-to-use servo motion control module which meticulously unified with the logic communication functions of the RX3i PACSystems CPU. This servo motion controller supports only the universal backplane, and it has a single slot and 4 controlled axes. It also comes with a motion path planning time of 1 millisecond with a power consumption rating of 1.1 Amps at 3.3 Volts or 0.45 Amps at 5 Volts. This motion controller module is flexible and it combines an incorporated machine and motion logic system with the flexibility, scalability, and performance levels that are required to achieve advanced automation. The IC695PMM335 multi-axis motion controller module by GE Fanuc Intelligent Platforms/GE Fanuc PACSystems has several features that allow it to offer the best performance. The IC695PMM335 multi-axis motion controller module can control up to 4 different servo axes and it allow allows for the configuration of an additional encoder and an extra virtual axis. It supports up to 8 modules at a time that can all be included in 1 rack of 40 axes. Other features include the fiber input and output terminal block with support for an optional fiber input and output terminal block as well as the built-in faceplate I/O and electronic cam profiles that can be created by using the integral cam editor in the imported CVS file or the Proficy software.