GE RX3i PacSystem Series Service Manual

IC695PNC001

1. Description

The IC695PNC001 is a PACSystems RX3i communication module that is manufactured by Emerson Automation, formerly by GE Intelligent Platforms (GE IP). This module is a PROFINET controller module that is used to connect an RX3i system to PROFINET network. It supports PROFINET Version 2.2 General Class A IO-Controller and compatible with CPU315 or CPU320, with firmware version 7.0 or higher. It supports up to 64 devices per PROFINET Controller where up to 8 I/O controllers per network can be connecte

2. Specifications

Specification	Value
8	**Number of PROFINET Slots per device**
32	**Communication interfaces**
256	
Brand	**GE Intelligent Platforms/GE Fanuc**
Series	**PACSystem RX3i**
Manufacturer	**GE Fanuc**
Part	**Number IC695PNC001**
Product	**Description Profibus Master Module**
Profinet	**Controller Module CPU Compatibility Requires**
Product	**Line RX3i**
Catalog	**IC695**
One	**(1) Mounting location**
Product	**Type PROFINET Controller**
Main	**rack only Protocol Support**
Number	**of Slots 1 (single slot)**
PROFINET	**Version 2.2 General Class A Communication Ports**
Backplane	**Support Universal Only**
Two	**(2) PROFINET ports; Maximum I/O Memory**
Protocol	**Support PROFINET Version 2.2 General Class A**
128	**Kbytes of combined input/output memory per PROFINET Controller CPU Status Bit**
Communication	**Ports Micro USB (for diagnostics and system setup only)**
Internal	**Power at 5 V DC 1.5 A**
One	**(1) Micro USB (for diagnostics and system setup only); Two (2) PROFINET ports No. of module per CPU**
Internal	**Power at 3.3 V DC 0.5 A**
Four	**(4) IO-Devices per IO-Controller**
CPU	**Status Bits 32**
64	**per**

3. Product Information

The IC695PNC001 is a PACSystems RX3i communication module that is manufactured by Emerson Automation, formerly by GE Intelligent Platforms (GE IP). This module is a PROFINET controller module that is used to connect an RX3i system to PROFINET network. It supports PROFINET Version 2.2 General Class A IO-Controller and compatible with CPU315 or CPU320, with firmware version 7.0 or higher. It supports up to 64 devices per PROFINET Controller where up to 8 I/O controllers per network can be connected. Maximum of 2048 I/O devices or 128 per network can be connected to this PROFINET controller. This module has Two RJ-45 and Two SFP slots and One micro USB connector.

Technical specifications for IC695PNC001

8 Number of PROFINET Slots per device

32 Communication interfaces

256

Brand GE Intelligent Platforms/GE Fanuc

Series PACSystem RX3i

Manufacturer GE Fanuc

Part Number IC695PNC001

Product Description Profibus Master Module

Profinet Controller Module CPU Compatibility Requires

Product Line RX3i

Catalog IC695

One (1) Mounting location

Product Type PROFINET Controller

Main rack only Protocol Support

Number of Slots 1 (single slot)

PROFINET Version 2.2 General Class A Communication Ports

Backplane Support Universal Only

Two (2) PROFINET ports; Maximum I/O Memory

Protocol Support PROFINET Version 2.2 General Class A

128 Kbytes of combined input/output memory per PROFINET Controller CPU Status Bit

Communication Ports Micro USB (for diagnostics and system setup only)

Internal Power at 5 V DC 1.5 A

One (1) Micro USB (for diagnostics and system setup only); Two (2) PROFINET ports No. of module per CPU

Internal Power at 3.3 V DC 0.5 A

Four (4) IO-Devices per IO-Controller

CPU Status Bits 32

64 per PROFINET Controller IO-Devices per Network

Port Connectors Two RJ-45 and two SFP Cage

128 per network, spread across up to 8 IO-Controllers IO-Devices per RX3i CPU

128 per RX3i CPU, spread across up to 4 PROFINET Controllers IO-Controllers per network

The IC695PNC001 is a PROFINET controller module. This module is manufactured previously by GE Intelligent Platforms (GE IP), now by Emerson Automation. This PROFINET controller enables an RX3i CPU to send and receive data over PROFINET network. The IC695PNC001 is compatible for use with PACSystem RX3i CPU315 or CPU320, with firmware version 7.0 or higher. This module comes with Two (2) RJ-45 and Two (2) SFP slots with SFP connectors separately sold. Only One IP address is assigned for these PROFINET ports. Up to Four (4) IC695PNC001 can be installed along a single CPU and must located to the to the main rack only, where the CPU resides. Up to Sixty-Four (64) I/O devices can be connected to One (1) controller; 128 I/O device per network, distributed among Eight (8) I/O controllers. Additionally, up to Eight (8) I/O devices can be installed in a single network. This module has configurable data update times of 1 ms, 2 ms, 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms, 256 ms and 512 ms. The IC695PNC001 can be Removed and Inserted Under Power (RIUP). It occupies a single slot of the chassis and draws 0.5 A without SFP devices installed and maximum of 1.2 A maximum with Two (2) SFP devices installed where an SFP device uses 0.35 A. At 5.5 VDC, the module draws 1.5 A, maximum. Aside from the embedded dual PROFINET ports, this module also comes with a micro USB connector that is used for communicating with a computer using Command Line Interface. It must be operated at a temperature range of 0-60 Degree Celsius.

The IC695PNC001 controller is a PROFINET controller manufactured by GE Intelligent Platforms/GE Fanuc PACSystems as part of the RX3i series. This PROFINET controller module helps to connect the controllers in the RX3i PacSystems series to a high-speed PROFINET LAN. Some of its notable specifications include a single slot, support for only universal backplanes, and PROFINET 2.2 General Class A network ratings. It operates on an internal power of 1.5 Amps at 5 Volts DC or 0.5 Amps at a rated voltage of 3.3 Volts DC. The IC695PNC001 PROFINET controller module has an operating temperature range of 0 to 60 degrees Celsius, but lower temperatures may be needed depending on the PNC001 location and the population of SFP. This module has 1 micro USB connector for communication with the computer through the command-line interface. It also features 2 SFP cages and 2 RJ-45 port connectors, but the SFP devices can be acquired separately. The main features of the IC695PNC001 RX3i PacSystems PROFINET controller or PNC include firmware upgrades through the use of the WinLoader software utility. The controller also has a built-in command-line interface functionality that provides partial configuration and direct monitoring by using the telnet or through a micro USB port. It also has support for ring, star, and daisy-line/chain network topologies. Other features of the IC695PNC001 PNC are an internal clock matched with an RX3i CPU for diagnostics that are time-stamped. It also features a restart pushbutton that restarts the PROFINET controller manually without having to power cycle the whole system. The USB port on this PNC is designed for setting up the system and for diagnostic purposes only.