GE RX3i PacSystem Series Service Manual

IC694DNM200

1. Description

The IC694DNM200 is a Series 90-30 and PACSystem RX3i communication module formerly manufactured by GE Fanuc, now under Emerson Automation. This module is a DeviceNet Master module, able to establish communication with up to 63 DeviceNet Slaves and supports data transfer size of 255 Bytes of input and 255 Bytes of output for every slave device. It comes with One (1) RS232 service port and One (1) DeviceNet Master port. This module installs to an RX3i backplane and occupies a single slot.

2. Specifications

Specification	Value
Manufacturer	**Emerson Automation**
Series	**PACSystem RX3i**
Product	**Description DeviceNet Master Module**
Part	**Number IC694DNM200**
Communication	**interface One (1) RS232 Service port; One (1) DeviceNet Master Port**
Product	**Type DeviceNet Master Module**
Communication	**protocol DeviceNet**
Maximum	**Number of Slave Devices Supported 63**
No.	**of supported DeviceNet slave: 63**
Slave	**Operation Supported**
Input	**data: 255 Bytes**
Communication	**Rates 125k, 250k, or 500k bauds**
Output	**data: 255 Bytes**
Maximum	**Load (5 Volts DC) 450 milliamps or 2.25 Watts**
Baud	**rates: 125k, 250k, or 500k**
Compatible	**RX3i CPUs Version 3.5 or Later**
Mounting	**location Rx3i and Series 90-30 Backplane**
Configurable	**Global Scan Rate Supported**
Redundancy	**Not supported**
Network	**Power for Node devices 24VDC +/- 4%**
Diagnostic	**Address Detection During power-up**
Current	**draw: 450mA @ 5VDC**
Product	**Lifecycle Status Discontinued/Obsolete**
The	**IC694DNM200 is a DeviceNet Master module. This module is an option communication module that is part of the PACSystem**

3. Product Information

The IC694DNM200 is a Series 90-30 and PACSystem RX3i communication module formerly manufactured by GE Fanuc, now under Emerson Automation. This module is a DeviceNet Master module, able to establish communication with up to 63 DeviceNet Slaves and supports data transfer size of 255 Bytes of input and 255 Bytes of output for every slave device. It comes with One (1) RS232 service port and One (1) DeviceNet Master port. This module installs to an RX3i backplane and occupies a single slot.

Technical specifications for IC694DNM200

Manufacturer Emerson Automation

Series PACSystem RX3i

Product Description DeviceNet Master Module

Part Number IC694DNM200

Communication interface One (1) RS232 Service port; One (1) DeviceNet Master Port

Product Type DeviceNet Master Module

Communication protocol DeviceNet

Maximum Number of Slave Devices Supported 63

No. of supported DeviceNet slave: 63

Slave Operation Supported

Input data: 255 Bytes

Communication Rates 125k, 250k, or 500k bauds

Output data: 255 Bytes

Maximum Load (5 Volts DC) 450 milliamps or 2.25 Watts

Baud rates: 125k, 250k, or 500k

Compatible RX3i CPUs Version 3.5 or Later

Mounting location Rx3i and Series 90-30 Backplane

Configurable Global Scan Rate Supported

Redundancy Not supported

Network Power for Node devices 24VDC +/- 4%

Diagnostic Address Detection During power-up

Current draw: 450mA @ 5VDC

Product Lifecycle Status Discontinued/Obsolete

The IC694DNM200 is a DeviceNet Master module. This module is an option communication module that is part of the PACSystem RX3i Programmable Automation Controller (PAC) platform. It is installed to any vacant slot of an RX3i baseplate at enables communication to the DevieNet network. Being a master DeviceNet master module, this module is used to communication to DeviceNet, supporting up to 63 DeviceNet slaves. With the use of the IC694DNM200, Distributed I/O architecture can be implemented. Up to 63 I/O stations can be configured with each station exchanging information at configurable speeds of 125k, 250k, or 500k baud and with maximum data that be exchanged amounting to 255 Bytes of input and 255 Bytes of output for every slave device. In addition, each master module is capable of communicating up to maximum of 3972 bytes of input data and 3972 bytes of output data. Configurable connection types include Polled, Cyclic, Strobe or Change of State (COS). It also supports Unconnected Message Manager (UCMM) with one proxy connection per slave. The IC694DNM200 is powered by the backplane therefore, no external power is required. It has power consumption amounting to 450mA at 5VDC (typical). It supports trunkline or dropline topology however, redundancy is not supported. It has One (1) DeviceNet terminal which supports used of thick and thin communication cables. Cables must be of common axis with drain wire in the center. This module is not only compatible for use in an RX3i backplane but to a Series 90-30 baseplate as well. The firmware of this module can also be modified by upgrading to newer release. This can be done through the RS232 Service port.

The GE Fanuc IC694DNM200 module is a DeviceNet master module that is made for use in the GE RX3i PacSystem PLCs. It can support any RX3i CPU that is version 3.5 or later. The IC694DNM200 DeviceNet master module, like many RX3i devices, does not support hot insertion or hot removal. At 5 Volts DC voltage, this DeviceNet master module supports a maximum load of 450 milliamps or 2.25 Watts. The purpose of the IC694DNM200 DeviceNet master module in the RX3i PLC is to allow the PLC’s CPU to send and receive data through the DeviceNet network. In this DeviceNet network, this master module can control as many as 63 slave devices or it can be configured as both a master device and as a slave device to another master device simultaneously. The GE Fanuc IC694DNM200 DeviceNet master module can be installed in any of the available I/O slots in the host PLC’s universal backplane, but it can never be installed in a remote backplane or an expansion backplane. This module is well-suited for a variety of DeviceNet applications that require data to be transmitted between control systems like PLCs and distributed industrial devices like sensors, switches, motor starters, and operator interface devices. The IC694DNM200 DeviceNet master module can communicate at standard rates of 125k, 250k, or 500k baud on the DeviceNet network. Its global scan rate is configurable and firmware updates can be done through the service port on the module. The DeviceNet connector on the IC694DNM200 DeviceNet master module can be removed without disrupting the bus operation.