GE Series 90-30 Series Service Manual

IC693DNM200

1. Description

The IC693DNM200 is a Series 90-30 component that is manufactured by GE Fanuc. This is a single-slot DeviceNet Master Module with One (1) DeviceNet terminal and One (1) RS232 Service port. This module supports standard DeviceNet transmission rates such as 125K, 250K and 500K and capable of 255 input data bytes and 255 output data bytes and capable of accommodating up to 63 DeviceNet slaves.

2. Specifications

Specification	Value
Brand	**GE Fanuc**
Series	**Series 90-30**
Manufacturer	**GE Fanuc**
Part	**Number IC693DNM200**
Product	**Description DeviceNet Master Module**
Compatibility	**Series 90-30, PACSystems RX3i**
Communication	**ports One (1) DeviceNet terminal; One (1) Service port**
Supported	**network DeviceNet**
Communication	**speed 125K, 250K and 500K**
Supported	**data rates 125K, 250K and 500K Baud**
Module	**location Any slot of Series 90-30 except slots 0 and 1**
Rated	**voltage 12 to 24 Volts DC, positive logic**
Module	**Width Single slot**
ON-state	**voltage drop 0.3 Volts DC**
No.	**of slaves up to 63 DeviceNet slaves**
ON	**/ OFF response times 0.5 milliseconds (maximum)**
No.	**of I/O connection per slave Two (2) I/O connection per slave**
Number	**of outputs 32**
Data	**transfer per slave 255 Input Bytes / 255 Output Bytes**
Inrush	**current 5.4 Amps for 10 milliseconds**
Data	**transfer to Master 3972 Input Bytes / 3972 Output Bytes**
Output	**current 0.5 Amps per point**
Connection	**Poll, Strobe, Cyclic and COS I/O**
Backplane	**current consumption 450 milliAmps at 5 Volts DC (**

3. Product Information

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Technical specifications for IC693DNM200

Brand GE Fanuc

Series Series 90-30

Manufacturer GE Fanuc

Part Number IC693DNM200

Product Description DeviceNet Master Module

Compatibility Series 90-30, PACSystems RX3i

Communication ports One (1) DeviceNet terminal; One (1) Service port

Supported network DeviceNet

Communication speed 125K, 250K and 500K

Supported data rates 125K, 250K and 500K Baud

Module location Any slot of Series 90-30 except slots 0 and 1

Rated voltage 12 to 24 Volts DC, positive logic

Module Width Single slot

ON-state voltage drop 0.3 Volts DC

No. of slaves up to 63 DeviceNet slaves

ON / OFF response times 0.5 milliseconds (maximum)

No. of I/O connection per slave Two (2) I/O connection per slave

Number of outputs 32

Data transfer per slave 255 Input Bytes / 255 Output Bytes

Inrush current 5.4 Amps for 10 milliseconds

Data transfer to Master 3972 Input Bytes / 3972 Output Bytes

Output current 0.5 Amps per point

Connection Poll, Strobe, Cyclic and COS I/O

Backplane current consumption 450 milliAmps at 5 Volts DC (typical)

Operating temperature 0 to 60 degrees Celsius (32 to 140 degrees Fahrenheit)

Backplane Current draw 450mA at 5VDC (typical)

Storage temperature -40 to 85 degrees Celsius (-40 to 185 degrees Fahrenheit)

The IC693DNM200 is a DeviceNet Master Module. This module is a single slot communication module that is part of the Series 90-30 Programmable Logic Controller (PLC) platform being manufactured by formerly by GE Fanuc, now under Emerson Automation. This module is provided with a single DeviceNet terminal. It also has One (1) RS232 9-pin D shell female port that is used as module service port. The IC693DNM200 supports all data rates of DeviceNet protocol particularly, 125K, 250K and 500K transmission rates. Up to 255 Bytes of input data and 255 Bytes of output data can be transferred by the master per slave device and up to 3972 bytes of input data and 3972 Bytes of output data can be transferred to this master module. Additionally, a total of 126 I/O connections can be established using this module as it is capable of communicating up to 63 slave devices, where each slave assignable with up to Two (2) I/O station. The module's supported and configurable data connection are Polled, Strobe, Cyclic or COS. Explicit messaging, Unconnected Message Manager (UCMM) and One (1) Proxy connection per slave unit is also supported by this DeviceNet Master Module. In addition, this module can operate in dual mode, as Master and Slave simultaneously. Fault behavior specifically during communication loss can be configured to provide acceptable system reaction in the event of the said error. This module also comes with an upgradeable firmware, allowing module updates and bug fixes to be downloaded via the RS232 service port.

The IC693DNM200 module is a DeviceNet master module that is designed and manufactured by GE Fanuc. The unit is part of Series 90-30 and it has a variety of integrated functions for messaging and data transfer applications. Most of these functions are automatic and the unit works on a DeviceNet network that includes other devices and a host computer. The IC693DNM200 module can be mounted on the main rack of Series 90-30 or PACSystems RX3i systems but it does not fit into remote or expansion racks. The IC693DNM200 DeviceNet module has 32 output points and it supports standard data rates like 125K,250K, and 500K Baud. The outputs are arranged in groups of 4 and every group covers 8 points. The unit has a rated voltage of 12 to 24 Volts DC (positive logic) and its backplane consumes a current of 450 milliAmps at 5 Volts DC. The output current of the GE Series 90-30 DeviceNet IC693DNM200 module is 0.5 Amps per point while its inrush current is 5.4 Amps for the duration of 10 milliseconds. For the output current, it should be noted that the ultimate output current per group is 4 Amps while output current per group common pin is not more than 3 Amps. In addition to that, the ON-state voltage drop is 0.3 Volts DC while the ON/OFF response time is not more than 0.5 milliseconds. The IC693DNM200 module is very reliable and it operates within the temperature range of 0 to 60 degrees Celsius (32 to 140 degrees Fahrenheit). In addition to that, the specified storage temperature range of the unit is -40 to 85 degrees Celsius (-40 to 185 degrees Fahrenheit).