GE Versamax Series Service Manual

IC200GBI001

1. Description

The IC200EBI001 is a Genius Network Interface Unit (NIU) from the VersaMax Programmable Logic Controller (PLC) product family. This module is manufactured by Emerson automation, formerly by GE Fanuc. This module functions as an Genius slave module, hosting and controlling I/O modules for implementing distributed I/O architecture.

2. Specifications

Specification	Value
Brand	**GE Intelligent Platforms/GE Fanuc**
Series	**Versamax**
Manufacturer	**Emerson Automation / GE Fanuc (former)**
Part	**Number IC200GBI001**
Series	**VersaMAx**
Product	**type Genius Network Interface Unit**
No.	**of communication ports Two (2) Genius terminals**
Bulletin	**IC200**
Redundancy	**Supported**
Product	**Type Network Interface Unit**
No.	**of modules Eight (8) modules**
Network	**Inputs/Bus Scan 128 bytes**
No.	**of racks Eight (8) racks**
I/O	**Memory 1024 points**
Supported	**transmission rate 153.6 kbaud for extended network configuration; 153.6 kbaud, 76.8 Kbaud and 38.4 Kbaud for standard configuration.**
Analog	**I/O Memory 128 bytes**
Wiring	**topology Daisy-chain**
Power	**Rating at 250 mA 5 V**
Terminating	**resistor 75, 100, 120, or 150 ohms**
Power	**Rating at 10 mA 3.3 V**
Compatible	**controllers Series 90-70; PACSystem RX7i; PACSystem RX3i**
Serial	**Bus Address Range 0 to 31**
No.	**of Discrete I/O 2048**
Number	**of I/O 64**
No.	**of discrete inputs 1024**
No.	**of discrete outputs 1024**
LED	**indicators PWR; OK; FAULTS; I/O ENBL; FORCE; SBA ERR; BUS B**
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3. Product Information

The IC200EBI001 is a Genius Network Interface Unit (NIU) from the VersaMax Programmable Logic Controller (PLC) product family. This module is manufactured by Emerson automation, formerly by GE Fanuc. This module functions as an Genius slave module, hosting and controlling I/O modules for implementing distributed I/O architecture.

Technical specifications for IC200GBI001

Brand GE Intelligent Platforms/GE Fanuc

Series Versamax

Manufacturer Emerson Automation / GE Fanuc (former)

Part Number IC200GBI001

Series VersaMAx

Product type Genius Network Interface Unit

No. of communication ports Two (2) Genius terminals

Bulletin IC200

Redundancy Supported

Product Type Network Interface Unit

No. of modules Eight (8) modules

Network Inputs/Bus Scan 128 bytes

No. of racks Eight (8) racks

I/O Memory 1024 points

Supported transmission rate 153.6 kbaud for extended network configuration; 153.6 kbaud, 76.8 Kbaud and 38.4 Kbaud for standard configuration.

Analog I/O Memory 128 bytes

Wiring topology Daisy-chain

Power Rating at 250 mA 5 V

Terminating resistor 75, 100, 120, or 150 ohms

Power Rating at 10 mA 3.3 V

Compatible controllers Series 90-70; PACSystem RX7i; PACSystem RX3i

Serial Bus Address Range 0 to 31

No. of Discrete I/O 2048

Number of I/O 64

No. of discrete inputs 1024

No. of discrete outputs 1024

LED indicators PWR; OK; FAULTS; I/O ENBL; FORCE; SBA ERR; BUS B

The IC200GBI001 is a VersaMax communication module. This module is a Genius Network Interface Unit, allowing VersaMax I/O modules to be installed in distributed I/O architecture. This module is designed to host up to Eight (8) I/O module per rack and supports installation of up to Eight (8) racks, for a maximum number of 64 I/O module support. It supports transmission speed of 153.6 kbaud for extended network configuration; 153.6 kbaud, 76.8 Kbaud and 38.4 Kbaud for standard configuration, The IC200GBI001 can accommodate a high number of I/O points, specifically, up to 1024 points for Discrete Inputs; 1024 Discrete outputs; 128 bytes of analog analog input memory and 128 bytes of analog output memory. This module can manage scanning of 128 bytes of network input per scan and 128 bites of output per scan. It has power consumption of 250 mA @ 4VDC and 10 mA @ 3.3 mA. The IC200GBI001 is compatible for use with a variety of controller systems as Genius protocol is supported by previous and modern controller platforms. Compatible control systems include Series 90-70 and PACSystem RX7i and PACSystem RX3i. Appropriate firmware revisions must be loaded to both the controller and the IC200GBI001 Genius Network Interface Module. The IC200GBI001 is provided with dual Genius connection terminals. The upper terminal serves as the primary Genius connection point while the lower terminal serves as the redundant port. These ports are designed for connecting in Daisy chain topology, installed with a terminating resistor at both ends of the communication cable. Appropriate resistor values are 75, 100, 120, or 150-ohm across terminals Serial 1 and 2.

The GE Fanuc IC200GBI001 unit is a Network Interface Unit or NIU that is manufactured by GE Intelligent Platforms/GE Fanuc. It belongs to the GE Versamax series and it is designed to provide control functions for different I/O modules that are connected to it. When the NIU is installed with the right firmware version, it is compatible with several modules such as the Genius Bus controllers, Series 90-70 PLCs, and the PacSystems RX7i and Rx3i PLCs. Any computer that can control the bus can be used as the host PC. Each of the racks on the IC200GBI001 Network Interface Unit has the capacity for 8 modules, and it also supports 8 racks maximum. The maximum network input that each bus can scan is 128 bytes with a maximum discrete I/O memory of 1024 points and analog I/O memory of 128 bytes. The GE Fanuc IC200GBI001 unit comes with 2 different power settings that are 3.3 Volts of power at 10 milliamps of current and 5 Volts of power at 250 milliamps of current. It has serial bus addresses ranging from 0 to 31. The rate of data transfer throughout the network is 153.6 Kilo-baud for extended transfers, and 153.6 Kilo-76.8 Kilo-baud, or 38.4 Kilo-baud for standard transfers. The operators of the IC200GBI001 Network Interface Unit must know that the rate of transfer varies depending on the distance between the devices and the number of devices supported. The IC200GBI001 NIU comes with a wide range of features including 64 analog I/O, the ability to use fiber-optic cables and shielded twisted pair (STP) cables, removable connectors, and operator diagnostics data available through the Enhanced Diagnostics Mode (EDM). Additionally, this network interface unit provides redundancy for the hardware as well as the media.