GE Series 90-30 Series Service Manual

IC693NIU004

1. Description

The IC693NIU004 is an Ethernet Network Interface Unit (NIU) that is part of the Series 90-30 PLC series, formerly by GE Fanuc Automation, now under Emerson Automation. This module allows the creation of a remote IO station utilizing Ethernet Global Data (EGD). It supports handling of up to 2048 Discrete Input; 2048 Discrete outputs; 1268 Analog input words and 512 Analog output Words

2. Specifications

Specification	Value
Brand	**GE Fanuc**
Series	**Series 90-30**
Manufacturer	**GE Fanuc (Former); Emerson Automation (Current)**
Part	**Number IC693NIU004**
Series	**Series 90-30**
Type	**of Memory Storage RAM and Flash**
Product	**Description Ethernet Network Interface Unit (NIU)**
Discrete	**Input Points - %I 2048**
Slot	**width Single slot**
Discrete	**Output Points - %Q 2048**
Analog	**Inputs - %AI 1268**
Internal	**Coils - %M 4096 (fixed). Reserved for system use.**
Analog	**Outputs - %AQ 512**
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Internal	**Coils - %M 4096 (fixed)**
Analog	**Outputs - %AQ 512**
Output	**(Temporary) Coils - %T 256 bits (fixed)**
Protocol	**Support SNP and SNPX on power supply RS-485 port**
Communication	**Ports Two (2) Ethernet ports**
Built-in	**Ethernet Communications Ethernet (built-in) â□□ 10/100 base-T/TX Ethernet Switch**
No.	**of IP address One (1)**
Communication	**speed 10/10 mbps, auto-sensing**
Supported	**protocols SRTP server; Ethernet Global Data (EGD)**
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Technical specifications for IC693NIU004

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No. of IP address One (1)

Communication speed 10/10 mbps, auto-sensing

Supported protocols SRTP server; Ethernet Global Data (EGD)

The IC693NIU004 is a Series 90-30 Programmable Logic Controller (PLC) module. This is specifically an Ethernet Network Interface Unit (NIU) that is primarily used for implementing distributed I/O architecture over Ethernet network utilizing Ethernet Global Data (EGD) protocol for exchanging I/O data, monitoring and control of remote systems over simplex or fault-tolerant Ethernet network topology. The IC693NIU004 comes with Two (2) Ethernet communication interface that features auto-sensing, auto-negotiation and supports a transmission rate of 10/100 Mbps. These ports utilize One (1) IP address, therefore functioning as a built-in Ethernet switch that can be used for Linear, Star, and Ring topologies. This module comes with the capability of processing and handling up to 2048 Discrete Inputs (%I); 2048 Discrete outputs (%Q); 1268 Analog input Words (%AI) and 512 Analog output Words (%AQ). Aside from these registers for physical I/Os, the IC693NIU004 also has built-in 4096 internal coil memory; 256 bits of temporary output coil, and 9999 register memory. This module supports interconnection of up to 8 baseplates being comprised of One (1) CPU baseplate and Seven (7) expansion and remote baseplates. The IC693NIU004 also supports the Secure Real-time Transport Protocol (SRTP) server. The IC693NIU004 comes with Status LED indicators such as EOK, LAN, STAT, and PS PORT. It is also provided with an Ethernet restart pushbutton which can be used to re-initialize the module without the need of removing power or using the programming software. An appropriate programming software package for use with this module is the CIMPLICITY Machine Edition Logic Developer 4.0, service pack 3, with Special 4 or later.

The GE Fanuc IC693NIU004 Ethernet Network Interface provides a gateway for the connection of the GE Fanuc Series 90-30 Programmable Logic Controllers to the industrial Ethernet protocol via a built-in 10/100 Base-T/TX Ethernet Switch. This Ethernet interface module comes equipped with two RJ45 ports with auto-sensing capabilities. Up to 2,048 discrete inputs and 2,048 discrete outputs can be connected to, monitored by, and controlled through the Ethernet protocol. The GE Fanuc IC693NIU004 Ethernet Network Interface can also handle up to 1268 analog inputs and up to 512 analog outputs. With such a high-speed and accurate processing and data transmission capabilities, this Ethernet Network interface module is ideal for industrial application processes spanning a high number of field devices. The operating temperature for the GE Fanuc IC693NIU004 Ethernet Network Interface should remain between 0 and 60 degrees Celsius (32 and 140 degrees Fahrenheit) at all times. Performance issues may occur when the module is to be exposed to higher (or lower) temperatures than those in the rated temperature ranges for extended periods. The ambient humidity should also be controlled, so it is recommended to install the GE Fanuc IC693NIU004 Ethernet Network Interface inside a protected panelboard, preferably with climate control or forced air circulation. The installation of the unit should only be carried out by properly trained technicians, and only qualified technicians should perform any maintenance work, servicing, or repairs to the module. The configuration of the device is done through the CIMPLICITY Machine Edition Logic Developer software, which is required in order to perform basic activities such as assigning an IP address and setting up the subletting parameters.