GE Series 90-30 Series Service Manual

IC693CPU341

1. Description

The IC693CPU341 is a single-slot CPU module from the Series 90-30 Programmable Logic Controller (PLC) platform that is formerly manufactured by GE Fanuc, now under Emerson Automation. This CPU mainly features an embedded 80C188XL CPU with clock speed of 20 MHz with Boolean execution time of 0.3 ms per 1K logic. It comes with a program memory of 80 Kbytes and capable of processing up to 512 Discrete Inputs, 512 Discrete outputs, 1024 Analog input Words and 256 Analog output Words. This baseplate

2. Specifications

Specification	Value
Brand	**GE Fanuc**
Series	**Series 90-30**
Manufacturer	**GE Fanuc**
Manufacturer	**GE Fanuc; Emerson Automation (Current)**
Part	**Number IC693CPU341**
Product	**Description Modular CPU**
Series	**Series 90-30**
Product	**type CPU module**
User	**memory 80 Kbytes**
Part	**Number IC693CPU341**
Clock	**speed 20 Megahertz**
Processor	**type 80188**
Product	**Description Single slot CPU**
User	**memory 80 kilobytes**
Typical	**scan rate 0.3 ms per 1K of Boolean logic**
No.	**of supported baseplates Five (5)**
Microprocessor	**90C188XL**
Processor	**speeds 20 MHz**
Clock	**Speed 20 MHz**
Voltage	**input 5 Volts DC**
Expandable	**Yes**
User	**Memory 80 Kbytes**
Current	**draw 490 milliamps**
No.	**of extension baseplates Four (4) expansion baseplate; Four (4) Remote I/O baseplate**
Boolean	**Execution speed 0.3 ms per 1K logic**
Register	**memory 9999 words**
Discrete	**Input Points - %I 512**
Timers	**/ Counters > 2000**
Serial	**port 1**
Discrete	**Output Points - %Q 512**
Communication	**Ports One (1) SNP Ports hosted by the Power Supply module**
Analog	**Inputs - %AI 1024 Words**
Interrupts	**Yes**
Analog	**Outputs -**

3. Product Information

The IC693CPU341 is a single-slot CPU module from the Series 90-30 Programmable Logic Controller (PLC) platform that is formerly manufactured by GE Fanuc, now under Emerson Automation. This CPU mainly features an embedded 80C188XL CPU with clock speed of 20 MHz with Boolean execution time of 0.3 ms per 1K logic. It comes with a program memory of 80 Kbytes and capable of processing up to 512 Discrete Inputs, 512 Discrete outputs, 1024 Analog input Words and 256 Analog output Words. This baseplate has integrated 1 SNP slave and SNP-X slave protocol compatible port, hosted by the power supply module.

Technical specifications for IC693CPU341

Brand GE Fanuc

Series Series 90-30

Manufacturer GE Fanuc

Manufacturer GE Fanuc; Emerson Automation (Current)

Part Number IC693CPU341

Product Description Modular CPU

Series Series 90-30

Product type CPU module

User memory 80 Kbytes

Part Number IC693CPU341

Clock speed 20 Megahertz

Processor type 80188

Product Description Single slot CPU

User memory 80 kilobytes

Typical scan rate 0.3 ms per 1K of Boolean logic

No. of supported baseplates Five (5)

Microprocessor 90C188XL

Processor speeds 20 MHz

Clock Speed 20 MHz

Voltage input 5 Volts DC

Expandable Yes

User Memory 80 Kbytes

Current draw 490 milliamps

No. of extension baseplates Four (4) expansion baseplate; Four (4) Remote I/O baseplate

Boolean Execution speed 0.3 ms per 1K logic

Register memory 9999 words

Discrete Input Points - %I 512

Timers / Counters > 2000

Serial port 1

Discrete Output Points - %Q 512

Communication Ports One (1) SNP Ports hosted by the Power Supply module

Analog Inputs - %AI 1024 Words

Interrupts Yes

Analog Outputs - %AQ 256 Words

Shift register Yes

Built-in Serial Ports 1 (uses connector on PLC power supply). Supports SNP slave and SNP-X slave protocols

Timers / Counters >2000

Interrupts No

Shift register Yes

Current load: 490 mA

Bus voltage: +5VDC

The IC693CPU341 is a single slot CPU that is formerly manufactured by GE Fanuc Automation, now under Emerson Automation. This CPU is an 80C188XL, 20 MHz processor with a Boolean execution speed of 0.3 milliseconds per 1K of logic (boolean contacts). It belongs to the modular hardware type with built-in user memory amounting to 80 KB which supports up to 512 Discrete Inputs, 512 Discrete outputs, 1024 Analog input Words, and 256 Analog output. In addition, the IC693CPU341 has built-in 1280 bits of Discrete Global Memory (%G); 1024 bits of Internal Coils (%M); 256 bits of Output (Temporary) Coils (%T); 128 bits of System Status References (%S, %SA, %SB, %SC with each memory area having 32 bits each and 9999 Words of Register memory (%R). More than 2000 timers are available to this CPU and support shift register, interrupts, and override instructions. It has a battery-backed clock and is compatible with PCM / CCM memory. The IC693CPU341 does not come with an embedded memory instead, the Serial communication port supporting SNP and SNP-X protocols is hosted by the Power Supply module. In addition, optional communication modules supported by the IC693CPU341 are Ethernet, FIP, Profibus, GBC, GCM, and GCM+ option modules. The IC693CPU341 supports configuration of up to 5 baseplates which consists of 1 CPU baseplate and Four (4) expansion and/or remote I/O baseplates. This CPU requires 490 mA from the 5 VDC power supply while the operating temperature requirement is 0 to 60 Degree Celsius or 32 to 140 Degree Fahrenheit.

The IC693CPU341 module is a GE Fanuc CPU module clocked at 20 Megahertz. The IC693CPU341 module is designed and developed for Series 90-30 programmable logic controllers. The user memory provided on the IC693CPU341 module is 80 kilobytes. Early versions of the module supported RAM and optional EPROM or EEPROM. Starting with hardware version IC693CPU341-J and release 4.61 of the firmware, this CPU module supports only RAM and optional Flash memory. The IC693CPU341 module can be installed in slot 1 of a 5-slot baseplate system. The microprocessor on which the module is based is the 90C188XL microprocessor. The power supply requirement of the module is 490 milliamps at 5 Volts DC. The

average scan rate for the module per 1K of logic is 0.3 milliseconds. A total of 512 discrete outputs and 512 discrete inputs are supported by the IC693CPU341 module. The register memory is 9999 words. The integrated serial port on the IC693CPU341 module uses an interface connector which is located on the PLC power supply. Available optional network communication modules include the Ethernet, GBC, and FIP modules. GE Fanuc provides 2 types of CPU modules for the Series 90-30 PLCs which are the modular and embedded CPUs. The embedded CPU models include model 311, model 313, and model 323. The major advantage of embedded CPUs is the comparatively lower cost that they have. Modular CPUs, on the other hand, are less cost effective but they provide higher performance than embedded CPUs. Modular CPUs include model 331 and higher. All modular CPUs, including the IC693CPU341 module, are installed in slot 1 of the PLC baseplate. Excluding special option modules, slot 1 cannot be used for other module types that are not CPU modules.