



## *Series 90™-30 PLCs*

*GE Fanuc Automation*

[www.gefanuc-europe.com](http://www.gefanuc-europe.com)



*One of the Most Versatile PLC's  
Ideal for Simple Up to the  
Most Complex Applications*

# Versatility and Power in One Small Package

## Basic Features of All CPU Models:

- Four level password protection
- Online programming changes
- I/O and CPU diagnostics
- Full function double precision math (floating point on selected models)
- PID function
- Program block moves, arrays
- Indirect addressing
- Structured programming
- Advanced module support for Temperature Control, Motion Control, Ethernet, Bus Controllers and others.

GE Fanuc's Series 90-30 PLCs are a family of controllers, I/O systems, and specialty modules designed to meet the demand for a versatile industrial control. The variety and flexibility of I/O and specialty modules make automation integration easy. There are 11 powerful CPUs to choose from, over 100 different I/O module types, a wide range of intelligent modules, high-level communications options, and a variety of bus interfaces.

Programming options for the Series 90-30 are Ladder Logic, Instruction List, SFC, "C" or State Logic®. "C" programming enables users to handle complex calculations that were once only handled by large PLCs.

GE Fanuc uses industry standards, such as Ethernet TCP/IP for the Series 90-30 family. The Ethernet interface allows you to attach the Series 90-30 PLC directly to an Ethernet LAN and upload or download Ladder Logic etc.



In addition, data can be transferred between PLCs and PCs simultaneously. Access can also be handled over the Internet.



The Series 90-30 is suited for applications requiring as little as 32 I/O or as much as 4,000 I/O. Remote I/O is handled easily using industry standards like Genius® Bus, Profibus-DP, Interbus-S™ or DeviceNet™.

To ensure that the Series 90-30 PLC provides a full range of application solutions, GE Fanuc works closely with third-party manufacturers of peripherals, modules, and software packages to provide complex automation solutions. Application tools are available for redundancy, Sequence of Event Recording, injection molding, chemical delivery, and much more.

GE Fanuc also offers a full line of Operator Interfaces, Human Machine Interfaces, Motion Control products, and various integration services. In addition, the Series 90-30 integrates easily with Variable Frequency Drives, GE Motor Control Centers, and other automation products.

Part Number	Standard			
	IC693CPU311	IC693CPU313	IC693CPU323	IC693CPU351
<b>Total I/O Discrete</b>	160	160	320	4096
<b>Total Analog</b>	64 In/32 Out	64 In/32 Out	64 In/32 Out	2048 In/ 512 Out
<b>User Logic Memory</b>	6K bytes	12K bytes	12K bytes	32K bytes
<b>Registers</b>	512	1024	1024	9999
<b>Programming Language</b>	LD, IL, SFC	LD, IL, SFC	LD, IL, SFC	LD, IL, C, SFC
<b>Boolean Execution Speed</b>	18 ms/K	0.6 ms/K	0.6 ms/K	0.22 ms/K
<b>Built in Serial Ports</b>	1	1	1	1
<b>Max. I/O Module Slots</b>	5	5	10	79
<b>Floating Point Math</b>	No	No	No	Yes
<b>Battery-Backed Clock</b>	No	No	No	Yes

## Powerful CPUs

*Standard Models CPU311, CPU313, CPU323*

These CPUs are ideal for entry level applications with low I/O counts. The CPU is embedded into the backplane, leaving all slots available for I/O. These models are compatible with advanced modules such as Ethernet, the various bus modules, and motion modules.

*High Performance Models CPU350, CPU360, CPU363, CPU364, CPU352, CPU374*

If high performance is required, then these are the CPUs of choice. These CPU models are modular and provide increased functionality such as overrides, battery-backed clock, Programmable Coprocessor module support as well as high performance. Each CPU is based on a high performance processor for fast computation and high through-put. They can handle up to 4,096 I/O and start at 32k of memory. They can be programmed in Ladder Logic, SFC, Instruction List, "C" or in all of these. These high-performance CPUs are ideal for complex applications that were once reserved for large controllers.

The newest model, the CPU374, is the latest fast performing Series 90-30 CPU from GE Fanuc. This CPU374 is truly in its own class with greater speed and performance. In pilot projects, this new CPU offered four to five times performance improvements over the previous generation CPUs. In addition to high-speed processing, the CPU374 features a built-in Ethernet switch with two 10/100Mbit ports (RJ-45).

## Over 100 I/O Module Types

The power of the Series 90-30 is in its I/O. GE Fanuc offers one of the widest selections of I/O on the market. There are over 40 different discrete I/O types, 17 analog I/O types and a wide variety of specialty modules to choose from like:

- High-Speed Counter
- Temperature Control
- Servo/Stepper/Motion Control
- Thermocouple/RTD
- Millivolt/Strain Gage
- Sequence of Event recorder
- Programmable Coprocessor
- I/O Processor

The majority of these modules are also available as Low Temperature (-40 to +60° C) versions.

## Communication Options

The Series 90-30 has a variety of communications options available including Ethernet, Genius, Series 90 Protocol (SNP), Modbus RTU and several Field Bus networks which can easily be integrated into the system.

Beside Ethernet TCP/IP and Genius, the following Field Bus network interfaces are available:

- Profibus-DP
- DeviceNet
- Interbus-S
- CANOpen
- WorldFIP



GE Fanuc's Series 90-30 PLC is a family of

- Controllers
- I/O's systems
- Specialty Modules
- Communication Options
- Motion Products

designed to meet the demand for a versatile industrial control solution.

High Performance

	IC693CPU360	IC693CPU363	IC693CPU352	IC693CPU364	IC693CPU374
	4096	4096	4096	4096	4096
	2048 In/ 512 Out	2048 In/ 512 Out	2048 In/ 512 Out	2048 In/ 512 Out	2048 In/ 512 Out
	240K bytes	240K bytes	240K bytes	240K bytes	240K bytes
	9999	9999	9999	up to 32K	up to 32K
	LD, IL, C, SFC	LD, IL, C, SFC	LD, IL, C, SFC	LD, IL, C, SFC	LD, IL, C, SFC
	0.22 ms/K	0.22 ms/K	0.22 ms/K	0.22 ms/K	0.15 ms/K
	1	3	3	1-RS485, 1-10 Mbit Ethernet TCP/IP Built In	10/100 Mbit Ethernet TCP/IP Built In Switch
	79	79	79		79
	Yes	Yes	Yes, Hardware	Yes	Yes, Hardware
	Yes	Yes	Yes	Yes	Yes

With its innovative architecture and modular design, the Series 90-30 family of PLCs offer a low-cost solution to a surprisingly wide range of PLC applications, from simple relay replacement to sophisticated mid-range processes and discrete automation.

## Ordering Information

Part Number	Description
<b>Series 90-30 CPU Bases and Expansion Bases</b>	
IC693CHS391	Base, CPU, 10 Slots
IC693CHS392	Base, Expansion, 10 Slots
IC693CHS393	Base, Remote Expansion, 10 Slots (700 ft.)
IC693CHS397	Base, CPU, 5 Slots
IC693CHS398	Base, Expansion, 5 Slots
IC693CHS399	Base, Remote Expansion, 5 Slots (700 ft.)
<b>Series 90-30 Communications Modules</b>	
IC693CMM301	Genius Communications Module, GCM (256 bits)
IC693CMM302	Genius Communications Module, (1K byte) GCM+
IC693CMM311	Communications Module, CCM, RTU, SNP, SNPX
IC693CMM321	Ethernet Interface Module
HE693RTUXXX	Various RTU/Modbus Module
<b>Series 90-30 Bus Networks</b>	
IC693BEM331	Genius Bus Controller Module
IC693PBM200	Profibus-DP Interface Modules (Master)
IC693PBS201	Profibus-DP Interface Modules (Slave)
IC693BEM340	WorldFIP Bus Module (Master)
IC693BEM330	WorldFIP Bus Module (Slave)
HE693DNT250	DeviceNet Interface Modules (Master)
HE693IBS100	Interbus-S Interface Modules (Slave)
<b>Series 90-30 Specialty Modules</b>	
IC693ACC300	Input Simulator Module
IC693APU300	High Speed Counter (HSC)
IC693APU301	Axis Positioning Module (APM), 1 Axis Analog
IC693APU302	Axis Positioning Module (APM), 2 Axis Analog
IC693DSM302	Digital Servo Module, 2 Axis
HE693STPXXX	Various Stepper Positioning Modules
IC693APU305	I/O Processor Module (reads parallel Gray Code Encoder)
IC693PCM300	Prog. Coproc. Mdl., 160 KB (35 KB Basic Prgm), 2 Ports
IC693PCM301	Prog. Coproc. Mdl., 192 KB (47 KB Basic Prgm), 2 Ports
IC693PCM311	Prog. Coproc. Mdl., 640 KB (190 KB Basic Prgm), 2 Ports
IC693TCM302	Temperature Control Module with Auto Tuning, (8) Thermocouple In, (8) 24VDC Output
<b>Series 90-30 Power Supplies</b>	
IC693PWR321	Power Supply, 120/240VAC, 125VDC, Standard
IC693PWR322	Power Supply, 24/48VDC, Standard
IC693PWR330	Power Supply, 120/240VAC, 125VDC, High Capacity
IC693PWR331	Power Supply, 24VDC, High Capacity

Part Number	Description
<b>Series 90-30 Discrete I/O</b>	
IC693MDL230	120VAC Isolated Input (8 Points)
IC693MDL231	240VAC Isolated Input (8 Points)
IC693MDL240	120VAC Input (16 Points)
IC693MDL241	24VAC/VDC Input (16 Points)
IC693MDL632	125VDC Input (8 Points)
IC693MDL634	24VDC Input, Negative/Positive Logic (8 Points)
IC693MDL645	24VDC Input, Negative/Positive Logic (16 Points)
IC693MDL646	24VDC Input, Negative/Positive Logic 1 ms (16 Points)
IC693MDL654	5/12VDC (TTL) Input, Negative/Positive Logic (32 Points)
IC693MDL655	24VDC Input, Negative/Positive Logic, 1 ms, (32 Points)
IC693MDL310	120VAC Output, 0.5 Amp (12 Points)
IC693MDL330	120/240VAC Output, 2 Amp (8 Points)
IC693MDL340	120VAC Output, 0.5 Amp (16 Points)
IC693MDL390	120/240VAC Isolated Output, 2 Amp (5 Points)
IC693MDL734	125VDC Output, (6 points)
IC693MDL730	12/24VDC Output, 2 Amp, Pos. (8 Points)
IC693MDL731	12/24VDC Output, 2 Amp, Neg. (8 Points)
IC693MDL732	12/24VDC Output, 0.5 Amp, Pos. (8 Points)
IC693MDL733	12/24VDC Output, 0.5 Amp, Neg. (8 Points)
IC693MDL740	12/24VDC Output, 0.5 Amp, Pos. (16 Points)
IC693MDL741	12/24VDC Output, 0.5 Amp, Neg. (16 Points)
IC693MDL742	12/24VDC Output, 1 Amp, Pos. (16 Points), Fused
IC693MDL752	5/12/24VDC (TTL) Output, Neg., (32 Points)
IC693MDL753	12/24VDC Output, Pos. (32 Points)
IC693MDL930	Relay Output, Isolated, 4 Amp (8 points)
IC693MDL931	Relay Output, 8 Amp Form B/C, Iso. in groups of 4 (8 Points)
IC693MDL940	Relay Output, 2 Amp (16 Points)
IC693MAR590	Mixed I/O, 120VAC In (8 Points), Relay Out (8 Points)
IC693MDR390	Mixed I/O, 24VDC In (8 Points), Relay Out (8 Points)
<b>Series 90-30 PLC Analog I/O</b>	
IC693ALG220	Analog Input, Voltage/Current, 4 Channels
IC693ALG221	Analog Input, Current, 4 Channels
IC693ALG222	Analog Input, Voltage 16 Single/ 8 Differential Channels
IC693ALG223	Analog Input, Current, 16 Single Channels
IC693ALG390	Analog Output, Voltage, 2 Channels
HE693ADC4XX	Various Isolated Analog Input Modules
HE693DAC4XX	Various Isolated Analog Output Modules
HE693RTD6XX	Various RTD Modules
HE693STG8XX	Various Strain Gauge/Multivolt Modules
HE693THMXXX	Various Thermocouple Modules
IC693ALG391	Analog Output, Current, 2 Channels
IC693ALG392	High Density Analog Output, 8 Channels
IC693ALG442	Analog Combo Module (4 Input Channels/ 2 Output Channels)

Please see GE Fanuc price list for more details and more available options.



## GE Fanuc Automation

For the location of your nearest GE Fanuc sales representative or authorized distributor contact:

GE Fanuc Automation Information Centers  
 USA & Canada (1) 800 648-2001  
 Europe, Middle East,  
 CIS & Africa (352) 727979-1  
 Asia Pacific (65) 566-4918  
 Mexico (1) 800 989-1244

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