GE Series 90-70 Series Service Manual

IC697CPM790

1. Description

The GE Fanuc IC697CPM790 is a Series 90-70 Programmable Logic Controller (PLC) CPU. This CPU is specifically designed for use in Emergency Shut-Down (ESD), fire and gas, and other critical applications. This CPU has a built-in memory of 1 MB battery backed memory and supports up Triple Modular Redundancy (TMR).

2. Specifications

Specification	Value
Manufacturer	**GE Fanuc**
Series	**Series 90-70**
Part	**Number IC697CPM790**
Number	**of Installation Slots 1**
Number	**of LEDs 4**
Configurable	**Program and Data Memory Supported**
Specialty	**function Triple Modular Redundancy (TMR)**
Microprocessor	**64 MHz, 80486DX2 microprocessor**
Boolean	**execution 0.4 microseconds per boolean function**
Supported	**I/O Up to 12K discrete inputs and outputs (any mix -simplex mode only); 2048 voted discrete inputs, 2048 voted discrete outputs; Up to 8K analog inputs (simplex mode only) and 8K analog outputs (simplex mode only); 1024 voted analog inputs**
Memory	**1 Mbyte of battery-backed memory in the same slot (up to 512 Kbytes available for use by ladder diagram application program)**
Communication	**Port One (1) 15-pin sub-D connector**
Serial	**protocol support RS485**
Applications	**Emergency Shutdown, Fire, Gas and other critical application**
Product	**Type CPU**
Communication	**Route Through the Backplane**
Emergency	**Shutdown Functions Supported**
Standalone	**C Program Required**
The	**IC697CPM790 is a**

3. Product Information

The GE Fanuc IC697CPM790 is a Series 90-70 Programmable Logic Controller (PLC) CPU. This CPU is specifically designed for use in Emergency Shut-Down (ESD), fire and gas, and other critical applications. This CPU has a built-in memory of 1 MB battery backed memory and supports up Triple Modular Redundancy (TMR).

Technical specifications for IC697CPM790

Manufacturer GE Fanuc

Series Series 90-70

Part Number IC697CPM790

Number of Installation Slots 1

Number of LEDs 4

Configurable Program and Data Memory Supported

Specialty function Triple Modular Redundancy (TMR)

Microprocessor 64 MHz, 80486DX2 microprocessor

Boolean execution 0.4 microseconds per boolean function

Supported I/O Up to 12K discrete inputs and outputs (any mix -simplex mode only); 2048 voted discrete inputs, 2048 voted discrete outputs; Up to 8K analog inputs (simplex mode only) and 8K analog outputs (simplex mode only); 1024 voted analog inputs

Memory 1 Mbyte of battery-backed memory in the same slot (up to 512 Kbytes available for use by ladder diagram application program)

Communication Port One (1) 15-pin sub-D connector

Serial protocol support RS485

Applications Emergency Shutdown, Fire, Gas and other critical application

Product Type CPU

Communication Route Through the Backplane

Emergency Shutdown Functions Supported

Standalone C Program Required

The IC697CPM790 is a Series 90-70 Programmable Logic Controller (PLC) CPU. This CPU is a single slot wide module that is specifically used for critical applications such as Emergency shutdown systems, fire, gas and other applications. This CPU supports Triple Media Redundancy (TMR) by incorporating Standalone C program for enabling autotest routines as well.

The IC697CPM790 features 1 MB of battery-backed memory with up to 512KB available for utilization by the user program configured using ladder diagram programming language. This CPU supports up to 12K discrete input and output points, of any combination, when configured in simplex mode; 2048 voted discrete inputs and 2048 voted discrete outputs. Similarly, the IC697CPM790 is capable of handling up to 8K analog inputs and outputs, of any combination when operated in simplex mode and 1024 voted analog inputs. It is equipped with an 80486DX2 microprocessor with clock speed of 64 MHz. This CPU exhibits a relatively fast scan rate of 0.4 microseconds per boolean function, suitable for use in critical applications.

The IC697CPM790 supports Triple Modular Redundancy (TMR), utilized to allow the system without the chance of downtime. This TMR set-up is basically comprised of Triple PLC Racks with each rack having One (1) IC697CPM790 CPU, Triple Genius I/O Busses, as well as Triple input sensors and Triple output loads.

The IC697CPM790 comes with One (1) 15-pin sub-D connector allowing communication with RS485 compatible devices. Other forms of communication such as connection to a programming computer may be established with the use of RS-422/RS-485 to RS-232 Converter with part number IC690ACC900 or RS-232 to RS-422 Miniconverter with part number IC690ACC901.

The IC697CPM790 programmable controller CPU is also suitable for critical industrial and commercial safety-related applications such as fire and gas-related applications and ESD or Emergency Shutdown systems. It is programmed using the Windows or MS-DOS software and able to communicate with the I/O modules and the smart option modules in the same PLC system that it is installed in through the rack-mounted backplane. The IC697CPM790 programmable controller CPU cannot operate unless a Standalone C program is included as part of the loaded application program for the CPU. The IC697CPM790 programmable controller CPU must be used with a Standalone C program for operating TMR or Triple Modular Redundancy and autotest and operating routines. This CPU has 1 MB of battery-backed memory and up to 512 KB of memory is available for ladder diagram program. The IC697CPM790 programmable controller CPU can handle up to 12,000 discrete inputs and outputs in any mix as long as the inputs and outputs are all in the simplex mode, and it can handle up to 2048 discrete inputs and up to 2048 discrete outputs. Other features of this CPU include configurable program and data memory, 4 status indicator LEDs, password-controlled machine access, a 3-position operation mode control switch, and a calendar clock that is battery-backed.