GE Series 90-30 Series Service Manual

IC693BEM341

1. Description

The IC693BEM341 is a FIP Bus controller module that is part of the Series 90-30 Programmable Logic Controller (PAC) family, formerly manufactured by GE Fanuc Automation, now under Emerson Automation. This module is provided with Two (2) 9-pin D-shell connectors supporting Factory Instrumentation Protocol (FIP) at a data rate of 2.5MHz and an RS485 communication port for

2. Specifications

Specification	Value
Brand	**GE Fanuc**
Series	**Series 90-30**
Manufacturer	**GE Fanuc**
Manufacturer	**GE Fanuc / Emerson Automation**
Part	**Number IC693BEM341**
Series	**Series 90-30**
Series	**Series 90-30**
Type	**FIP Bus Controller**
Product	**Description FIP Bus controller**
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Version	**2.5 MHz**
Module	**interface: Two (2) 9-pin male D FIP connectors; One (1) RS485 communication port**
Slot	**width Single slot**
Configuration	**Mode 30**
FIP	**Frequency: 2.5 MHz**
Mounting	**location Slot 1 of CPU baseplate**
CPU	**Requirements IC693 PLC CPU Release 8.10 version or greater**
Supported	**functions: Redundancy Management of slave devices (I/O nests, drives) Monitoring of slave devices (I/O nests, drives, PLCs, control stations) Time stamping of Boolean values Messaging services MPS synchronous exchanges Reception of the external configuration through the FIP network**
Status	**LED indicators CD1 / CD2; TEN1/ TEN2; Module OK; RUN**
Compatible	**CPU version: Version 8.10 or higher**
No.	**of Ports Two (2) 9-pin D-shell female FIP connectors;**

3. Product Information

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Technical specifications for IC693BEM341

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Series Series 90-30

Manufacturer GE Fanuc

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Part Number IC693BEM341

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Status LED indicators CD1 / CD2; TEN1/ TEN2; Module OK; RUN

Compatible CPU version: Version 8.10 or higher

No. of Ports Two (2) 9-pin D-shell female FIP connectors; One (1) RS485 port

Enhanced HHP Display Yes, all modes

Backplane current draw, max 1.2 A

Slot Single-slot

Backplane current draw, typical 800 mA

Redundancy Supported

Backplane Support Universal

Operating temperature 0oC to +55oC (+32oF to +131oF)

Transmission rate 2.5 MHz

Current Consumption 1.2 Amps Max

Storage temperature –25 oC to +70oC (–13oF to +158oF)

Supported devices Series 90-30; Series 90-70; Hand Held Programmer; Bus Interface Units; Generic Devices;

Communication Ports Two 9-pin male D connectors, One RS-485

Humidity 5% to 95% (non–condensing)

Product Lifecycle Status* Discontinued/Obsolete

Operating Vibration 0.2-inch displacement 5Hz to 10Hz

Backplane current consumption: 1.2A at 5VDC

Operating shock 1 G 10Hz to 200Hz 5 G 10Ms duration

Product Lifecyle: Discontinued

The IC693BEM341 is a Factory Instrumentation Protocol (FIP) compatible module that belongs to the Series 90-30 Programmable Logic Controller (PLC) series of Emerson Automation, formerly manufactured by GE Fanuc Automation. This module is an upgrade to the previous Bus Controller as the IC693BEM341 comes with a data rate of 2.5 MHz. The IC693BEM341 comes with Three (3) built-in communication interfaces particularly, Two (2) 9-pin D-shell FIP Bus connectors and One (1) RS485 communication interface that is used for software upgrade through firmware modification. This module is also installed with Six (6) LED status indicators such as Module OK, Run, Carrier Detection for Channel 1; Carrier Detection for Channel 2; Transmit Enable for Channel 1 and Transmit enabled for Channel 2. This FIB Bus controller module is designed to interface with a variety of devices such as Series 90-70 PLC via FIB bus to FIP bus interface; Field Control stations through Field control I/O modules via Filed Bus Interface Unit (BIU); Remote I/O drops via FIP Remote I/O scanner modules and Generic devices using FIP interface module. The IC693BEM341 requires a Series 90-30 CPU with release 8.0 version or greater. For configuration, the module requires the use of a Hand-Held Programmer (HHP), windows programming software IC641CTLxxx Release 2.0 or later, or the FBCLOAD configuration utility to download the valid configuration to the module. The added functionalities to this module include the capability of displaying Firmware version, timestamping of up to 1024 Boolean values, and mode 30 which includes redundancy, slave I/O device management, time stamping, messaging services, MIPS synchronous exchanges, and external configuration reception.

The IC693BEM341 controller is a FIP Bus controller that has been designed and manufactured by GE Fanuc. This part belongs to GE Series 90-30. This specific controller model is an upgrade for older Bus controllers and it includes different innovative features. When comparing this model to the old one like the GE 340 controller, they are functionally identical except that the speed of the network has been improved in the new IC693BEM341 model. The GE Fanuc IC693BEM341 FIP Bus controller is the 2.5-Megahertz version of the bus controller. It also works with firmware version 3.01. This Bus controller requires any IC693 PLC CPU that is version 8.10 or later. Another configuration requirement for this field bus controller is that it needs a Hand-Held Programmer or HHP. This HHP has a programming software developed by Windows and it should be version 2.0 or later. The FBCLOAD

configuration utility must be used to configure the controller to operate properly with the networks. The GE Fanuc IC693BEM341 FIP Bus controller supports Configuration Mode 30. This mode is an extension of Configuration Mode 11 from previous Bus controller versions and it adds different features such as redundancy, management, and monitoring functions for slave devices that include I/O nests, drives, PLCs, and control stations. It can also time-stamp the Boolean values and handle messaging services and the reception of external configurations through the FIP network. Some of the corrections provided in the GE Fanuc IC693BEM341 FIP Bus controller were made to address a previous problem that produced a loss of Module fault that was reported by the PLC CPU when there was no such fault. Another problem that has been corrected was one where the state of the PLC application was often determined incorrectly