GE Series 90-30 Series Service Manual

IC693APU302

1. Description

The IC693APU302 is an Axis Positioning Module (APM) from the Series 90-30 Programmable Logic Controller (PLC) platform. Formerly manufactured by GE Fanuc, now under Emerson Automation, this module features Two (2) motion axes for controlling the servo motor and implementing motion or position control

2. Specifications

Specification	Value
Brand	**GE Fanuc**
Series	**Series 90-30**
Manufacturer	**GE Fanuc (Former); Emerson Automation (Current)**
Product	**Description Axis Positioning Module (APM)**
Part	**Number IC693APU302**
Series	**Series 90-30**
No.	**of supported Axis Two (2)**
Product	**Description Axis Positioning Module**
No.	**of axis Two (2)**
Communication	**Ports Two (2) Axis module; 25-pin Servo connection**
No.	**of Axes 2 Axis**
Operating	**modes: Standard mode; Follower mode**
Module	**LED indicators EN1, EN2, STST, OK and CFG**
Servo	**Loop Update 2 milliseconds**
Front	**panel connectors: Two (2) 24-pin axis connectors (A/B); One (1) Communication port**
Slot	**width Single slot**
Compatible	**cables: IC693CBL311 (10 feet/3 meters); IC693CBL319 (3 feet/1 meter); IC693CBL317 (10 feet/3 meters) with an 8” external shield pigtail and IC693CBL320 (3 feet/1 meter) with an 8” external shield pigtail**
Compatible	**CPU CPU 311, CPU 313, CPU 323, CPU 331 and higher**
Terminal	**block: Weidmuller RD25 910648 o or equivalent**
No.	**of permitted modules CPU 311, CPU 313 and CPU 323: Three**

3. Product Information

The IC693APU302 is an Axis Positioning Module (APM) from the Series 90-30 Programmable Logic Controller (PLC) platform. Formerly manufactured by GE Fanuc, now under Emerson Automation, this module features Two (2) motion axes for controlling the servo motor and implementing motion or position control

Technical specifications for IC693APU302

Brand GE Fanuc

Series Series 90-30

Manufacturer GE Fanuc (Former); Emerson Automation (Current)

Product Description Axis Positioning Module (APM)

Part Number IC693APU302

Series Series 90-30

No. of supported Axis Two (2)

Product Description Axis Positioning Module

No. of axis Two (2)

Communication Ports Two (2) Axis module; 25-pin Servo connection

No. of Axes 2 Axis

Operating modes: Standard mode; Follower mode

Module LED indicators EN1, EN2, STST, OK and CFG

Servo Loop Update 2 milliseconds

Front panel connectors: Two (2) 24-pin axis connectors (A/B); One (1) Communication port

Slot width Single slot

Compatible cables: IC693CBL311 (10 feet/3 meters); IC693CBL319 (3 feet/1 meter); IC693CBL317 (10 feet/3 meters) with an 8” external shield pigtail and IC693CBL320 (3 feet/1 meter) with an 8” external shield pigtail

Compatible CPU CPU 311, CPU 313, CPU 323, CPU 331 and higher

Terminal block: Weidmuller RD25 910648 o or equivalent

No. of permitted modules CPU 311, CPU 313 and CPU 323: Three (3) APM modules CPU 331 and higher: Eight (8) APM modules

Connector Types 24-pin High Density, 25-pin D Type

Supported CPUs: Series 90-30 Modular CPUs; Embedded CPUs (311, 313 and 323)

No. of modules per baseplate: Three (3)

Compatibility Series 90-30 PLCs

No. installation instances: Modular CPUs: Up to Eight (8) modules Embedded CPUs: Three (3) module

Product Lifecycle Status* Discontinued/Obsolete

LED indicators EN1; EN2; STAT; OK; CFG

Product Lifecycle Discontinued

Current draw: 800 mA @ 5 VDC

Product Lifecycle Status Discontinued/Obsolete

The IC693APU302 is a dual Axis Positioning Module (APM) primarily used as a motion and position control component. This module is capable of controlling Two (2) axes or Two (2) servo motors for implementing simultaneous control of motion and position. This module is an intelligent module that can be configured to operate in standard and follower mode. With standard mode, the module operates and integrates control with the user logic present in the PLC memory to implement high-performance control. With Follower mode, the module delivers high-performance electronic gearing for master and slave applications. This module is downloaded with a configuration that is developed using the Motion programmer software package or the VersaPro software with a minimum software version of 1.1. The module’s front panel is installed with Two (2) motion axes ports via the 9-pin D-shell connectors and Two (2) 25-pin high-density ports designed to accommodate servo connections. Custom cables may be used to establish a connection to the module however, pre-assembled cables may also be acquired for faster wiring and termination. These cables include IC693CBL311 with a length of 10 feet/3 meters; IC693CBL319 with a cable length of 3 feet/1 meter; IC693CBL317 with a length of 10 feet/3 meters along with an 8” external shield pigtail and IC693CBL320 with cable length of3 feet/1 meter and an 8” external shield pigtail. Compatible Series 90-30 for use with the IC693APU302 dual-axis APM are CPU 311, CPU 313, and CPU 323 wherein up to Three (3) APM modules can be installed and CPU 331 or higher that allows installation of up to Eight (8) APM modules with Three (3) instances per baseplate.

The IC693APU302 Axis Positioning Module is a motion mate axis positioning module made by GE Fanuc. It is a fully programmable and intelligent module that allows PLC users to integrate their controllers with the advanced logic functions of the PLC to create a single combined system. It can be used with GE Series 90-30 PLCs. This module can directly communicate with machines and control drives and it even transfers the data to the PLC’s tables. Some of the important features of this module include independent control stability, automatic data transferring facilities, maximized drive capabilities, and improved system performance. The IC693APU302 Axis Positioning Module also has the facilities to calculate and enhance the position error measurements to maintain the tracking accuracy. It can be used to perform the complex calculations that are required to control a servo system precisely. The IC693APU302 Axis Positioning Module can be configured and programmed by using VersaPro Software or Logic developer-PLC software. The load requirement of the module is 800 milliamps of current at +5 Volts DC voltage. It comes with a 24-pin high-density connector. This module is suitable to operate in the standard mode and in the follower mode. When operating in the follower mode, it offers high-performance electronic gearing facilities for master/slave applications. Its motion configuration software offers a user interface for controlling and monitoring the system effectively. It also offers generic programming commands such as velocity, forward, move, and acceleration/deceleration commands. Its flash memory can store up to 10 programs and 40 subroutines. The APM front panel faceplate has two 24-pin high-density connectors for servo connections. The IC693APU302 Motion Mate Axis Positioning Module can be used in servo control applications for very precise motion control.