



This Datasheet for the

[IC693DSM302](#)

Series 90-30 DSM302 Motion Controller, 2 Axis

<http://www.qualitrol.com/shop/p-14641-ic693dsm302.aspx>

Provides the wiring diagrams and installation guidelines for this GE Series 90-30 module.

For further information, please contact Qualitrol Technical Support at

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IC693DSM302 Motion Mate Digital Servo Module (DSM302)

The Motion Mate DSM302 is a high-performance, two-axis motion control module that is highly integrated with the logic solving and communications functions of the Series 90-30 PLC. In digital mode, this module controls GE Fanuc digital servos. Beginning with firmware version 1.40, this module has the ability to control servos with an analog command input, such as the GE Fanuc SL Series Servos, or third party analog servos.

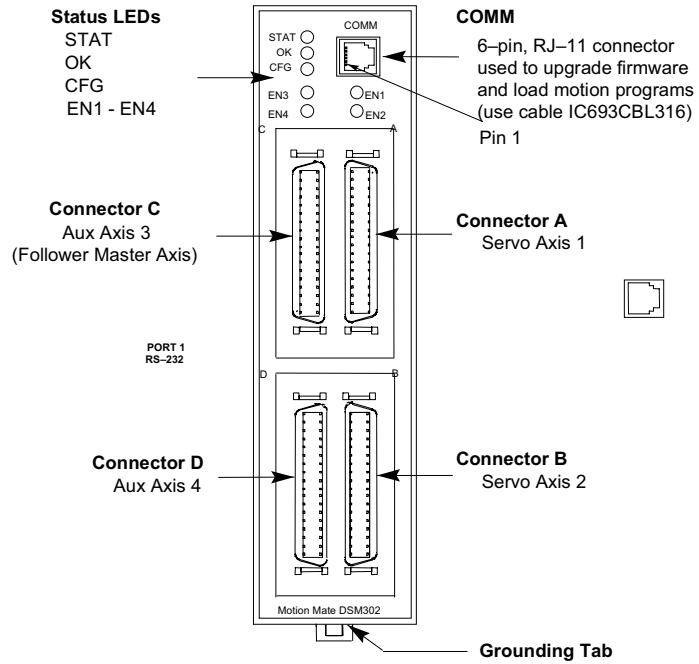


Figure 8-12. Motion Mate DSM302 Module

Features.

- Digital Signal Processor (DSP) control of GE Fanuc Servos
- Block Processing time under 5 milliseconds
- Velocity Feed forward and Position Error Integrator to enhance tracking accuracy
- High resolution of programming units
 - Position: $-8,388,608 \dots +8,388,607$ User Units
 - Velocity: $1 \dots 8,388,607$ User Units/sec
 - Acceleration: $1 \dots 134,217,727$ User Units/sec/sec
- Simple and powerful Motion Program instruction set
- Simple 1- or 2-axis motion programs with synchronized block start
- Program support for a short motion program, called Program 0, which can be created in the configuration software
- Non-volatile storage for 10 programs and 40 subroutines, created with the APM Motion Programming software.
- User scaling of programming units (User Units)
- DSM firmware, stored in Flash memory, is updated via its front panel COMM port.
- Generic programming using command parameters as operands for Acceleration, Velocity, Move, and Dwell Commands
- Automatic Data Transfer between PLC tables and DSM302 without user programming
- Ease of I/O connection with factory cables and terminal blocks as well as a serial port for connecting programming devices. The serial port also allows "soft" upgrades to firmware, which is stored in Flash memory.
- Control of GE Fanuc Digital servos, analog SL Series Servos, or third party analog servos.
- Home and overtravel switch inputs for each Servo Axis
- Two Position Capture Strobe Inputs for each Position Feedback Input
- 5v , 24v and analog I/O for use by PLC
- A Quad B Encoder input for Follower Master axis
- 13 bit Analog Output can be controlled by PLC or used as Servo Tuning monitor

IC693DSM302 Documentation

- GFK-1464, *Motion Mate DSM302 for Series 90-30PLCs User's Manual*.
- GFK-0664, *Series 90-30 PLC APM Programmer's Manual*

Related servo manuals:

- GFK-1581, *SL Series Servo User's Manual*

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- GFH-001, *Beta Series Servo Products Specification Guide*
 - GFZ-65192EN, *Alpha Series Servo Amplifier (SVU) Descriptions Manual*
 - GFZ-65162E, *Control Motor Amplifier, Alpha Series*
 - GFZ-65142E, GFZ-65150E, GFZ-65165E, *Alpha Series Servo Motor Manuals*