

I-8092F-G

High-speed 2-axis Motion Control Module with FRnet Master



Features:

- Independent 2-axis motion control
- Support for hand wheel and jog functions
- 2-axis linear / 2-axis circular interpolation function
- Continuous interpolation function
- Programmable T/S-curve acceleration and deceleration
- A maximum pulse output rate of 4 Mpps for each axis
- Pulse Output Types: CW/CCW or PULSE/DIR
- 32-bit encoder counter for each axis
- Encoder Pulse Input Types: A/B Phase or Up/Down
- Programmable automatic homing for each axis
- Programmable software limits
- Expandable Remote I/O: 128 DI and 128 DO via a two-wire FRnet interface

Introduction:

The **I-8092F** is a **2-axis** stepping/pulse-type servo motor control module that can be used on any of the ICP DAS I-8000 and PAC series controllers, and is suitable for general-purpose motion control applications. The I-8092F is equipped with one FRnet master, which allows fast remote I/O to be easily expanded. The two-wire FRnet interface can be used automatically scan its 128 DI and 128 DO channels with a scan period of 2.88 ms.

In addition to its wide speed range, this intelligent motion controller also has a variety of motion control functions built in, such as 2-axis linear interpolation, 2-axis circular interpolation, T/S-curve acceleration/deceleration, and others.

A major advantage is that the majority of the I-8092F motion control functions are performed by the high-performance motion ASIC with little load on the processor. While driving the motors, the motion status, and the status of the other I/O channels on the I-8000 or PAC modules, can still be monitored. As a result of the low CPU loading requirements of the I-8092F, one or more motion modules may be used on a single I-8000 or PAC controller.

ICP DAS provides a wide range of functions and examples that can be used to reduce the need for programming by users, making it a highly cost-effective solution for motion control application developers.

Specifications:

| | |
|------------------------------|--|
| Number of Axes | 2 |
| Maximum Pulse Output Rate | 4 MHz |
| Command Type | Pulse command |
| Resolution | 32-bit |
| Pulse Output Mode | CW/CCW, PULSE/DIR |
| Operation Mode | Semi-closed Loop |
| Linear Interpolation | 2 axes |
| Circular Interpolation | 2 axes |
| Speed Curve Profile | T/S curve |
| Motion Relative I/O | Home, LMT+/-, NHOME, EMG, INP, ALM, SVON |
| Synchronous Action | - |
| Ring Counter Mode | 32-bit |
| Position Control Mode | Incremental mode |
| Position Compare Trigger | - |
| Encoder Interface | A/B pulse, Up/Down |
| Encoder Counter | 32-bit |
| Encoder Rate | 4 MHz |
| Digital Input Channels | Expandable: 128 DI |
| Digital Output Channels | Expandable: 128 DO |
| I/O Isolation (with DN-8237) | 2500 Vrms optical isolation |
| Connector | 37-pin D-sub |
| Power Consumption | +5 V @ 500 mA |
| Environmental | |
| Operating Temperature | -20 ~ +75°C |
| Storage Temperature | -30 ~ +85°C |
| Ambient Relative Humidity | 5 ~ 90% RH, non-condensing |

Ordering Information/Accessories:

| Module | Description |
|---|---|
| I-8092F-G | High-speed 2-axis Motion Control Module with FRnet Master |
| DN-8237UB | Photo-isolated Universal Snap-on Wiring Terminal Board |
| DN-8237GB | Photo-isolated General Purpose Wiring Terminal Board |
| DN-8237MB | Photo-isolated Snap-on Wiring Terminal Board for Mitsubishi MELSERVO-J2 Servo Amplifier |
| DN-8237PB | Photo-isolated Snap-on Wiring Terminal Board for Panasonic MINAS A4/A5 Servo Amplifier |
| DN-8237YB | Photo-isolated Snap-on Wiring Terminal Board for Yaskawa Sigma II/III/V Servo Amplifier |
| DN-8237DB | Photo-isolated Snap-on Wiring Terminal Board for Delta ASDA-A Servo Amplifier |
| CA-3715DM-H / CA-3730DM-H / CA-3750DM-H | 37-pin D-Sub Male-Male Cable for Terminal Board (180°), Length 1.5 M / 3.0 M / 5.0 M |