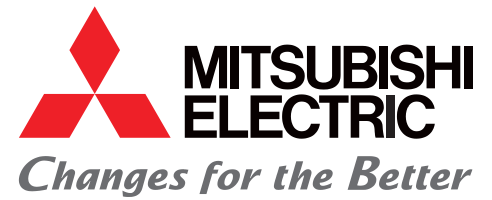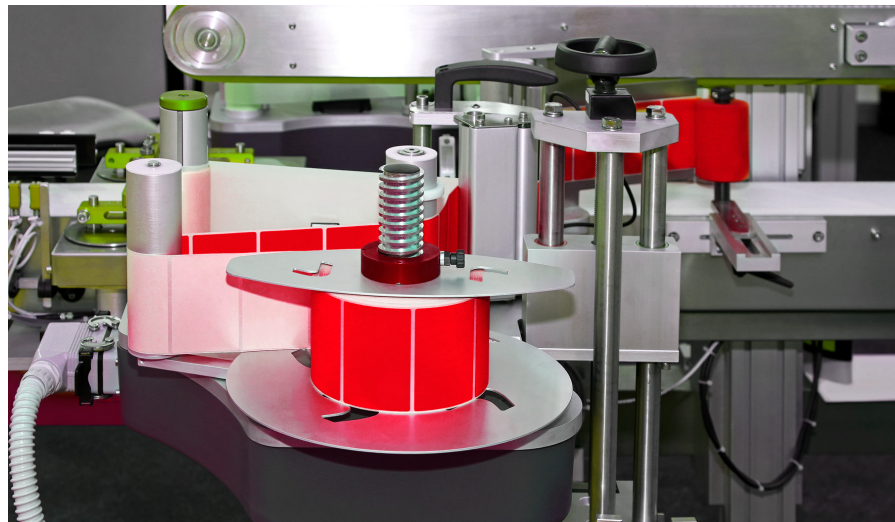# MELSEC IQ-F SERIES

Product Overview

MELSEC iQ-F series

The iQ-F Series is Mitsubishi Electric's compact control platform. The high functionality FX5U, FX5UC models and mid-range FX5UJ models provide a cost effective solution that boasts ease of use, functionality, and high performance in a small panel footprint. Ideal for small to medium machines, the iQ-F controllers enable faster decision making with access to real time data and improved machine accuracy and throughput. The iQ-F controllers are keys to a more profitable manufacturing environment.

KEY BENEFITS:

- Faster machine response and increased productivity with 34 ns execution speed
- Flexible architecture and expansion options to easily standardize for a variety of applications
- Open connectivity and flexible networking with Ethernet, Modbus and serial communications options
- Enhanced security options to protect intellectual property
- Motion control capability in a compact controller platform, reducing cost and simplifying design
- Convenient web server function for quick monitoring from any web-enabled device

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iQ-F SERIES – Product Overview
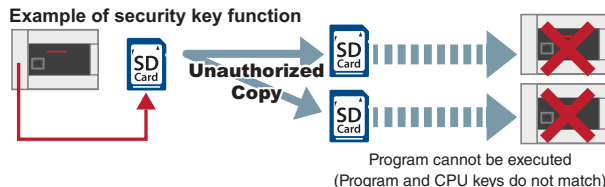
OUTSTANDING PERFORMANCE

Embedded Ethernet port – Access to Ethernet networks increases connectivity to other devices and provides access to data for making real time decisions.

Built-in SD card slot – iQ-F controllers have the capability to upload and download programs, store data, and authenticate security from an SD card.

Large memory capacity – Increased memory allows for more complex programs, and increased capacity for comments, labels and data logging.

Embedded analog – The FX5U provides low cost, simple PID control to regulate temperature, pressure, or flow rate.

Example of security key function

Unauthorized Copy

Program cannot be executed
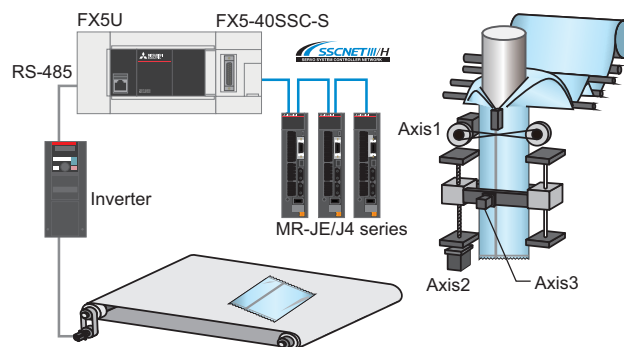(Program and CPU keys do not match)

SUPERIOR DRIVE CONTROL

Inverter control – Control up to 16 Mitsubishi inverters through the built-in Ethernet port or over RS-485 using dedicated inverter communication instructions. It is simple to read/write parameters, monitor, and control networked Mitsubishi inverters with the iQ-F controllers.

Positioning – The FX5U comes with built-in capacity for 200kHz high speed inputs and outputs. This provides the capability to control up to 4 axes of positioning with stepper or servo motors. The FX5U is a cost effective solution for interrupt operation, multistage speed operation, simple linear interpolation, and simultaneous start of 2 axes.

Simple Motion module – The Simple Motion module (FX5-40SSC-S or FX5-80SSC-S) provides coordinated motion control for up to 4 or 8 axes of motion over SSCNET III/H. This compact controller has the capability for applications that require advanced synchronous control, cam control, speed-torque control, and can be connected to FR-A800 VFDs.
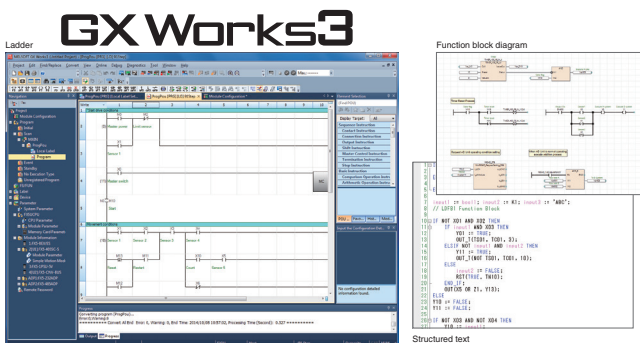
INTUITIVE PROGRAMMING ENVIRONMENT

Graphical interface – Easily configure a system and set parameters in GX Works3

Multiple programming languages – IEC 61131 programming languages are supported, and can even be used in the same project simultaneously. This flexibility allows the user to program in the most efficient manner for their application.

Motion setup tool – GX Works3 eliminates the need for additional software when using the Simple Motion module.

MITSUBISHI ELECTRIC AUTOMATION, INC.