

SSCNET III/H Compatible  
MELSEC iQ-F Series Simple Motion Module  
FX5-40SSC-S

January 2015

**New Product Release**

SV1501-2E

# Superior Motion Control with Easy Settings



State-of-the-art Motion performance  
is packed in a compact module.  
Combined with SSCNET III/H  
compatible servo amplifiers,  
FX5-40SSC-S Simple Motion module  
achieves high-speed, high-accuracy  
control.

**The Simple Motion module is the perfect choice  
as a controller for compact machines**

- The Simple Motion module achieves wide-range, advanced Motion controls, such as synchronous/cam controls, boosting machine performance further.
- Provided with various functions as standard, such as synchronous encoder input and mark detection function, the Simple Motion module is applied to various machines without any additional optional units.
- The parameters and servo data are managed centrally via SSCNET III/H, which simplifies the time-consuming startup and adjustment work as much as possible.
- Easy settings without complex programming using MELSOFT GX Works3 allows a quick startup and easy debugging.

**MELSEC iQ-F**  
series

 **SSCNET III/H**  
SERVO SYSTEM CONTROLLER NETWORK

Mitsubishi has invented an original servo system synchronous network "SSCNET III/H" in pursuit of high response and reliability. The SSCNET III/H is an optical network that achieves smooth, high-response and high-accuracy operation.

# The next level of industry

# MELSEC iQ-F

series

Witness the evolution of the micro PLC.

Designed on the concepts of outstanding performance, superior drive control, and user centric programming,

Mitsubishi's MELSEC-F Series has been reborn as the MELSEC iQ-F Series.

From standalone use to networked system application,

MELSEC iQ-F series brings your business to the next level of industry.



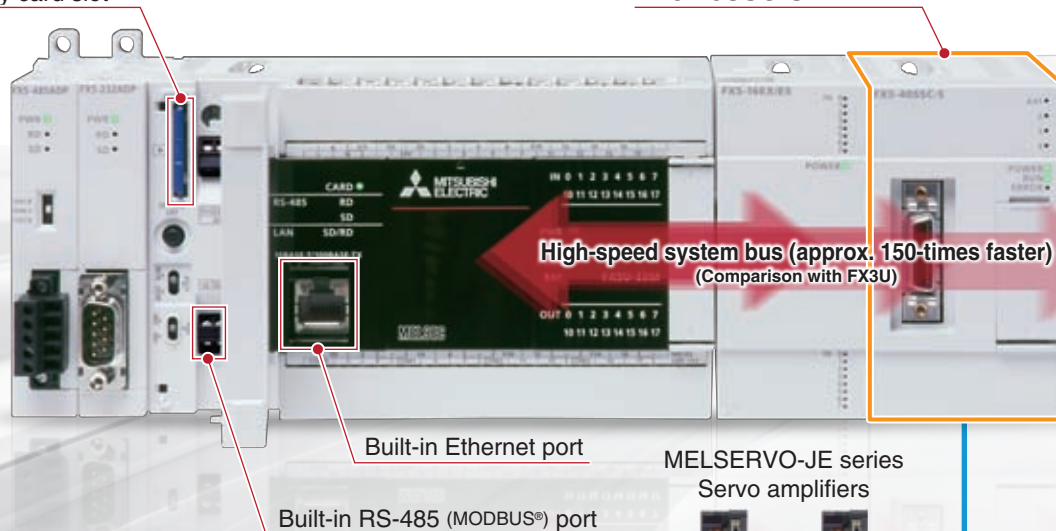
FX5-40SSC-S

## Superior Drive Control Achieved

## Simple Motion Module Debut

Built-in  
SD memory card slot

Simple Motion Module  
FX5-40SSC-S



## Synchronous/Cam Controls Contribute to Higher Performance of Small-sized Equipment

The Simple Motion module is provided with synchronous and cam controls required for food processing machines and packaging machines. Combined with the Mitsubishi Electric's high-performance servo amplifier, the Simple Motion module enables downsizing of machinery while achieving outstanding performance. In addition, diverse engineering environment allows you to create desired systems with ease.

## Central Control via SSCNET III/H Boosts Efficiency in Startup

The Simple Motion module can consolidate multiple servo amplifier parameters, shortening the startup time further. Also, operation information, such as power consumption and total power consumption of the servo amplifiers, can be monitored in real time, which enables further reduction in maintenance time.

## Solutions

### The Simple Motion Module Opens up Many Possibilities for Higher Performance

#### ➤ Rotary Knife

Sheet can be cut accurately at high speed by using synchronous control, cam control, and mark detection function. Additionally, cam data for the rotary knife axis can be easily created with the cam auto-generation function, which enables further reduction in programming time.



**MELSEC iQ-F**  
series



Positioning  
Control

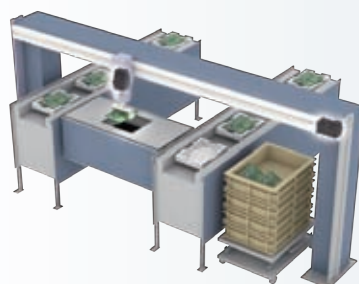
Advanced  
Sync.

Mark  
Detection

Cam Auto-  
Generation

#### ➤ Material Handling Machines

The machine can move workpieces easily from one line to another by using a combination of linear interpolation, 2-axis circular interpolation, and continuous trajectory control. Smooth trajectory can be traced with S-curve acceleration/deceleration function. As a result, the machine vibration can be minimized.



**MELSEC iQ-F**  
series



Linear  
Interpolation

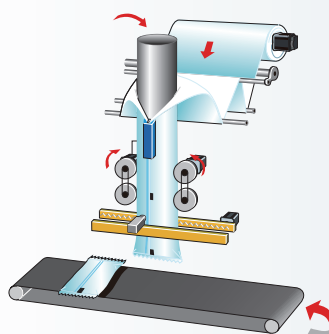
Circular  
Interpolation

Trajectory  
Control

S-curve  
Accel./decel.

#### ➤ Packing Machines

When the machine packs food, the whole process is synchronized by using advanced synchronous and cam controls. The high synchronization between the conveying roller axis and the sealing & cutting axis improves the packing accuracy, achieving high-quality production.



**MELSEC iQ-F**  
series



Positioning  
Control

Advanced  
Sync.

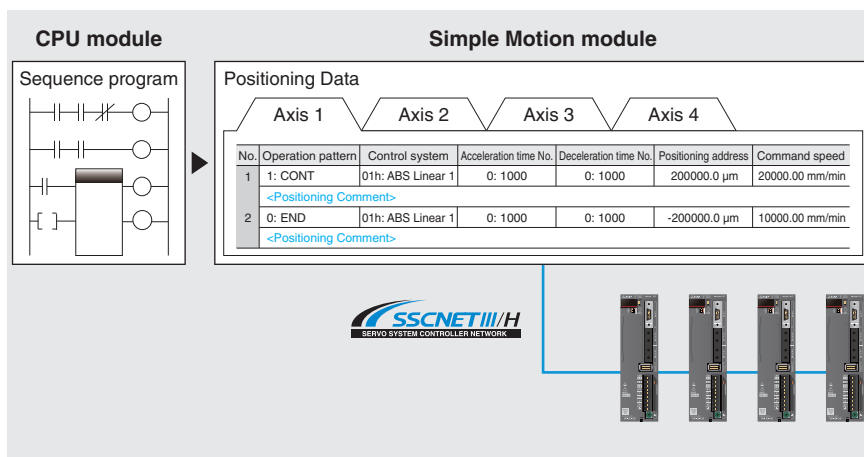
Cam  
Control

## Cutting-edge Technologies Packed in a Compact Module

### ► Basic Positioning Control

Positioning Control

Positioning control is easily performed with a sequence program starting positioning data of a point table. To respond to extensive applications, various positioning controls are available: Linear interpolation, 2-axis circular interpolation, fixed-pitch feed, and continuous trajectory controls, etc.



### ► Synchronous/Cam controls

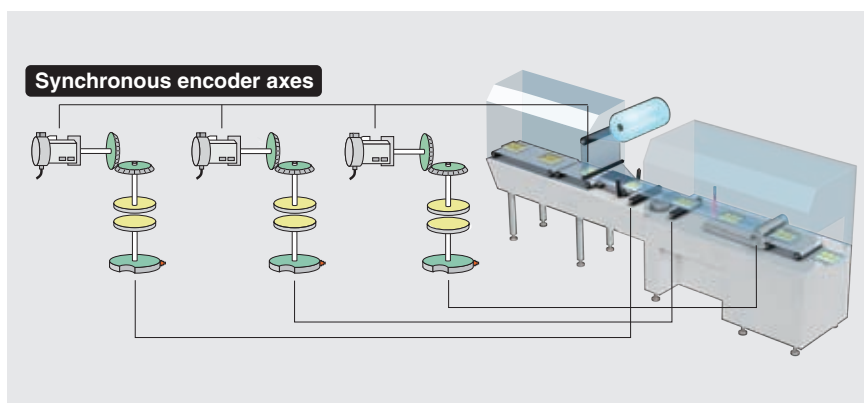
Advanced Sync.

Cam Auto-Generation

#### ● Advanced synchronous control

The advanced synchronous control is the software-based control that can be used as an alternative to mechanical control such as gear, shaft, clutch, speed change gear, and cam.

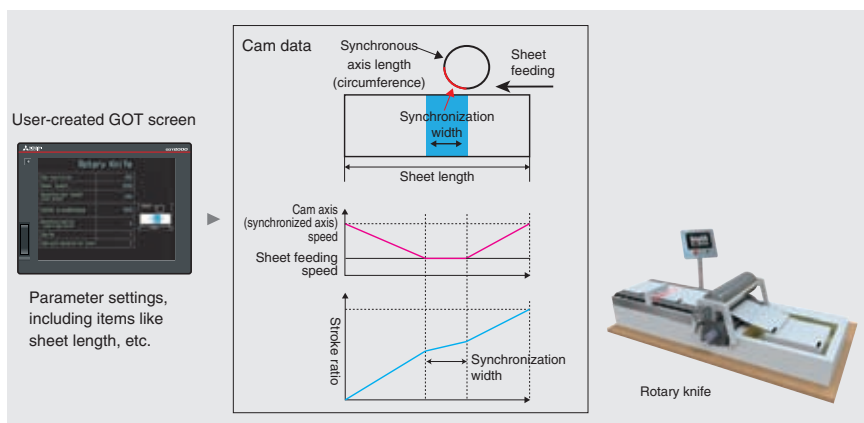
The settings are easily made with parameters on MELSOFT GX Works3. In addition, the output axes for the synchronous control are operated with a cam.



#### ● Cam auto-generation

Cams for rotary knife can be generated automatically.

An ideal cam data can be created just by registering sheet length, synchronous width, and cam resolution to the specified device memory on GOT screen.

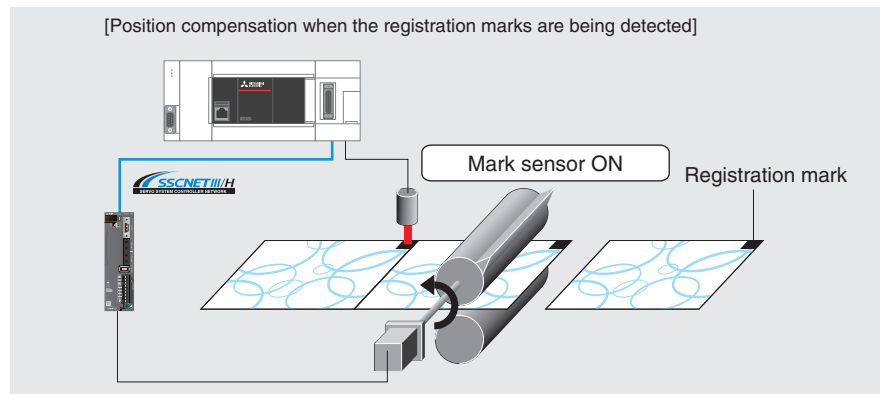




## ➤ Mark Detection Function

Mark  
Detection

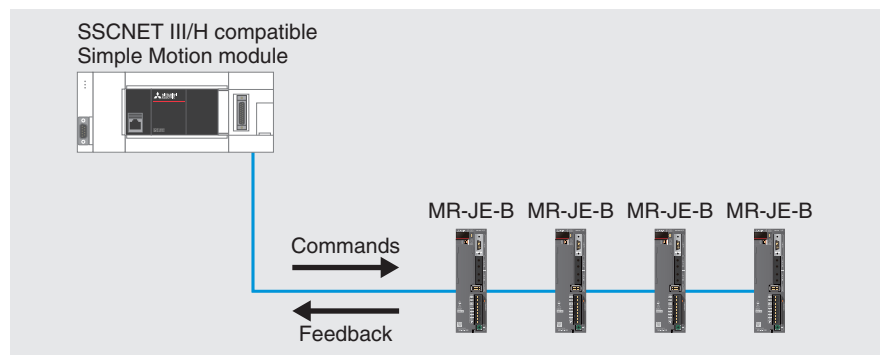
The actual position of the servo motor can be obtained based on the inputs from the sensor that detects the registration marks printed on the high-speed moving film. By compensating the cutter axis position errors based on those inputs from the sensor, the film can be cut at the set position.



## ➤ Supporting the Servo High-speed Synchronous Network "SSCNET III/H"

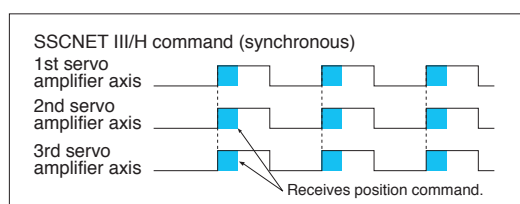
SSCNET III/H  
SERVO SYSTEM CONTROLLER NETWORK

Communication speed is increased to 150 Mbps full duplex (equivalent to 300 Mbps half duplex), three times faster than the conventional speed. Moreover, the network achieves faster system response, multiple-axis operation, and reduced wiring, contributing to improving machine performance further.



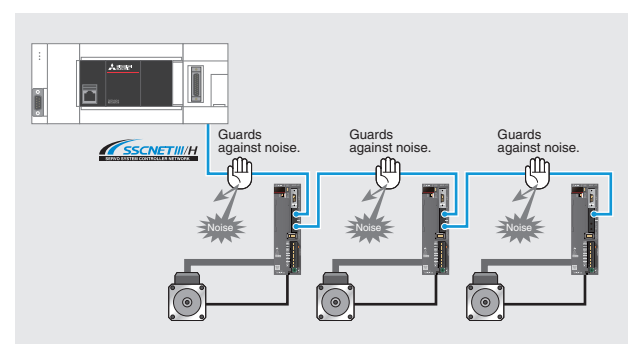
### ● Synchronous communication realizing a higher-performance machine

Complete deterministic and synchronized communication is achieved with SSCNET III/H, offering technical advantages in machines such as printing and food processing machines that require synchronous accuracy.



### ● No transmission collision

The fiber-optic cables thoroughly shut out noise that enters from the power cable or external devices. Noise tolerance is dramatically improved as compared to metal cables.



Easy point-and-click programming architecture

# MELSOFT GX Works3



This software supports the whole product development cycle - creation, startup, debugging and maintenance of sequence programs, parameters, positioning/cam data.

## ➤ Designed for Efficiency and Ease of Use over a Whole Development Process

### System configuration through point-and-click

A system can be configured just through drag and drop of a necessary module name from the list.

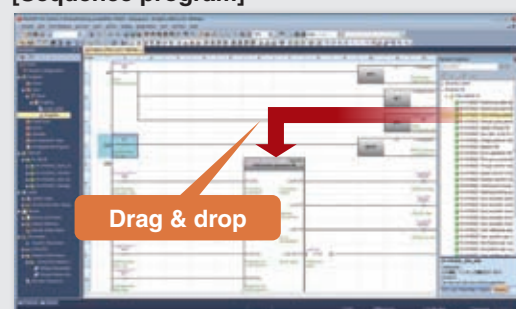
#### [Module configuration]



### Easy programming using module FB Coming soon

A sequence program can be created through drag & drop of module FB to the editor.

#### [Sequence program]



System design

Programming

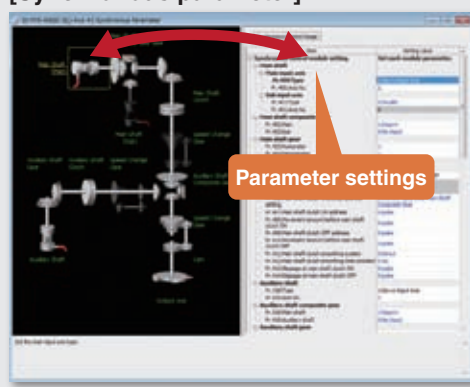
Startup

Maintenance

### Only parameter settings required

The synchronous control is achieved just by setting parameters with the graphical configuration screen for mechanical modules.

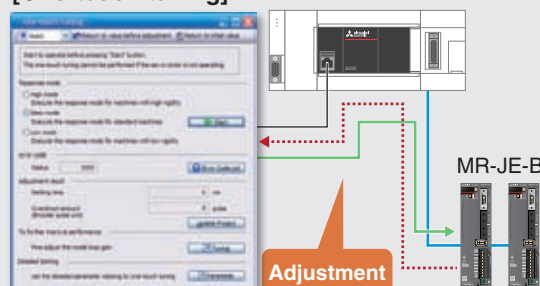
#### [Synchronous parameter]



### Quick startup and adjustment

Servo amplifier settings and adjustment can be done without replugging the cables.

#### [One-touch tuning]



Reliable basic performance and advanced ease-of-use

MITSUBISHI SERVO AMPLIFIERS & MOTORS

# MELSERVO-JE



**Advanced ease-of-use without compromising high performance.**  
The reliable basic performance and the advanced servo gain adjustment boost machine performance further.

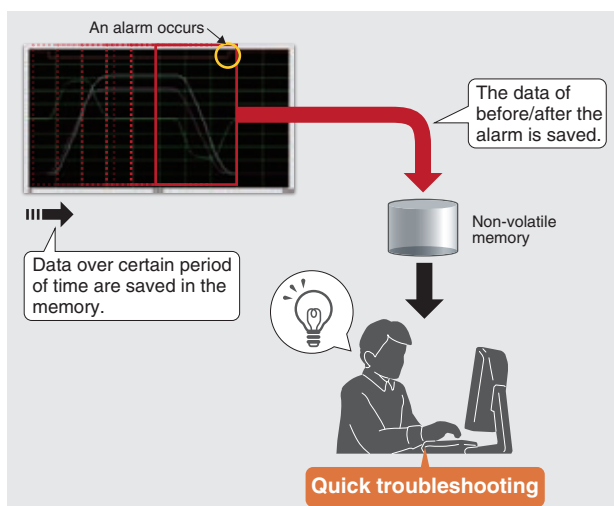
## ➤ Reliable Basic Performance

MELSERVO-JE series with class top-level basic performance enables shorter settling time and reduced tact time, boosting machine performance in combination with the Simple Motion module.

- Speed frequency response of 2.0 kHz
- High-resolution encoder of 131072 pulses/rev
- Dramatically reduced torque ripple during conduction
- Absolute position detection system configurable with ease
- Conformity to global standards (European EC directives, etc.)

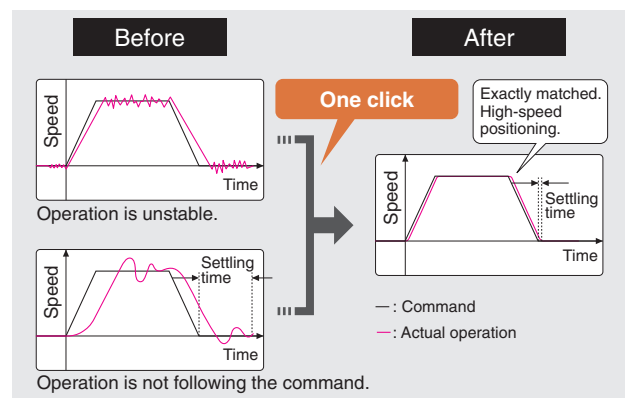
## ➤ Large-capacity Drive Recorder for Quick Troubleshooting

The drive recorder saves data of before/after the alarms in the non-volatile memory in the servo amplifier. This helps you investigate the condition of before/after the alarm in details through those data, enabling quick troubleshooting.



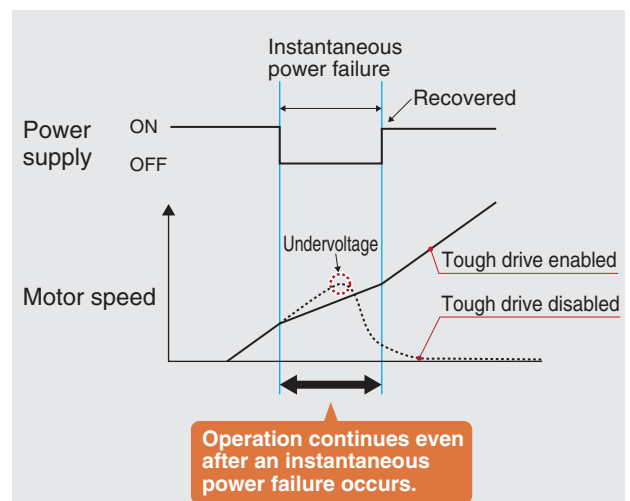
## ➤ Servo Gain Adjustment is Just a Click Away

Mitsubishi Electric's unique "Advanced one-touch tuning" enables servo gain adjustment with one-touch ease. Machine performance is utilized to the fullest using the advanced vibration suppression control function.

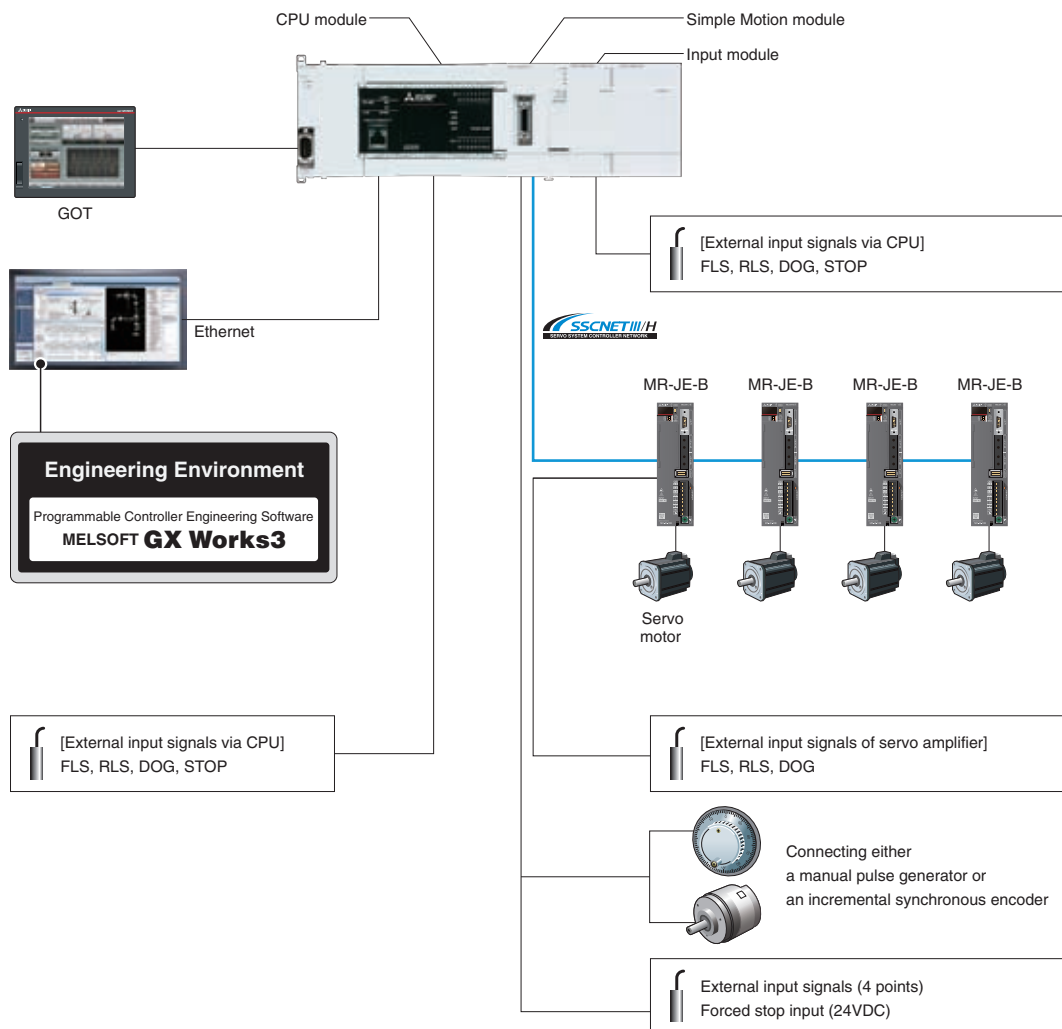


## ➤ Instantaneous Power Failure Tough Drive

When an instantaneous power failure is detected, this function allows the servo amplifier to use the electric energy charged in the main circuit capacitor in the servo amplifier to avoid an alarm occurrence, increasing the machine availability even with an unstable power supply.



## System configuration



## MELSEC iQ-F series product lineup

### MELSEC iQ-F series



Expansion adapter  
(Up to 6 modules)

CPU modules

Expansion modules  
(Up to 16 modules)

#### ●CPU modules

**FX5U**  
Terminal block type



**FX5UC**  
Connector type



#### ●Expansion adapters

- Communication adapter (RS-232C, RS-485)
- Analog I/O adapter

#### ●Expansion modules

- I/O module
- Intelligent function module (Simple Motion module, etc.)
- Connector conversion module
- Bus conversion module
- Extension power supply module

## Control specifications

| Item                                                              |                                                | Specifications                                                                                                                                                                           |
|-------------------------------------------------------------------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                   |                                                | FX5-40SSC-S                                                                                                                                                                              |
| Number of control axes<br>(Virtual servo amplifier axis included) |                                                | Up to 4 axes                                                                                                                                                                             |
| Operation cycle                                                   |                                                | 1.777ms                                                                                                                                                                                  |
| Interpolation function                                            |                                                | Linear interpolation (Up to 4 axes), Circular interpolation (2 axes)                                                                                                                     |
| Control modes                                                     |                                                | PTP (Point To Point) control, Trajectory control (both linear and arc), Speed control, Speed-position switching control, Position-speed switching control, Speed-torque control          |
| Acceleration/deceleration process                                 |                                                | Trapezoidal acceleration/deceleration, S-curve acceleration/deceleration                                                                                                                 |
| Compensation function                                             |                                                | Backlash compensation, Electronic gear, Near pass function                                                                                                                               |
| Synchronous control                                               | Input axis                                     | Servo input axis, Synchronous encoder axis                                                                                                                                               |
|                                                                   | Output axis                                    | Cam axis (Up to 4 axes)                                                                                                                                                                  |
| Cam control                                                       | Number of cam registration                     | Up to 64 (depending on memory capacity, cam resolution and number of coordinates)                                                                                                        |
|                                                                   | Cam data type                                  | Stroke ratio data type, Coordinate data type                                                                                                                                             |
|                                                                   | Cam auto-generation                            | Cam auto-generation for rotary knife                                                                                                                                                     |
| Control unit                                                      |                                                | mm, inch, degree, pulse                                                                                                                                                                  |
| Number of positioning data                                        |                                                | 600 data (positioning data No. 1 to 600)/axis<br>(Can be set with MELSOFT GX Works3 or a sequence program.)                                                                              |
| Backup                                                            |                                                | Parameters, positioning data, and block start data can be saved on flash ROM (battery-less backup)                                                                                       |
| Home position return                                              | Home position return method                    | Proximity dog method, Count method 1, Count method 2, Data set method, Scale home position signal detection method                                                                       |
|                                                                   | Fast home position return control              | Provided                                                                                                                                                                                 |
|                                                                   | Sub functions                                  | Home position return retry, Home position shift                                                                                                                                          |
| Positioning control                                               | Linear control                                 | 1-axis linear control, 2-axis linear interpolation control, 3-axis linear interpolation control, 4-axis linear interpolation control (Note-1)<br>(Composite speed, Reference axis speed) |
|                                                                   | Fixed-pitch feed control                       | 1-axis fixed-pitch feed, 2-axis fixed-pitch feed, 3-axis fixed-pitch feed, 4-axis fixed-pitch feed                                                                                       |
|                                                                   | 2-axis circular interpolation                  | Sub point designation, Center point designation                                                                                                                                          |
|                                                                   | Speed control                                  | 1-axis speed control, 2-axis speed control, 3-axis speed control, 4-axis speed control                                                                                                   |
|                                                                   | Speed-position switching control               | INC mode, ABS mode                                                                                                                                                                       |
|                                                                   | Position-speed switching control               | INC mode                                                                                                                                                                                 |
|                                                                   | Current value change                           | Positioning data, Start No. for a current value changing                                                                                                                                 |
|                                                                   | NOP instruction                                | Provided                                                                                                                                                                                 |
|                                                                   | JUMP instruction                               | Unconditional JUMP, Conditional JUMP                                                                                                                                                     |
|                                                                   | LOOP, LEND                                     | Provided                                                                                                                                                                                 |
| Manual control                                                    | High-level positioning control                 | Block start, Condition start, Wait start, Simultaneous start, Repeated start                                                                                                             |
|                                                                   | JOG operation                                  | Provided                                                                                                                                                                                 |
|                                                                   | Inching operation                              | Provided                                                                                                                                                                                 |
|                                                                   | Manual pulse generator                         | Possible to connect 1 module (Incremental), Unit magnification (1 to 10000 times)                                                                                                        |
| Expansion control                                                 | Speed-torque control                           | Speed control without positioning loops, Torque control, Tightening & press-fit control                                                                                                  |
| Absolute position system                                          |                                                | Made compatible by setting a battery to servo amplifier                                                                                                                                  |
| Synchronous encoder interface                                     |                                                | Up to 4 channels<br>(Total of the internal interface, via PLC CPU interface, and servo amplifier interface (Note-3))                                                                     |
| Functions that limit control                                      | Internal interface                             | 1 channel (Incremental)                                                                                                                                                                  |
|                                                                   | Speed limit function                           | Speed limit value, JOG speed limit value                                                                                                                                                 |
|                                                                   | Torque limit function                          | Torque limit value_same setting, Torque limit value_individual setting                                                                                                                   |
|                                                                   | Forced stop                                    | Valid/Invalid setting                                                                                                                                                                    |
|                                                                   | Software stroke limit function                 | Movable range check with current feed value, Movable range check with machine feed value                                                                                                 |
|                                                                   | Hardware stroke limit function                 | Provided                                                                                                                                                                                 |
| Functions that change control details                             | Speed change function                          | Provided                                                                                                                                                                                 |
|                                                                   | Override function                              | 1 to 300 [%]                                                                                                                                                                             |
|                                                                   | Acceleration/deceleration time change function | Provided                                                                                                                                                                                 |
|                                                                   | Torque change function                         | Provided                                                                                                                                                                                 |
|                                                                   | Target position change function                | Target position address and speed are changeable                                                                                                                                         |
| Other functions                                                   | M-code output function                         | Provided                                                                                                                                                                                 |
|                                                                   | Step function                                  | Deceleration unit step, Data No. unit step                                                                                                                                               |
|                                                                   | Skip function                                  | Via PLC CPU, Via external command signal                                                                                                                                                 |
|                                                                   | Teaching function                              | Provided                                                                                                                                                                                 |
| Parameter initialization function                                 |                                                | Provided                                                                                                                                                                                 |
| External input signal setting function                            |                                                | Via CPU, Via servo amplifier (Note-3)                                                                                                                                                    |
| Amplifier-less operation function                                 |                                                | Provided                                                                                                                                                                                 |
| Mark detection function                                           |                                                | Regular mode, Specified Number of Detections mode, Ring Buffer mode                                                                                                                      |
|                                                                   | Mark detection signal                          | Up to 4 points                                                                                                                                                                           |
|                                                                   | Mark detection setting                         | 16 settings                                                                                                                                                                              |
| Optional data monitor function                                    |                                                | 4 points/axis                                                                                                                                                                            |
| Driver communication function                                     |                                                | Provided (Note-3)                                                                                                                                                                        |
| SSCNET connect/disconnect function                                |                                                | Provided                                                                                                                                                                                 |
| Digital oscilloscope function (Note-2)                            | Bit data                                       | 16 channels                                                                                                                                                                              |
|                                                                   | Word data                                      | 16 channels                                                                                                                                                                              |

(Note-1): 4-axis linear interpolation control is enabled only at the reference axis speed.

(Note-2): 8CH word data and 8CH bit data can be displayed in real time.

(Note-3): Available only when the MR-J4-B servo amplifiers are connected.

## Module specifications



| Item                                                                          |                                                          |                                         | Specifications                                                                                                                             |
|-------------------------------------------------------------------------------|----------------------------------------------------------|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                               |                                                          |                                         | FX5-40SSC-S                                                                                                                                |
| Number of control axes<br>(Virtual servo amplifier axis included)             |                                                          |                                         | Up to 4 axes                                                                                                                               |
| Servo amplifier connection method                                             |                                                          |                                         | SSCNET III/H                                                                                                                               |
| Maximum overall cable distance [m(ft.)]                                       |                                                          |                                         | 400 (1312.32)                                                                                                                              |
| Maximum distance between stations [m(ft.)]                                    |                                                          |                                         | 100 (328.08)                                                                                                                               |
| Peripheral I/F                                                                |                                                          |                                         | Via CPU module (Ethernet)                                                                                                                  |
| Manual pulse generator operation function                                     |                                                          |                                         | Possible to connect 1 module                                                                                                               |
| Synchronous encoder operation function                                        |                                                          |                                         | Possible to connect 4 modules (Total of the internal interface, via PLC CPU interface, and servo amplifier interface <sup>(Note-1)</sup> ) |
| Input signals<br>(DI)                                                         | Number of input points                                   |                                         | 4 points                                                                                                                                   |
|                                                                               | Input method                                             |                                         | Positive common/Negative common shared (Photocoupler isolation)                                                                            |
|                                                                               | Rated input voltage/current                              |                                         | 24 VDC/ Approx. 5 mA                                                                                                                       |
|                                                                               | Operating voltage range                                  |                                         | 19.2 to 26.4 VDC (24 VDC +10%/-20%, ripple ratio 5% or less)                                                                               |
|                                                                               | ON voltage/current                                       |                                         | 17.5 VDC or more/ 3.5 mA or more                                                                                                           |
|                                                                               | OFF voltage/current                                      |                                         | 7 VDC or less/ 1.0 mA or less                                                                                                              |
|                                                                               | Input resistance                                         |                                         | Approx. 6.8 kΩ                                                                                                                             |
|                                                                               | Response time                                            |                                         | 1 ms or less (OFF→ON, ON→OFF)                                                                                                              |
| Recommended wire size                                                         |                                                          |                                         | AWG24 (0.2 mm <sup>2</sup> )                                                                                                               |
| Forced stop<br>input signal<br>(EMI)                                          | Number of input points                                   |                                         | 1 point                                                                                                                                    |
|                                                                               | Input method                                             |                                         | Positive common/Negative common shared (Photocoupler isolation)                                                                            |
|                                                                               | Rated input voltage/current                              |                                         | 24 VDC/ Approx. 5 mA                                                                                                                       |
|                                                                               | Operating voltage range                                  |                                         | 19.2 to 26.4 VDC (24 VDC +10%/-20%, ripple ratio 5% or less)                                                                               |
|                                                                               | ON voltage/current                                       |                                         | 17.5 VDC or more/ 3.5 mA or more                                                                                                           |
|                                                                               | OFF voltage/current                                      |                                         | 7 VDC or less/ 1.0 mA or less                                                                                                              |
|                                                                               | Input resistance                                         |                                         | Approx. 6.8 kΩ                                                                                                                             |
|                                                                               | Response time                                            |                                         | 4 ms or less (OFF→ON, ON→OFF)                                                                                                              |
| Recommended wire size                                                         |                                                          |                                         | AWG24 (0.2 mm <sup>2</sup> )                                                                                                               |
| Signal input form                                                             |                                                          |                                         | Phase A/Phase B (magnification by 4/magnification by 2/<br>magnification by 1), PULSE/SIGN                                                 |
| Manual pulse<br>generator/<br>Incremental<br>synchronous<br>encoder<br>signal | Differential<br>output type<br>(26LS31 or<br>equivalent) | Input pulse frequency                   | Up to 1 Mpulse/s (After magnification by 4, up to 4 Mpulse/s)                                                                              |
|                                                                               |                                                          | Pulse width                             | 1 μs or more                                                                                                                               |
|                                                                               |                                                          | Leading edge/<br>trailing edge time     | 0.25 μs or less                                                                                                                            |
|                                                                               |                                                          | Phase difference                        | 0.25 μs or more                                                                                                                            |
|                                                                               |                                                          | Rated input voltage                     | 5.5 VDC or less                                                                                                                            |
|                                                                               |                                                          | High/Low-voltage                        | 2.0 to 5.25 VDC/0 to 0.8 VDC                                                                                                               |
|                                                                               |                                                          | Differential voltage                    | ±0.2V                                                                                                                                      |
|                                                                               |                                                          | Cable length                            | Up to 30 m (98.43ft.)                                                                                                                      |
|                                                                               | Voltage-output/<br>Open-collector<br>type (5 VDC)        | Input pulse frequency                   | Up to 200 kpulse/s (After magnification by 4, up to 800 kpulse/s)                                                                          |
|                                                                               |                                                          | Pulse width                             | 5 μs or more                                                                                                                               |
|                                                                               |                                                          | Leading edge/<br>trailing edge time     | 1.2 μs or less                                                                                                                             |
|                                                                               |                                                          | Phase difference                        | 1.2 μs or more                                                                                                                             |
|                                                                               |                                                          | Rated input voltage                     | 5.5 VDC or less                                                                                                                            |
|                                                                               |                                                          | High/Low-voltage                        | 3.0 to 5.25 VDC/2 mA or less, 0 to 1.0 VDC/5 mA or more                                                                                    |
|                                                                               |                                                          | Cable length                            | Up to 10m (32.81ft.)                                                                                                                       |
|                                                                               |                                                          | 24 VDC internal current consumption [A] |                                                                                                                                            |
| Mass [kg]                                                                     |                                                          |                                         | 0.30                                                                                                                                       |
| Exterior dimensions [mm(inch)]                                                |                                                          |                                         | 90.0 (3.55)(H) × 50.0 (1.97)(W) × 83.0 (3.27)(D)                                                                                           |

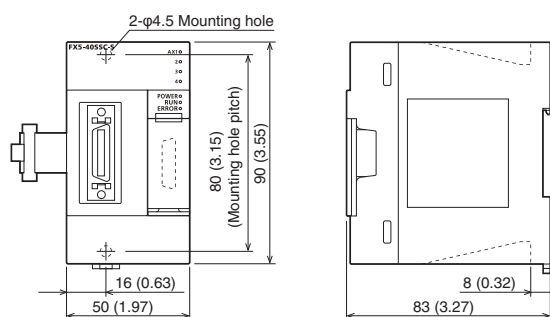
(Note-1): Available only when the MR-J4-B servo amplifiers are connected.

## Applicable CPU

|         |             |
|---------|-------------|
| PLC CPU | FX5U, FX5UC |
|---------|-------------|

## Exterior dimensions

### Simple Motion module FX5-40SSC-S



Unit: mm (inch)

## Component

### Simple Motion dedicated equipment

| Item                       | Model        | Specifications                                                                                                                    |                                 |                                                                             | Standards  |
|----------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------------------------------------|------------|
| Simple Motion module       | FX5-40SSC-S  | Up to 4 axes                                                                                                                      |                                 |                                                                             | CE, UL, KC |
| Internal I/F connector set | LD77MHIOCON  | Incremental synchronous encoder/Mark detection signal interface connector set                                                     |                                 |                                                                             | —          |
| SSCNET III cable           | MR-J3BUS_M   | • FX5-40SSC-S ⇔ Servo amplifier<br>• Servo amplifier ⇔ Servo amplifier                                                            | Standard code for inside panel  | 0.15m (0.49ft.), 0.3m (0.98ft.), 0.5m (1.64ft.), 1m (3.28ft.), 3m (9.84ft.) | —          |
|                            | MR-J3BUS_M-A |                                                                                                                                   | Standard code for outside panel | 5m (16.40ft.), 10m (32.81ft.), 20m (65.62ft.)                               | —          |
|                            | MR-J3BUS_M-B |                                                                                                                                   | Long distance cable             | 30m (98.43ft.), 40m (131.23ft.), 50m (164.04ft.)                            | —          |
| Manual pulse generator     | MR-HDP01     | Number of pulses per revolution: 25pulse/rev (100pulse/rev after magnification by 4), Permitted speed: 200r/min (Normal rotation) |                                 |                                                                             | —          |

### Servo amplifiers

| Model        | Description                                                       |
|--------------|-------------------------------------------------------------------|
| MR-JE-B      | SSCNET III/H compatible servo amplifier rated output: 0.1 to 3kW  |
| MR-J4-B(-RJ) | SSCNET III/H compatible servo amplifier rated output: 0.1 to 55kW |
| MR-J4W2-B    | SSCNET III/H 2-axis servo amplifier rated output: 0.2 to 1kW      |
| MR-J4W3-B    | SSCNET III/H 3-axis servo amplifier rated output: 0.2 to 0.4kW    |

(Note): Only the rotary servo motors are supported.

## Engineering environment

### Engineering software list

| Product           | Model         | Description                                                                                                                                                                                                                                                                                                                                                                                                            |         | Version         |
|-------------------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----------------|
| MELSOFT GX Works3 | SW1DND-GXW3-E | Sequence program creation, FX5-40SSC-S settings                                                                                                                                                                                                                                                                                                                                                                        | DVD-ROM | 1.007H or later |
| MELSOFT iQ Works  | SW2DND-IQWK-E | FA Engineering Software <sup>(Note-1)</sup><br>• System Management Software [MELSOFT Navigator]<br>• Programmable Controller Engineering Software [MELSOFT GX Works3]<br>• Motion Controller Engineering Software [MELSOFT MT Works2]<br>• Screen Design Software [MELSOFT GT Works3]<br>• Robot Total Engineering Support Software [MELSOFT RT ToolBox2 mini]<br>• Inverter Setup Software [MELSOFT FR Configurator2] | DVD-ROM | —               |

(Note-1): Refer to each product manual for software needed for the model.

### Operating environment

| Item                         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OS                           | Microsoft® Windows® 8.1 (64bit/32bit), Microsoft® Windows® 8.1 (Enterprise, Pro) (64bit/32bit)<br>Microsoft® Windows® 8 (64bit/32bit), Microsoft® Windows® 8 (Enterprise, Pro) (64bit/32bit)<br>Microsoft® Windows® 7 (Enterprise, Ultimate, Professional, Home Premium, Starter) (64bit/32bit)<br>Microsoft® Windows Vista® (Enterprise, Ultimate, Business, Home Premium, Home Basic) (32bit)<br>Microsoft® Windows® XP Service Pack3 or later (Professional, Home Edition) (32bit) |
| CPU                          | Intel® Core™2 Duo 2 GHz or more recommended                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Required memory              | For 32-bit edition: 1GB or more recommended<br>For 64-bit edition: 2GB or more recommended                                                                                                                                                                                                                                                                                                                                                                                            |
| Available hard disk capacity | When installing MELSOFT GX Works3: HDD available capacity is 5GB or more.                                                                                                                                                                                                                                                                                                                                                                                                             |
| Optical drive                | DVD-ROM supported disk drive                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Monitor                      | Resolution 1024 × 768 dots or higher                                                                                                                                                                                                                                                                                                                                                                                                                                                  |



### Safety Warning

To ensure proper use of the products listed in this catalog, please be sure to read the instruction manual prior to use.

Mitsubishi Electric Corporation Nagoya Works is a factory certified for ISO14001 (standards for environmental management systems) and ISO9001(standards for quality assurance management systems)



## MITSUBISHI ELECTRIC CORPORATION

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