

High-speed and Compact Controller for Handling FS100

Optimum controller for handling and assembly

The FS100 is a compact controller with improved performance and functions optimized for handling and assembly. This controller can be used with robots with a 20-kg payload or less.

- Fits in a 19-inch rack and can be installed under conveyors.
- Better performance and high-speed control achieved by improving resolutions for I/O commands and reducing time for ladder scanning.
- High-speed positioning achieved by suppressing vibration of hands.
- Commands specifically designed for workpiece handling with synchronized conveyors.



Open controller

The FS100 robot controller offers an environment and functions that enable users to develop optimum application programs for their own use.

Functions	Descriptions	Remarks
MotoPlus	Allows users to customize application programs for robot control. · Users can create robot control programs in C language and install them in the controller.	MotoPlusIDE (development environment) is optional.
MotomanSync <small>Optional</small>	Allows users to directly control the FS100 controller from the host controller by using the FS100 as a server. · Robots can be controlled directly from the host computer.	Compatible host computers: Windows, MP3200 controllers, Rockwell PLC*
Pendant Customization <small>Optional</small>	Provides a function to develop application programs for the programming pendant. · WindowsCE application programs developed by users can be incorporated in the programming pendant.	—

*: Compatible with 1756-L61 ControlLogix and 1756-L35E CompactLogix controllers.

Hardware Options

- Programming pendant
- External axis (max.: 2 axes)
- I/O module (28 points, NPN or PNP)
- Counter module (2 channels)
- Analog Inputs module (8 channels)
- Analog Outputs module (4 channels)
- Major fieldbus interface boards
DeviceNet (master/slave), CC-Link (slave), PROFIBUS (slave), Ethernet/IP (slave, I/O communications)

Optional Functions

- Conveyor synchronization
- TCP
- Relative job
- Coordinated control
- Servo float
- Energy saving mode (with servomotor turn off limit)
- Software pendant
- Network (data transfer, FTP, Ethernet server)
- Bilingual display (Shown in the required language.)
- Vision function
- External reference point control
- Independent control
- Search
- Automatic backup

FS100 Controller Specifications

Items	Specifications
Configuration	Open structure (IP20)
Dimensions	470 (W)×420 (D)×200 (H) mm (Protrusions are not included.)
Mass	20 kg
Cooling System	Direct cooling
Ambient Temperature	During operation: 0°C to +40°C During storage : -10°C to +60°C
Relative Humidity	90% max. (non-condensing)
Power Supply	Single-phase 200/230 VAC (+10% to -15%), 50/60 Hz* Three-phase 200/220 VAC (+10% to -15%), 50/60 Hz *: MOTOMAN-MH6F, -MH12, -HP20F can be used with three-phase power supply only.
Grounding	Grounding resistance: 100 Ω or less
Digital I/Os	Specialized signals: 10 inputs and 1 output General signals : 28 inputs and 28 outputs Max. I/O (optional) : 1,024 inputs and 1,024 outputs
Positioning System	Serial communications (absolute encoder)
Programming Capacity	JOB: 10,000 steps, 1,000 instructions CIO ladder: 1,500 steps
Expansion Slots	MP2000 bus × 5 slots
LAN (Connection to Host)	1 (10BASE-T/100BASE-TX)
Interface	RS-232C: 1ch
Control Method	Software servo control
Drive Units	Six axes for robots Two more axes can be added as external axes. (Can be installed in the controller.)

Programming Pendant Specifications Optional

Items	Specifications
Dimensions	169 (W)×50 (D)×314.5 (H) mm
Mass	0.990 kg
Material	Reinforced plastics
Operation Device	Select keys, axis keys (8 axes), numerical/application keys, Mode switch with key (mode: teach, play, and remote), emergency stop button, enable switch, compact flash card interface device (compact flash is optional), USB port (1 port)
Display	640×480 pixels color LCD, touch panel (Alphanumeric characters, Chinese characters, Japanese letters, Others)
IEC Protection Class	IP65
Cable Length	Standard: 8 m, optional: 20 m max.

Note: A programming pendant or a dummy connector is required with the FS100. (Sold separately.)

- Programming pendant (model: JZRCR-YPP03-1 or JZRCR-YPP13-1)
For maintenance, the programming pendant is required.
One programming pendant can be used with more than one controller.
- Dummy connector (model: CBL-FRC063-2)
The dummy connector must be inserted when the programming pendant is not connected or when the software pendant is used.
- The programming pendant (YPP01-1) for a DX100 controller cannot be connected to the FS100 controller because of differences in their specifications.

Total support from the construction to actual operation of robot systems

High-precision Robot Simulator

MotoSim EG-VRC

MotoSim EG-VRC is equipped with a variety of functions, including the modeling, layout, programming, debugging, simulation, and online functions. These functions allow users to carry out intuitive and speedy operations at every step, from the construction of robot systems to actual operation.

