Changes for the Better

MITSUBISHI ELECTRIC

Single Axis Motion Controller

MR-MQ100

On your mark sensor, go!

Empowering Industries

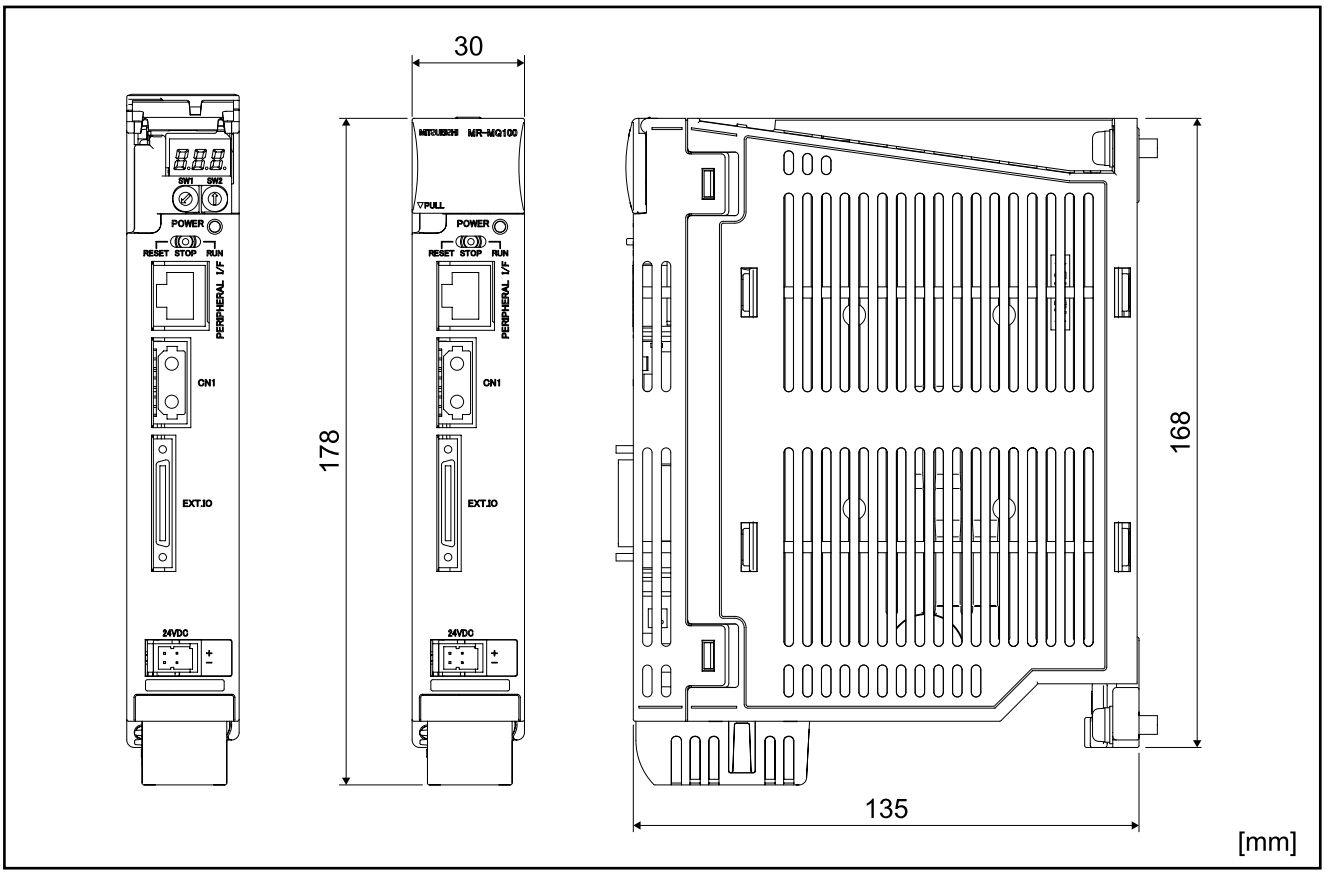
MR-MQ100 Single Axis Motion Controller for SSCNETIII Servo Amplifier

The MR-MQ100 was designed to be the performance standard in 1.5 axis control. Combined with the strengths of SSCNETIII fiber optic communications and the power of the MR-J3B servo amplifier, machine makers are now able to raise performance to new levels in rotary cut, flying saw, labeling applications and so on. Plus, intuitive software makes implementation of encoder following, CAM profiles, registration mark synchronization and even servo axis tuning quick and easy.

Specifications

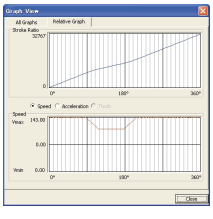
Items		Specifications
Power Supply		24VDC +/-10% (Required Current Capacity 400mA)
Mass [kg(lb)]		0.7(1.54)
Dimensions [mm]		178(H)×30(W)×135(D)
Digital Inputs (Mark sensors)		4 inputs (24VDC)
Digital outputs		2 outputs (24VDC)
Synchronous encoder	Signal type	A/B phase pulse train input
	Voltage-output / Open-collector type (5VDC)	Up to 800kpps (After magnification by 4), Up to 10m
	Differential-output type	Up to 4Mpps (After magnification by 4), Up to 30m
Peripheral interface		100Mbps/10Mbps Ethernet (for programming and additional options)
Number of control axis		1 axis
Operation cycle		0.44ms
Servo amplifier		MR-J3B servo amplifier (over SSCNETIII)
Programming language		Motion SFC, Dedicated instruction, Mechanical support language (SV22)
Memory back up		Q6BAT
Cam function	Number of Cams	Up to 256 Cam profiles may be stored internally.
	Resolution per cycle	256, 512, 1024, 2048
	Stroke resolution	32767
	Control mode	Two-way cam, feed cam

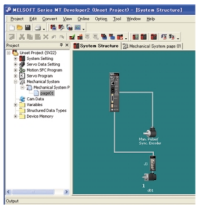
Dimensions

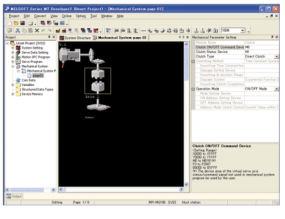


Programming Software

The powerful programming tool helps you setup, program, tune and easily monitor your system.


CAM function

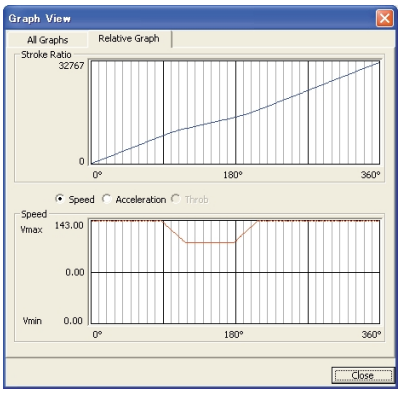

System setting


Mechanical support language

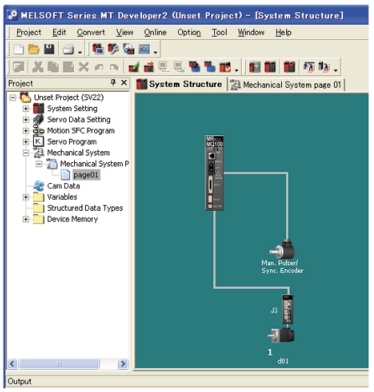
Best combination of advanced functionality and ease-of-use.

We compared our single axis motion controller to our competitors and in nearly every single technical specification, from mark sensor input response to CPU speed, CAM capacity, user memory and installation area, the MR-MQ100 comes out on top. But none of that matters unless it's easy to use.

★MT Developer 2 : Easy to use menus and graphical interfaces!

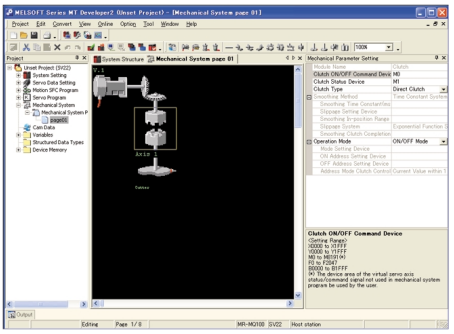


CAM function



System setting

★Mechanical Support Language for drag-and-drop creation of electronic clutches, gears and CAMs!

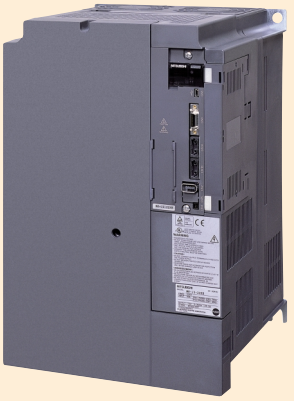


Mechanical support language

★Compatible with all MR-J3B amplifiers for access to time saving functions like Model Adaptive Tuning, Real Time Auto-tuning and Auto Gain finding.

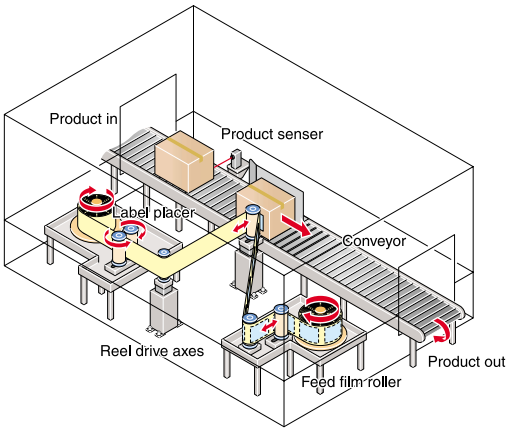
MR-J3-10B

MR-J3-500B

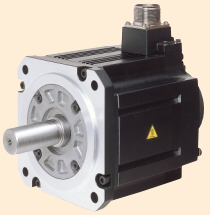


MR-J3-22KB

★Suitable for many applications such as flying saw, labeling, rotary cut and more!

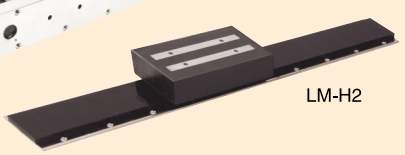


★A broad range of high-efficiency rotary motors from 50W to 55kW, plus linear motors from 50N to 18000N (max)!



HF-SP152

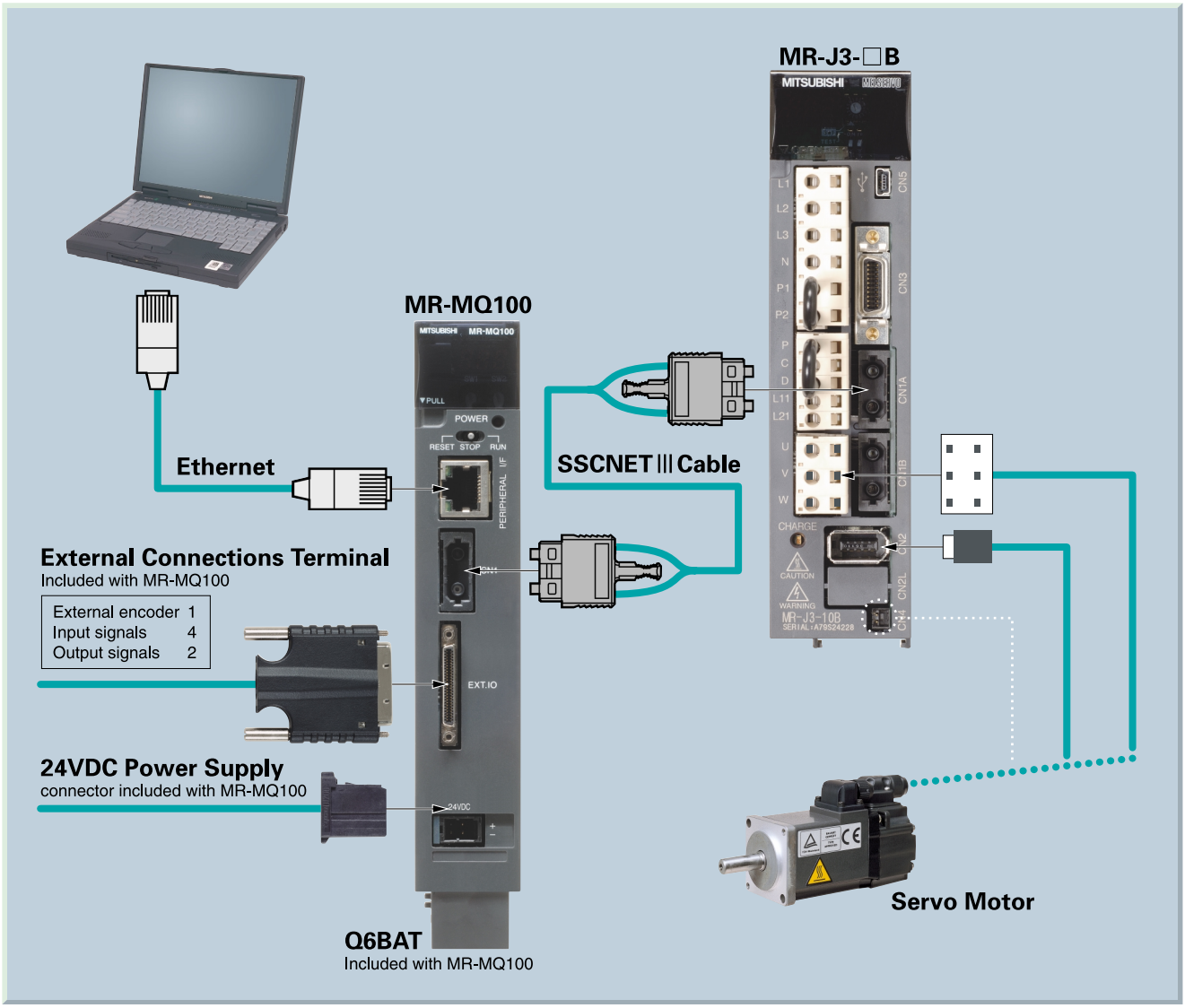
LM-U2



LM-H2

Configuration

Peripheral equipments are connected to MR-MQ100 as below.



Part Number Information

Products	Model	Details
Single Axis Controller	MR-MQ100	Control for 1 axis Motion OS is preinstalled.
Battery	Q6BAT	• For memory back-up of IC-RAM in MR-MQ100 (SFC program, Servo program, Mechanical support language, Parameters, Absolute data) • Included with MR-MQ100.
SSCNETIII cable	MR-J3BUS□M	• MR-MQ100 ⇔ MR-J3- □ B • 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	• MR-MQ100 ⇔ MR-J3- □ B • Standard code for outside panel 5m(16.40ft.),10m(32.81ft.),20m(65.62ft.)
	MR-J3BUS□M-B	• MR-MQ100 ⇔ MR-J3- □ B • Long distance cable: 30m(98.43ft.),40m(131.23ft.),50m(164.04ft.)

Software packages

Products	Model	Details
Operating system software	SW9DNC-SV22QW	Automatic machinery use SV22 Motion OS is preinstalled.
MELSOFT MT Works2 (MT Developer2)	SW1DNC-MTW2MQ-E	Only for MR-MQ100
MR Configurator	MRZJW3-SETUP221E	Version C1 or later

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