

MOTOMAN-MA1400

■ Manipulator Specifications

Model		MOTOMAN-MA1400
Type	YR-MA01400-A00	
Controlled Axis	6 (Vertically articulated)	
Payload	3 kg	
Repeatability*1	±0.08 mm	
Range of Motion	S-axis (turning)	±170°
	L-axis (lower arm)	+155° to -90°
	U-axis (upper arm)	+190° to -175°
	R-axis (wrist roll)	±150°
	B-axis (wrist pitch/yaw)	+180° to -45°
	T-axis (wrist twist)	±200°
Maximum Speed	S-axis (turning)	3.84 rad/s, 220°/s
	L-axis (lower arm)	3.49 rad/s, 200°/s
	U-axis (upper arm)	3.84 rad/s, 220°/s
	R-axis (wrist roll)	7.16 rad/s, 410°/s
	B-axis (wrist pitch/yaw)	7.16 rad/s, 410°/s
	T-axis (wrist twist)	10.65 rad/s, 610°/s
Allowable Moment	R-axis (wrist roll)	8.8 N·m
	B-axis (wrist pitch/yaw)	8.8 N·m
	T-axis (wrist twist)	2.9 N·m
Allowable Inertia (GD ² /4)	R-axis (wrist roll)	0.27 kg·m ²
	B-axis (wrist pitch/yaw)	0.27 kg·m ²
	T-axis (wrist twist)	0.03 kg·m ²
Mass	130 kg	
Ambient Conditions	Temperature	0°C to +45°C
	Humidity	20 to 80%RH (non-condensing)
	Vibration	4.9 m/s ² or less
	Others	<ul style="list-style-type: none"> • Free from corrosive gasses or liquids, or explosive gasses • Clean and dry • Free from excessive electrical noise (plasma)
Power Requirements*2	1.5 kVA	

*1 : Conforms to JIS B 8432.

*2 : Varies in accordance with applications and motion patterns.

Note : SI units are used for specifications.

■ DX100 Controller Specifications

Items	Specifications
Configuration	Dust proof
Dimensions	425(W)×450(D)×1200(H) mm (Possible to control 3 external axes.)
Mass	100 kg max.
Cooling System	Indirect cooling
Ambient Temperature	During operation : 0°C to +45°C During storage : -10°C to +60°C
Relative Humidity	90% max. (non-condensing)
Power Supply	Three-phase 200/220 VAC (+10% to -15%), 60 Hz (±2%)(Japan) Three-phase 200 VAC (+10% to -15%), 50 Hz (±2%)(Japan)
Grounding	Grounding resistance : 100 Ω or less
Digital I/Os	Specialized signals : 23 inputs and 5 outputs General signals : 40 inputs and 40 outputs Max. I/O (optional) : 2048 inputs and 2048 outputs
Positioning System	By serial encoder
Programming Capacity	JOB : 200,000 steps, 10,000 instructions CIO ladder Standard : 15,000 steps Expanded : 20,000 steps
Expansion Slots	PCI : 2 slots for main CPUs and 1 slot for servo CPU 1 additional slot for sensor board
LAN (Connection to Host)	1 (10BaseT/100BaseTX)
Interface	RS-232C : 1ch
Control Method	Software servo control
Drive Units	Standard 6 axes and 2 additional single-axis amplifiers can be mounted (8 axes max.) Additional amplifiers for the external axis can also be used.
Painting Color	Munsell notation 5Y 7/1 (reference value)

■ Programming Pendant Specifications

Items	Specifications
Dimensions	169(W)×314.5(H)×50(D) mm
Mass	0.986 kg
Material	Reinforced plastics
Operation Device	Select keys, axes keys, numerical/application keys, mode keys (mode : teach, play, and remote), emergency stop button, enable switch, compact flash card interface device (compact flash is optional.)
Display	5.7-inch color LCD, touch panel 640×480 pixels (Alphanumeric characters, Chinese characters, Japanese letters, Others)
IEC Protection Class	IP65
Cable Length	Standard : 8 m, Max. : 36 m (optional)

Sales Department

HEAD OFFICE

2-1 Kurosaki-Shiroishi, Yahatanishi-ku, Kitakyusyu-shi
806-0004, Japan

Phone: +81-93-645-7745 Fax: +81-93-645-7746

MOTOMAN INC. HEADQUARTERS

805 Liberty Lane, West Carrollton, OH 45449, U.S.A.

Phone: +1-937-847-6200 Fax: +1-937-847-6277

MOTOMAN ROBOTICS EUROPE AB

Franska Vagen 10, Box 4004, SE-390 04 Kalmar, Sweden

Phone: +46-480-417800 Fax: +46-480-417999

MOTOMAN ROBOTEC GmbH

Kammerfeldstrasse 1, 85391 Allershausen, Germany

Phone: +49-8166-90-0 Fax: +49-8166-90-103

YASKAWA ELECTRIC KOREA CORPORATION

1F, Samyang Bldg. 89-1, Shinchun-dong, Donk-ku, Daegu, Korea

Phone: +82-53-382-7844 Fax: +82-53-382-7845

YASKAWA ELECTRIC (SINGAPORE) PTE. LTD.

151 Lorong Chuan, #04-01, New Tech Park, Singapore 556741

Phone: +65-6282-3003 Fax: +65-6289-3003

YASKAWA ELECTRIC (MALAYSIA) SDN. BHD.

Unit 47-1&2, Jalan PJU 5/9, Dataran Sunway, Kota Damansara, 47810,

Petaling Jaya Selangor, Malaysia

Phone: +60-3614-08919 Fax: +60-3614-08929

YASKAWA ELECTRIC (THAILAND) CO., LTD.

252/246, 4th Floor, Muang Thai-Phatra office Tower II Rachadapisek Road,

Huaykwang Bangkok, 10320, Thailand

Phone: +66-2-693-2200 Fax: +66-2-693-4200

SHOUGANG MOTOMAN ROBOT CO., LTD.

No.7 Yongchang-North Road, Beijing Economic and Technological

Development Area, Beijing 100176, China

Phone: +86-10-6788-0541 Fax: +86-10-6788-0542

MOTOMAN MOTHERSON ROBOTICS LTD.

910, DLF Galleria, DLF City Phase IV, Gurgaon - 122002 Haryana, India

Phone: +91-124-414-8514 Fax: +91-124-414-8016



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