

RC7M Controller

Controller specifications : RC7M

Item		RC7M						
Applicable robot		VP-G Series	VS-G Series	VM-G Series	HS-G Series	HM-G Series		
Model name(RC7M-)		VPG-5/6***.**	VSG-6***.**	VMG-6***.**	HSG-4***.**	HMG-4***.**		
Number of controllable axes		5/6	6		4			
Control system		PTP, CP 3-dimensional linear, 3-dimensional circular						
Drive system		All axes : Full-digital AC servo						
Language		DENSO robot language (conforming to SLIM)						
Memory capacity		3.25MB(equivalent to 10.000-step, 30.000-point)						
Teaching system		1)Remote teaching 2)Numerical input(MDI)		1)Direct teaching 2)Remote teaching 3)Numerical input(MDI)				
External signals(I/O)	Standard I/O	Mini I/O	Input : 8 user open points + 11 fixed system points			Output : 8 user open points + 14 fixed system points		
			(Note : The global model of the controller cannot use system-fixed emergency stop I/Os.)					
	SAFETY I/O (only on global type)		HAND I/O				Input : 8 user open points / Output : 8 fixed system points	
	Parallel I/O extension boards (option)	2 boards mounted	Input : 80 user open points / Output : 96 user open points (additional possible)					
		Single board mounted	Input : 40 user open points / Output : 48 user open points (additional possible)					
	DeviceNet board (option)	Master/Slave	Input : 1024 points(Maste) + 256 points(Slave) / Output : 1024 points(Maste) + 256 points(Slave)					
		Master	Input : 1024 points / Output : 1024 points					
		Slave	Input : 256 points / Output : 256 points					
	CC-Link board (option)	Slave	Input : 128 points / Output : 128 points					
	External communications interface		RS-232C: 1 line Ethernet : 1 line USB : 2 lines (Supporting flash memory)					
Extension slots		3(for optional boards)						
Self-diagnosis function		Overrun, servo error, memory error, input error etc.						
Timer function		0.02 to 10sec (in unit of 1/60 sec)						
Error display		Error codes will be outputted on the external I/O. Error codes will be displayed on the mini pendant (option). Error message will be displayed on the teaching pendant(option).						
Cables	Cable between main units (option)		Standard : 4m, 6m, 12m(Standard/Mistproof model)					
	I/O Cable (option)		8m, 15m(for Mini I/O, HAND I/O, Parallel I/O extension boards, safety I/O board)					
	Power cable		5m					
Environmental conditions (operation)		Temperature 0 to 40°C Relative humidity 90% or less (No condensation)						
Power source		<200VAC model> Three-phase 200VAC-15%-230VAC+10%, 50/60Hz, 1kVA Single-phase 230VAC-10%-230VAC+10%, 50/60Hz, 1kVA <100VAC model> Single-phase AC100V-10%-AC110V+10%, 50/60Hz, 1kVA	Three-phase 200VAC-15%-230VAC+10%, 50/60Hz, 1.85kVA Single-phase 230VAC-10%-230VAC+10%, 50/60Hz, 1.85kVA	Three-phase 200VAC-15%-230VAC+10%, 50/60Hz, 3.3kVA	Three-phase 200VAC-15%-230VAC+10%, 50/60Hz, 1.8kVA Single-phase 230VAC-10%-230VAC+10%, 50/60Hz, 1.8kVA	Three-phase 200VAC-15%-230VAC+10%, 50/60Hz, 2.5kVA Single-phase 230VAC-10%-230VAC+10%, 50/60Hz, 2.5kVA		
I/O Power source (Note)	External power source		A24VDC ±10% should be supplied from external equipment.					
	Internal power source		A24VDC ±10% should be supplied internally in the robot controller.					
Safety category		with safety board : Compliant with safety category 3						
		with safety box : Compliant with safety category 4						
Degree of protection		IP20						
Weight		4-axis standard model : approx. 17kg 6-axis standard model : approx. 18kg 4-axis global model(with safety board) : approx. 18kg 6-axis global model(with safety board) : approx. 19kg 4-axis global model(with safety box) : approx. 21kg 6-axis global model(with safety box) : approx. 22kg						

Note : Refer to Sections 4.2.1 and 5.2.1 "Setting up Mini I/O Power Supply."


Controller Handling Notes

 WARNING

- * DO NOT touch fins. Their hot surfaces may cause severe burns.
- * DO NOT insert fingers or foreign objects into openings. Doing so may cause bodily injury.
- * Before opening the controller cover and accessing the inside of the controller for maintenance, be sure to turn off the power switch, disconnect the power cable, and wait 3 minutes or more. This is for protecting you from electric shock.
- * DO NOT connect or disconnect connectors to / from the controller while the AC power or the 24 VDC power for I/O is being supplied. Doing so may cause electric shock or controller failure.

 CAUTION IN INSTALLATION

- * This controller is not designed to be dust-proof, mist-proof, or explosion-proof.
- * Read operation manuals before installation.
- * Do not place anything on the controller or apply an impact or shock to the controller.
- * Avoid mounting the controller in an environment where excessive vibration is applied to the controller.

 CAUTION

The robot controller connectors are of a screw-lock type or ring-lock type. Lock the connectors securely. If even one of the connectors is not locked, weak contact may result thereby causing an error.

Be sure to turn the robot controller OFF before connection / disconnecting the power connector or motor connector. Otherwise, the internal circuits of the robot controller may be damaged.